

STRATEGIC ASSESSMENT: **The 2019 Project Pipeline for Jordan** AND INVESTMENT OPPORTUNITIES



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Abstract

Jordan's growth model is highly dependent on investment, with contractions in the magnitude, quantity and efficacy of investments being key drivers in the sharp deceleration of growth since 2010. As such, boosting investment, specifically private investment, is critical to increasing the economy's potential growth. In response, Jordan is developing a Pipeline of Projects (PP) in order to chart the way for investments over the medium to long term. From this list, the Government of Jordan has identified a Pipeline of Projects for 2019 (2019 PP) spanning water, energy, wastewater, transport, digital economy and education sectors, for a total investment cost of JD 3 (US\$ 4.25) billion.

In this document, the World Bank, which has had a long-term engagement with Jordan, both sectorally and cross-sectorally, presents a strategic assessment for the 2019 PP. The Assessment was undertaken on the basis of the listing and data provided by the Government, which is presented in Annex A, as well as other adhoc information. This Assessment does not supplant obligations that are beyond the mandate of this document, and that include (i) for each project to undergo an independent appraisal as per highest standards; (ii) for a careful examination of issues associated with land management and allocation; and (iii) for analysis that incorporates the pipeline into a sustainable macro-fiscal framework and debt strategy.

The Assessment generally finds that the choice of the 2019 PP for the water, wastewater, digital economy and education sectors is highly appropriate, and moderately appropriate for transport and energy. Nonetheless, all were assessed as either a priority or "good to have" for the sector, and all are consistent with a sector strategy. The Assessment also takes note of the Government's five-year reform matrix, which prioritizes reforms that are critical to achieving Jordan's growth objectives, as well as to enabling the implementation of its pipeline.

The Assessment highlights good potential for complete private sector financing for a majority of the 2019 PP. Given Jordan's limited sovereign borrowing headroom due to high indebtedness and large debt service obligations relative to GDP (and relative to government revenues), the Jordanian authorities may wish to maximize the volume of commercial investment and finance in infrastructure.

I. ASSESSMENT SYNOPSIS



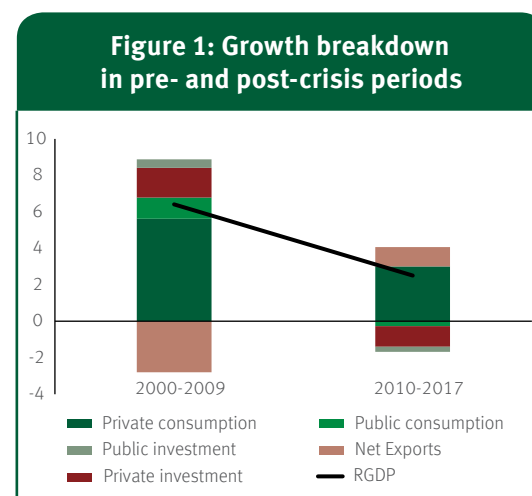
A. Investments for Jordan

1. Jordan's economy has endured a prolonged period of low economic growth as it faced a succession of external shocks. The economy entered into a period of protracted slowdown in 2010, on the back of the 2008-09 Gulf Cooperation Council (GCC) financial crisis, itself a second-degree ripple effect from the 2008 global financial crisis.¹ This was followed by the eruption of regional wars, first in Syria and then Iraq. Regional headwinds involved spillovers on the security front, leading to the closure of trade routes with Iraq and Syria, both having been final destinations and transit routes for Jordanian exports. While these borders have since been re-opened, recovery of trade for Jordan has been gradual and insufficient to regain lost markets. The regional turmoil also induced a large influx of Syrian refugees into Jordan, which the country has generously hosted, incurring additional fiscal costs. Consequently, real GDP growth declined sharply from a 2000-2009 annual average of 6.4 percent to 2.5 percent (Figure 1) since 2010.

2. Investment is a primary component of Jordan's growth model, with contractions in the magnitude, quantity and efficacy of investments being key drivers in the sharp deceleration of growth since 2010. Total investment (public and private) contributed positively and significantly to real GDP growth in the pre-crisis period of 2000-2009, averaging 2.6 percentage points (pp) annually. It has since fallen sharply, becoming a drag on growth with an average annual contribution of -1.3 pp. While both public and private investment shared this trend, the latter's regression has been quite striking, falling by around 3.5 pp between the two periods. As such, boosting private investment is critical to increasing potential growth in Jordan.

3. Public investment has been a casualty of Jordan's fiscal consolidation drive since 2010. The average overall fiscal

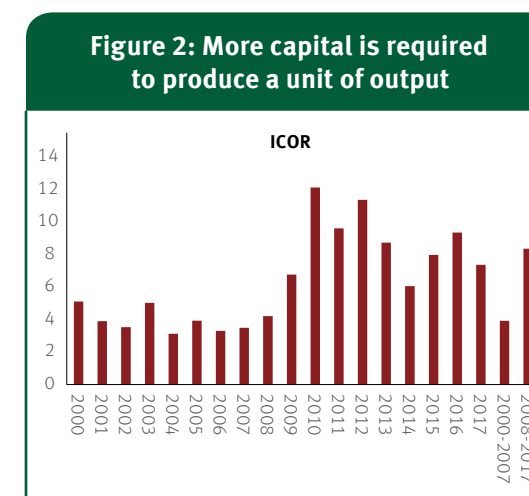
¹ Jordan's economy enjoys strong linkages with the GCC via a number of channels including investment, tourism and remittances. For more on these linkages, see: World Bank (2016), *Jordan Economic Monitor: Toward Stronger External Trade Performance*, Fall 2017.



Source: DOS and WB staff assessment.

deficit, excluding grants, is close to 10 percent of GDP, while gross public debt is estimated to have reached 95 percent of GDP by end-2018. Within a context of a fixed exchange rate regime, large fiscal imbalances along with sizable current account deficits subject the economy to substantial financing needs. Traditionally, a considerable portion of Jordan's financing needs has been sourced from bilateral and multilateral grants and concessional finance, rendering such instruments key ingredients for macro-economic stability in Jordan. In fact, when including grants, the annual overall fiscal deficit falls to an average of 3.5 percent of GDP in the pre-crisis period, increasing to 6.4 percent since. In response, Jordan entered into successive programs with the International Monetary Fund (IMF)—a US\$ 2 billion IMF Stand By Arrangement (SBA) program in 2013 and the current US\$ 723 million Extended Fund Facility (IMF-EFF) in effect since 2016—which motivated significant fiscal consolidation effort.² Notwithstanding other significant policy measures, capital expenditures contracted from a pre-crisis (2000-2009) annual average of 7.4 percent of GDP to 4.2 percent since.

² Jordan has also had a strong engagement with the World Bank, with major programs that include a Programmatic Development Policy Loan (DPL) in 2012 and 2013 (US\$ 500 million) and an energy and water sector DPL (US\$ 250 million) in 2015. Jordan is also currently engaged in a programmatic DPL with the World Bank, the first part of which dispensed US\$500 million in June 2018.



Source: DOS and WB staff assessment.

4. Investment efficacy has also been on the wane since 2008. The Incremental Capital Output Ratio (ICOR)³ has more than doubled since 2007 (Figure 2), an indication of regressed efficacy of investments. A possible explanation is that, foreign aid needed to meet large financing needs and prevent balance of payments crises, are directed toward investment projects with less emphasis on feasibility.⁴

5. As a result, the quality of Jordan's infrastructure network has deteriorated markedly since 2009. According to the 2017-2018 Global Competitiveness Index (GCI) by the World Economic Forum (WEF), Jordan ranked 63 out of 137 countries in quality of overall infrastructure, compared to 48 out of 144 countries in the 2014-2015 GCI, and 35 out of 139 countries in the 2010-2011 GCI. Concurrently, the 2017-2018 GCI ranked *inadequate supply of infrastructure* as 6th out of 16 factors (with a score of 7.2) that are most problematic for doing business in Jordan.

³ ICOR measures the efficiency of investments by quantifying the additional capital required to increase output by one unit.

⁴ For example, in 2012, and as Jordan struggled with severe balance of payments pressures resulting from the interruption of Egyptian gas supply in the wake of the so-called "Arab Spring", the GCC pledged US\$ 5 billion in grants over a period of 5 years. These funds were directed toward specific investment projects that the Jordanian government identified and negotiated with the donors.

This compares to 8th out of 16 factors (6.1) and 10th out of 15 factors (3.3) in 2014-2015 GCI and 2010-2011 GCI, respectively.

B. A National Growth Strategy

6. Jordan 2025: A National Vision and Strategy is a ten-year vision that was developed in 2014 by the Government of Jordan (GoJ). The vision pivots economic transformation on export development by building on existing strengths in various sectors, as well as improvements in export promotion, natural resource management, infrastructure, finance as well as the macroeconomic environment.

7. In 2017, the Jordan Economic Growth Plan (JEGP) 2018-2022 was developed by the Economic Policy Council.⁵ The JEGP is comprised of economic, fiscal and sectoral strategies that outline the vision and policies pertaining to each sector. It further identifies policy interventions, public projects and private investments that must be undertaken to realize these sectoral visions. The Government, which is mandated with increasing investment, developing an efficient government and bringing the country together around a fair and just tax system, has confirmed its commitment to the business environment, labor market reforms and fiscal consolidation efforts.

8. The new Government also introduced a two-year priority plan for 2019-20 in November 2018, with the aim of reviving economic growth, improving public service delivery and creating more jobs. Key features of the plan hinge on enhancing Jordan's competitiveness through improving ranking in the Doing Business indicator via cost reductions in energy and support for entrepreneurship and SMEs. On fiscal front, the plan puts forward an ambitious goal of reducing the budget deficit (excluding grants) by 0.5 pp of GDP annually and a decrease in the public debt-to-GDP ratio to 92.4 percent by

⁵ The Economic Policy Council is headed by the Prime Minister and includes the Governor of the Central Bank of Jordan, private sector organizations and experts.

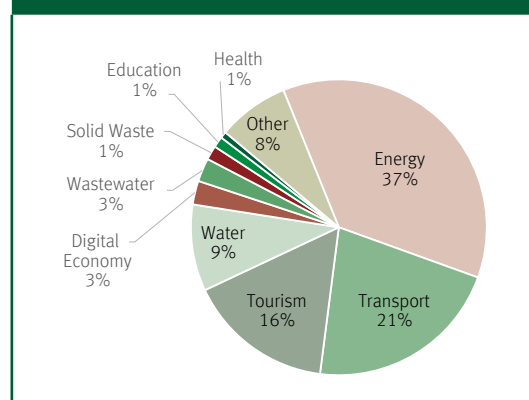
the end of 2020. Moreover, the plan aims to create 30,000 additional jobs through vocational training centers, by providing tax incentives for companies in support of training and employment for fresh graduates, and through improving the business environment. The priority plan further targets increasing investments and access to finance for specific sectors as well as improving efficiency of the private sector.

9. **The Government, with assistance from the World Bank and other development partners, is developing a five-year reform matrix that prioritizes reforms that are critical to achieving the objectives identified by Jordan 2025 and JEGP.** The matrix is structured around three pillars/objectives: (i) reducing business costs and improving market accessibility; (ii) creating more flexible and integrated labor markets and providing better and more efficient social assistance; and (iii) improving fiscal sustainability and taking more informed decisions regarding risk. Effective implementation of this reform program is critical to the viability of Jordan's investment plans.
10. **The above consistently highlight Foreign Direct Investments and exports of goods and services as key enablers of growth and employment for Jordan that needed to be boosted.** Vital sectors identified include: business, information technology and professional services; education services; healthcare services; creative industries; tourism services; transport services; construction materials and services; and agriculture and food processing.

C. Jordan's Pipelines of Projects

11. **Jordan's Pipeline of Projects (PP) includes 123 projects at a total investment cost of JD 12.6 (US\$ 17.7) billion, divided between energy, transport, tourism, water, digital economy, wastewater, solid waste, education, health and other projects.** The largest investment share is allocated to energy receiving 37 percent of the total investment cost. Transport receives 21 percent of the total investment

Figure 3: Sector share in investment cost of the PP



Source: GoJ

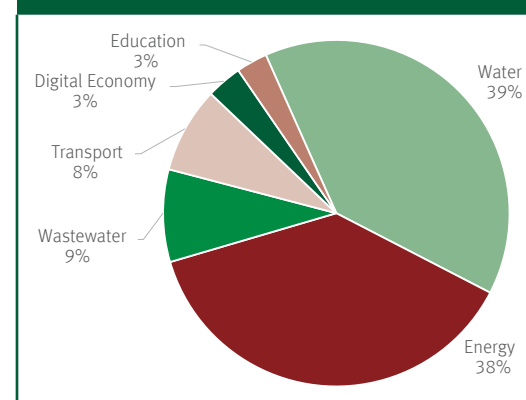
cost, while tourism and water and digital economy are assigned 16 percent and 9 percent, respectively (Figure 3).

12. **From the PP, GoJ has identified a Pipeline of Projects for 2019 (2019 PP) at a total investment cost of JD 3 (US\$ 4.25) billion, divided between water, energy, wastewater, transport, digital economy and education.** Annex A presents the 2019 PP as received from the GoJ. The largest investment share is allocated to water, energy, representing 39 percent of the total 2019 PP investment cost. Energy comes in second with a 38 percent share of total 2019 PP investment cost, followed by wastewater and transport with 9 percent and 8 percent, respectively (Figure 4).

WATER SUPPLY AND SANITATION

13. **Jordan ranks as the world's second poorest country in per capita water availability; thus, optimizing water allocation is a long-standing focus of the Government.** The per capita annual renewable water resource is about 105 cubic meters per capita, far below the threshold of severe water scarcity of 500 cubic meters per capita. This does not even account for the Syrian refugee population.
14. **Strong Government commitment to reforms in the water sector has led to some efficiency gains.** In August 2013, the Government approved the Structural

Figure 4: Sector share in investment cost of 2019 PP



Source: GoJ

Benchmark - Action Plan to Reduce Water Sector Losses ('Action Plan'), to increase water sector revenues, thus enhancing cost recovery to cover operation and maintenance. Since 2013, the Water Authority of Jordan (WAJ) implementation of the 'Action Plan' has partially absorbed the effects of successive external shocks through a combination of modest tariff increases, reductions in non-revenue water, replacing inefficient pumps and expanding renewable energy production. This progress between 2013-2017 led to improvements in the cost recovery ratio.

15. **Water and sanitation still however impose a heavy fiscal burden due to elevated energy costs.** Half of the cost for delivering municipal services is to cover high electricity for pumping and treating water and wastewater. Following interruptions in the Egyptian natural gas supply in 2009, Jordan had to move to more expensive electricity generation methods and to diversify its energy mix, increasing its exposures to global energy markets.
16. **The PP contains 10 separately classified investment projects in water and sanitation for a total of JD 1,512 (US\$ 2,132) million, from which 5 water and sanitation projects with an investment cost of JD 1,442 (US\$ 2,034) million are included in 2019 PP.**

ENERGY

17. **Since 2011, Jordan has achieved a strategic objective towards enhanced energy security.** Following the revolution in Egypt, interruptions in Egyptian gas supply, its sole source at the time for gas to operate power plants, forced Jordan to switch to more expensive and less efficient diesel and fuel oil. This, along with higher energy prices, had significant implications on Jordan's balance of payments. In response, Jordan rapidly prepared and commissioned a Floating Storage and Regasification Unit (FSRU) to be deployed in Aqaba. By 2015, Jordan began receiving Liquefied Natural Gas via the FSRU in Aqaba establishing a key objective in energy security. However, for the bulk of its primary energy needs for non-electricity sector, Jordan remains dependent on imported fossil fuels. This continues to impose an energy security risk as well as a balance of payment burden on the Jordanian economy.
18. **Efficiency improvements in the energy sector have been identified by the GoJ as a priority to support economic growth and job creation.** This translates into the following: reduction in overall cost of electricity, increased grid resiliency to high share of variable renewable energy, reduced dependence on imported fossil fuels, improved handling of excess contracted capacity, and a shift to more 'green-clean' energy. Jordan should consider leap-frogging to renewable energy by leveraging local high-quality wind and solar resources. Investments in concentrated solar power (or solar heat) and energy storage systems, and a faster transition to e-mobility can help transition to domestic clean sources of energy.
19. **The PP contains 17 separately classified investment projects in the energy sector for a total of JD 4,600 (US\$ 6,490) million, from which 1 energy project with an investment cost of JD 1,140 (US\$ 1,608) million is included in 2019 PP.**

TRANSPORT

20. **The transport sector⁶ contributes to over 10 percent of the GDP in Jordan, employing about 7.2 percent of the work force.** The sector has consistently shown that it can be a major creator of employment opportunities in Jordan, especially for the disadvantaged and low-skilled (truck drivers, taxi drivers, workers at the airports, construction workers etc.). It can also be a main catalyst for increasing female participation in the labor force.
21. **Jordan has the potential to be a major trade and transport hub.** Jordan has a geostrategic location and can be the gateway between Asia and Europe, as well as Turkey and the GCC. Jordan played a key role in regional trade until the beginning of regional turmoil, the resultant closure of the borders with Syria and Iraq and the imposition of stringent border crossing regimes with Saudi Arabia. These measures had a toll on the Jordanian economic activities in general and on the logistics and freight industries in specific.
22. **Investments in transport infrastructure are needed to align with international comparators of middle-income countries.** Despite Jordan's investment of about US\$ 1.7 billion over the last 5 years, it remains less than 1 percent of GDP annually, compared to between 1 and 3 percent of GDP in middle income countries. Such investments require adequate financial allocations for maintenance to sustain the longer-term benefits.
23. **The PP contains 30 separately classified investment projects in the transportation sector for a total of JD 2,700 (US\$ 3,810) million, from which 2 transport projects with an investment cost of JD 242 (US\$ 341) million are included in 2019 PP.**

DIGITAL ECONOMY

24. **With a GDP contribution worth around 12 percent, information and communication technology (ICT) has witnessed**

significant growth over the years, becoming an increasingly strategic sector for the economy. The services sector is the main source of employment opportunities for Jordanians, generating 60 percent of the around 54,000 new jobs (net) created in 2017. In 2016, 4.7 percent of total exports (amounting to US\$ 648 million) was also attributed to the ICT sector. A year earlier, in 2015, IT revenues reached more than USD 600 million, while the telecom sector's total revenues reached more than USD 1.35 billion.

25. **The Government of Jordan identified digital development as a high priority for the country's social and economic development.** Jordan formulated a comprehensive digital economy strategy, Reach 2025, with a vision to raise productivity and ensure growth by becoming an attractive business destination for investments and international partnerships. Jordan also committed to the launch of the World Economic Forum "Internet for All Initiative." This initiative aims at ensuring inclusive digital development, focusing on creating opportunities for economic growth and jobs across the Kingdom. It also focuses on digital government and using digital infrastructure to increase work efficiency, improving work mechanisms and promoting socio-economic development.
26. **Jordanian mobile and fixed broadband connections are adequate compared to the Arab region, however there is still room for development to catch up with developed economies in Europe and the US.** While the usage of internet by individuals in Jordan (53.4 percent) is above the global average (44 percent), internet speed is below; in June 2018, average download speed in Jordan was 14.4 Mbps, compared to 23.5 Mbps globally. Jordan also has a fixed broadband download speed (21.6 Mbps) that is lower than the global average (46.1 Mbps download average in June 2018). Meanwhile, more than 75 percent of Jordan's population have access to mobile broadband (Q4 of 2017). Internet penetration reached 87.8 percent in Jordan, which is way above the Middle

East average of 64.5 percent.⁷ Jordan is classified as a Fast Grower market by GSMA.

27. **The PP contains 5 separately classified investment projects in the digital economy for a total of JD 326 (US\$ 460) million, from which a single digital economy project with an investment cost of JD 100 (US\$ 141) million is included in the 2019 PP.**

HUMAN CAPITAL

28. **Investment in human capital is critical for increased productivity and growth.** Based on Jordan's Human Capital Index (HCI), a child born in Jordan today will be 56 percent as productive when they grow up as they could have been if they enjoyed complete education and health.
29. **The Jordanian education system has shown great resilience by absorbing a large number of Syrian refugees in public schools.** Jordan has enrolled more than 130,000 Syrian refugee children in public schools as of December 2018, which corresponds approximately to 10 percent of the public education student population. The increase in enrollment has exacerbated a supply shortage of public schools and increased overcrowding in classrooms, leading to the operation of an increased number of second shifts in schools and the reliance on rented schools.
30. **A dynamic private healthcare system is a strong asset for the Jordanian economy, but long-term challenges in the public health system need to be addressed.** The private health sector, composed of for profit and not for profit providers, includes highly qualified staff known for their skills in many areas of specialized care throughout the region. On the other hand, the public health system faces challenges that include quality of care, fragmented health financing functions and limited flexibility to adapt to epidemiological change. Moreover, the public sector dominates overall health provision, with

the Ministry of Health the largest service provider, contributing 1,545 primary healthcare clinics and 31 hospitals.

31. **The PP contains 6 separately classified investment projects in education and 9 in health, for totals of JD 151 (US\$ 213) and JD 89 (US\$ 126) million, respectively, and from which a single education project with an investment cost of JD 88 (US\$ 123) million is included in the 2019 PP.**

TOURISM

32. **Tourism is an important contributor to Jordan's economy and has been prioritized by the Government as a key sector for economic growth.** According to the World Travel and Tourism Council (WTTC), which compiles tourism statistics for 185 countries, the direct contribution of Travel & Tourism (T&T) to Jordan's GDP in 2016 represented close to 5 percent, while the total contribution of this sector was equivalent to almost 20 percent of GDP.⁸
33. **Jordan's tourism sector is an important source of employment, with potential foci on less developed areas and female employment.** WTTC reports that Jordanian T&T directly generated 80,500 jobs in 2016, equivalent to 5.1 percent of total employment. This includes employment by hotels, travel agents, airlines and other passenger transportation services as well as the activities of the restaurant and leisure industries directly supported by travellers. When including wider effects from investment, the overall supply chain and induced income impacts, WTTC reports the total contribution of T&T to employment is 287,500 jobs in 2016 or 18.1 percent of total employment. Ministry of Tourism and Antiquities estimates that 9 percent of travel and tourism employment is held by women. There is significant opportunity to expand these numbers through targeted investment and development of related hard and soft infrastructure.

8 World Travel and Tourism Council, Travel and Tourism Economic Impact 2017 Jordan. See: <https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2017/jordan2017>

7 Source: Internet World Stats.

6 This includes aviation, public transport, marine, railways and roads.

34. The PP contains 10 separately classified investment projects in the tourism sector for a total of JD 2,000 (US\$ 2,830) million, from which none are included in the 2019 PP.

OTHER SECTORS

35. The PP contains 4 separately classified investment projects in solid waste for a total of JD 194 (US\$ 274) million, from which none are included in the 2019 PP.
36. The PP contains 32 separately classified investment projects in a variety of other sectors at a cost of JD 980 (US\$ 1,383) million, from which none are included in the 2019 PP. These sectors include agriculture, environment, labor and youth and gender, as well as other mostly construction projects.

D. Assessment Methodology

37. Based on a request from the GoJ, the World Bank (WB) conducted an assessment of 10 projects that make up the 2019 PP. In light of the afore-highlighted need for investment, a well-designed project pipeline can be an effective tool to help reinforce Jordan's infrastructure, abetting a boost in economic growth. The WB's long-term engagement with Jordan affords its staff country context and sector insight, in addition to the technical know-how and international best practices, that can provide an effective assessment of 2019 PP.
38. The Assessment was conducted at three levels: project, sector and macro.
39. At the project level, a framework for the Assessment, henceforth termed the Framework 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 B presents the Framework Assessment. This assessment does not supplant necessary

project appraisal (i.e. feasibility, financial, environmental etc.), which need to be conducted independently and at the highest standards.

40. A sector-level assessment is conducted in the form of a short sector note that highlights the following:
- i. Growth and Job Creation: illustrating the strategic relevance of the sector in relation to Jordan's growth and reform agenda.
 - ii. State of Sector: presenting a brief overview on the state of the sector and the main bottlenecks.
 - iii. Reform Needs: identifying key sectoral (vertical) reforms that will (1) improve performance of the sector in sustainable ways; and (2) that are needed to make the projects viable.
41. At the macro level, conclusions are drawn on the plan with views presented on strategic relevance, impact on economy, feasibility, as well as manner to enforce the enabling environment, including maximizing finance for development. A sustainable macro-fiscal framework and debt strategy that incorporate the pipeline are beyond the mandate of this Assessment but is a necessary exercise for project pipeline viability. GoJ can ill afford to ignore fiscal constraints and should aim to have them incorporated and accounted for in the final plan.
42. The Assessment affords a chance to review opportunities for private investment in Jordan. Public-private partnerships (PPP) is an important tool to help boost much needed investment within the context of minimum fiscal space, provided that financial contingent liabilities are well assessed and sufficiently mitigated. 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, including co-financing.

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

The project:	Strategic Assessment						
	belongs to an official sector strategy	is a strategic priority (good to have) for the sector	alleviates significant supply bottlenecks in the sector	helps attract FDI's in the sector	contributes to increased exports	helps reduce the cost structure in the sector	is an appropriate technical solution
	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Water	100	97 (3)	97	97	N/A	N/A	97
Energy	100	0 (100)	0	100	0	0	N/A
Wastewater	100	77 (23)	77	77	77	77	100
Transport	100	52 (48)	52	100	100	100	100
Digital Economy	100	100 (0)	100	100	100	100	100
Education	100	100 (0)	0	N/A	0	N/A	N/A

N/A denotes 'unassessed', as more information is required to assess the statement. N/A was assigned to criteria for which 10 percent or more (in investment cost) could not be assessed.

Source: WB staff assessment.

E. Results in Aggregation

43. The strategic Assessment of the 2019 PP reveals that all projects are part of an official sector strategy and are regarded as either a strategic priority for the relevant sector or *are good to have* (Table 1). All 2019 PP projects in water, energy, wastewater, transport, digital economy and education are assessed as part of an official sector strategy. The two projects in digital economy and education are assessed as strategic priorities for their corresponding sectors. This also applies to almost all 2019 PP investments in water (97 percent), a vast majority in wastewater (77 percent) and over half in transport. The single energy project in the 2019 PP is assessed as *good to have*.⁹ Significant supply bottlenecks in the respective sector are expected to be alleviated by the

2019 PP investments in digital economy and water, and by the vast majority (77 percent) of the wastewater investments.

44. The vast majority of the 2019 PP investments can attract foreign direct investments (FDIs), while those in digital economy, transport and (the majority in) wastewater will contribute to increased exports and help reduce the cost structure. Jordan's growth strategy identifies FDIs and exports as main channels for growth. Moreover, high input costs in the production of goods and services is a significant hurdle for Jordanian competitiveness. The Assessment finds that all 2019 PP investments in the energy, transport and digital economy sectors, as well as the great majority in water (97 percent) and wastewater (77 percent) are capable of attracting FDIs. Meanwhile, only 18 percent of 2019 PP investments in the transport, digital economy and (majority of) wastewater, are expected to increase exports and help reduce the cost structure of the respective sector.

⁹ In this regard, while the assessment recognizes the need for Jordan to become less dependent on fossil fuel imports—due to the large balance of payment effects—priority should be given to efficiency gains, reduction in costs and renewables, over the development of its own fossil fuel industry.

45. The Assessment for growth, employment and inclusion shows all 2019 PP investments, other than those in energy and education, are anticipated to have a growth dividend in the short to medium term, while 2019 PP investments in energy, digital economy and to a lesser extent, transport are expected to generate a large or moderate number of high-skilled jobs (Table 2). All 2019 PP investments in energy, transport and digital economy are expected to generate a large or moderate number of jobs. Moreover, the digital economy and energy projects can contribute significantly to high productivity jobs.

46. The feasibility Assessment for 2019 PP shows that the education and digital economy projects, and half of the investments in transport are ready to be implemented within a period of 18 months (Table 3). Further, the implementing agency has the necessary capacity for all 2019 PP investments in the energy, water, wastewater and digital economy and for half of investments in transport.

47. The reform needs Assessment shows that, while all 2019 PP investments, other than those in the energy sector, are in need of reforms, these reforms do not have to be frontloaded but can be introduced

concurrently with implementation. For water, wastewater and digital economy, reforms are effected via cabinet decrees, whereas half of the transport 2019 PP investments need cabinet-decreed reforms, while the other half and all the education projects need parliament to act.

costs (including power) and subdued competitive pressures in key segments of the economy. A key indicator of competitiveness, Jordan's real exchange rate has appreciated significantly since 2010, despite the modest reversal due to deflation in recent years. At the same time, Jordan's relatively large financial sector does not play a role in financing private sector activity commensurate with its size. Exports have also been reduced by endemic conflict in two key regional markets: Syria and Iraq. Improvements in the enabling environment will be achieved, on the one hand, through measures that reduce the cost-base, improve regulatory predictability and ease access to finance for Jordanian businesses, and on the other, by measures that improve the ability of those businesses to access markets. Better reform implementation will be key to success, and a significant investment in improved reform governance is needed.

50. Governance challenges are particularly pertinent when it comes to the business enabling environment. Many of the uncertainties and administrative burdens faced by investors and businesses are a function of inadequate governance practices related to the way rules impacting businesses are prepared, coordinated, consulted, implemented and updated. An effective cross-ministerial regulatory reform and oversight body will need to be established. Beyond the direct effects, the reforms will also have a positive signalling

F. Enabling Environment

48. The Government, with assistance from the World Bank and other development partners, is developing a five-year reform matrix, which prioritizes reforms that are critical to achieving Jordan's growth objectives, as well as enabling the implementation of its pipeline. The matrix is structured around three pillars/objectives: (i) reducing business costs and improving market accessibility; (ii) creating more flexible and integrated labor markets and providing better and more efficient social assistance; and (iii) improving fiscal sustainability and taking more informed decisions regarding risk. Effective implementation of this reform program is critical to the viability of Jordan's investment plans.

49. The first pillar supports a better operating environment for the private sector in terms of costs, regulatory complexity and predictability. Jordan's productivity growth has been modest since 2010, weighed down by unpredictable regulatory processes, high business input

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

Assessment for Growth, Employment and Inclusion				
	Growth impact of completed project in less than 36 months from initiation	The growth impact of the completed project is highly sustainable	The completed project contributes significantly to high productivity jobs	The project creates a large or moderate number of jobs
Water	97	0	0	0
Energy	0	0	100	100
Wastewater	77	0	0	N/A
Transport	100	52	48	100
Digital Economy	100	0	100	100
Education	0	N/A	0	0

N/A denotes 'unassessed', as more information is required to assess the statement. N/A was assigned to criteria for which 10 percent or more (in investment cost) could not be assessed.

Source: WB staff assessment.

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

Feasibility Assessment		
	Readiness to implement (0-18 months for shovel readiness)	The implementing agency has the necessary capacity
Water	4	97
Energy	0	100
Wastewater	N/A	100
Transport	48	52
Digital Economy	100	100
Education	100	0

N/A denotes 'unassessed', as more information is required to assess the statement. N/A was assigned to criteria for which 10 percent or more (in investment cost) could not be assessed.

Source: WB staff assessment.

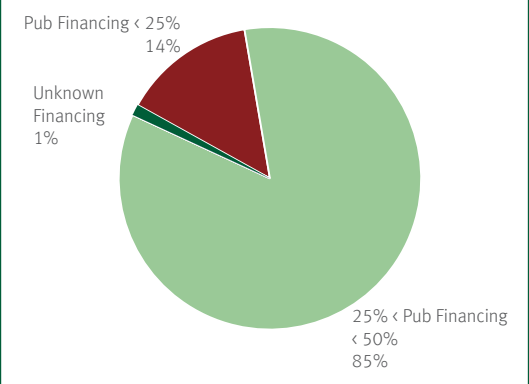
Table 4. Percentage of investment cost in the sector that need reforms

Reform Needs Assessment				
	Reforming Institution		Reform Timeline	
	Cabinet	Parliament	Front end	With implementation
Water	96	0	0	96
Energy	0	0	0	0
Wastewater	100	0	0	77
Transport	52	48	N/A	N/A
Digital Economy	100	0	0	100
Education	0	100	0	100

N/A denotes 'unassessed', as more information is required to assess the statement. N/A was assigned to criteria for which 10 percent or more (in investment cost) could not be assessed.

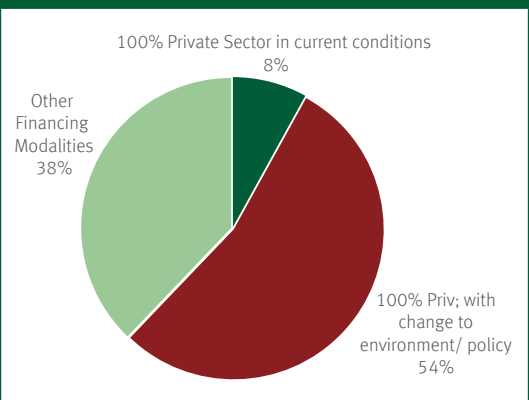
Source: WB staff assessment.

Figure 5: 2019 PP public financing



Source: WB staff assessment.

Figure 6: 2019 PP private financing



Source: WB staff assessment.

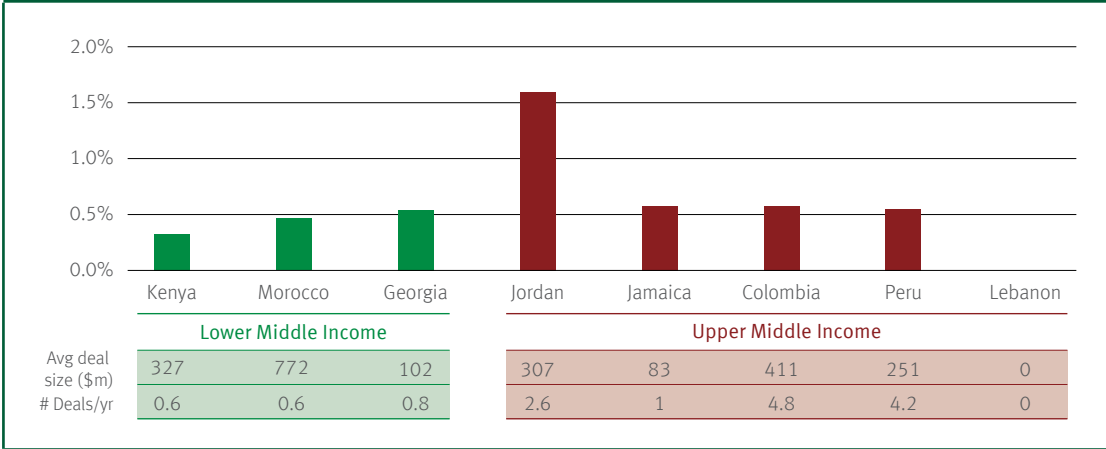
effect to investors on the Government’s commitment to strengthening the environment for business.

51. **The second pillar helps foster a more flexible and inclusive labor market and a more effective social safety net.** Pillar 2 is structured around three sets of reforms. These are designed to address two pressing issues that affect the job performance of the Jordanian economy; namely (a) reforms that address the drastically low female labor force participation rate by removing barriers to women’s ability to participate in the labor market; (b) reforms that address the growth of the informal sector through better management of the foreign labor force entering legally and staying illegally in Jordan; and (c) reforms designed to provide better and more efficient social assistance.
52. **The third pillar supports fiscal consolidation efforts by focusing on efficiency in public investment, ensuring maximum opportunities for private investment in traditional public investment areas through the adoption of a Maximizing Finance for Development approach, and updating the approach to managing debt and contingent liabilities.** Public investment averaged 7.4 percent of GDP in 2000-2009, and 4.4 percent of GDP in 2010-2015 and 3.7 percent of GDP in both 2016 and 2017. With a significant fiscal consolidation pending in the medium term, fiscal space for public investment will likely be limited. Yet Jordan needs significant amounts of investment to boost growth and to improve the efficiency of the economy. Jordan will have to seek efficiency gains in public investment and to significantly increase its reliance on the private sector, through making effective the newly-adopted Public Investment Management—Public-Private Partnership (PIM-PPP) Governance Framework. At the same time, Jordan needs to make progress in managing emerging contingent liabilities as part of an updated approach to managing public investment and debt.

G. Maximizing Finance for Jordan’s Pipelines of Projects

53. **Given Jordan’s limited sovereign borrowing headroom due to high indebtedness and large debt service obligations relative to GDP (and relative to government revenues), the Jordanian 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. Capital investment needs for Jordan far exceed current fiscal capacity and to be realized will require a crowding in of private financing. The banking sector has a primary role in financing the pipeline. Still, and despite the fact that capital markets remain too nascent to play a role in the short to medium term, the potential on longer horizons is strong and progress on that front would send a good signal to international investors.
54. **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.
55. **The Assessment finds good opportunities for private financing for the 2019 PP investments.** Public finance is expected to cover less than 25 percent of the financing for 14 percent of the 2019 PP investments, and less than 50 percent of the financing for 85 percent (Figure 5). The Assessment also highlights the need for an improved

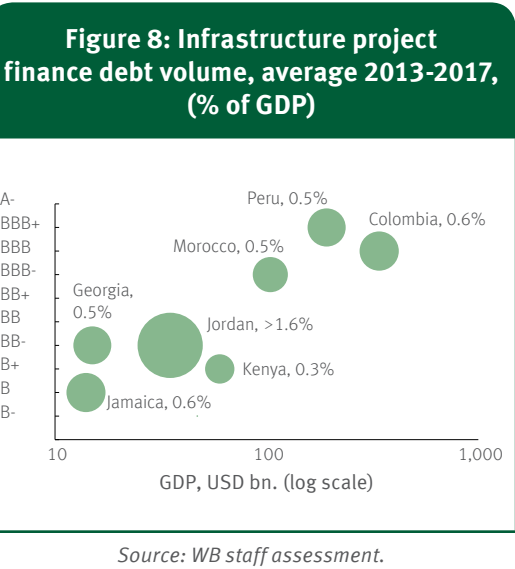
Figure 7: Infrastructure project finance volume in selected countries



Source: WB staff assessment.

environment for private financing; in current conditions, only 8 percent of 2019 PP investments can be financed completely from the private sector, but with policy changes, this could rise to 62 percent (Figure 6).

56. **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.
57. **Since 1994, Jordan achieved financial closure on several PPPs across several sectors, including electricity, telecoms, transportation, water, wastewater and telecoms.¹⁰** A cross- country analysis on infrastructure private debt finance indicates volumes reaching 1.6 percent of GDP for Jordan each year, surpassing by a significant amount other comparator countries (Figure 7, Figure 8). This translates to around US\$ 700 million annually. For total private financing of projects an average of 25 percent equity is added, to arrive at US\$ 875 million per year of private infrastructure financing.
58. **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.** The Global Concessional Financing Facility, the GCFF, can thus be a source of financing. 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 Jordan’s long-standing development needs, while at the same time, help mitigate the impact on the refugees.



¹⁰ Projects include, among others, the AES Amman Jordan IPP (2007), the Al Qatrana IPP (2009), Queen Alia International Airport (2007), the Disi Water PPP (2009), the As-Samra wastewater treatment plant (2012), the Tafila windfarm (2013), several solar power projects (2015 and 2016), including IFC’s Seven Sisters projects, and lately Daehan windfarm (2017).

II. WATER AND WASTEWATER



The 2019 PP contains 5 separately classified projects in the water and sanitation sector for a total investment of about JD 1,440 (US\$ 2,030) million. Three of these projects are in the water supply sector: Aqaba-Amman National Water Conveyance Project (PP18); Non-Revenue Water Reduction (PP20); and Hisban brackish water desalination (PP21). The two remaining are in sanitation: As Samra Treatment Plant (PP19); and Al Ghabawi Wastewater Septic Tank Facility Project (PP23). The WB assesses that PP18, PP19 and PP20, at a combined investment cost of JD 1,300 (US\$ 1,832) million, are priorities.

The Assessment recommends that projects be done in partnership with the private sector, supported by legal, regulatory and policy changes that need to be made by the Government. Although the investments seem reasonably costed, when compared to other projects in Jordan and the region, it is essential to confirm that these amounts are based on (or will be updated by) detailed design and that the costs of expropriation and environmental mitigation are included.

A. Growth and Job Creation

59. **Municipal water services have experienced a series of external shocks, such as the influx of refugees from Syria and sharp increases in energy prices, exacerbating long-term water scarcity.** Over the period of 2011 to 2015, an estimated 1.3 million refugees moved to Jordan displaced by the conflict in Syria. The influx was equivalent to 20 percent of Jordan's pre-crisis population. This placed tremendous pressure on water services throughout the country but especially in the northern governorates. Moreover, interruptions in the Egyptian natural gas supply in 2011, forced Jordan to switch to more expensive electricity generation methods and to diversify its energy mix, increasing its exposure to global energy markets. It was estimated in 2014 that energy related factors induced a 5 percent of GDP annual debt accumulation. In response, the Government withdrew electricity subsidies

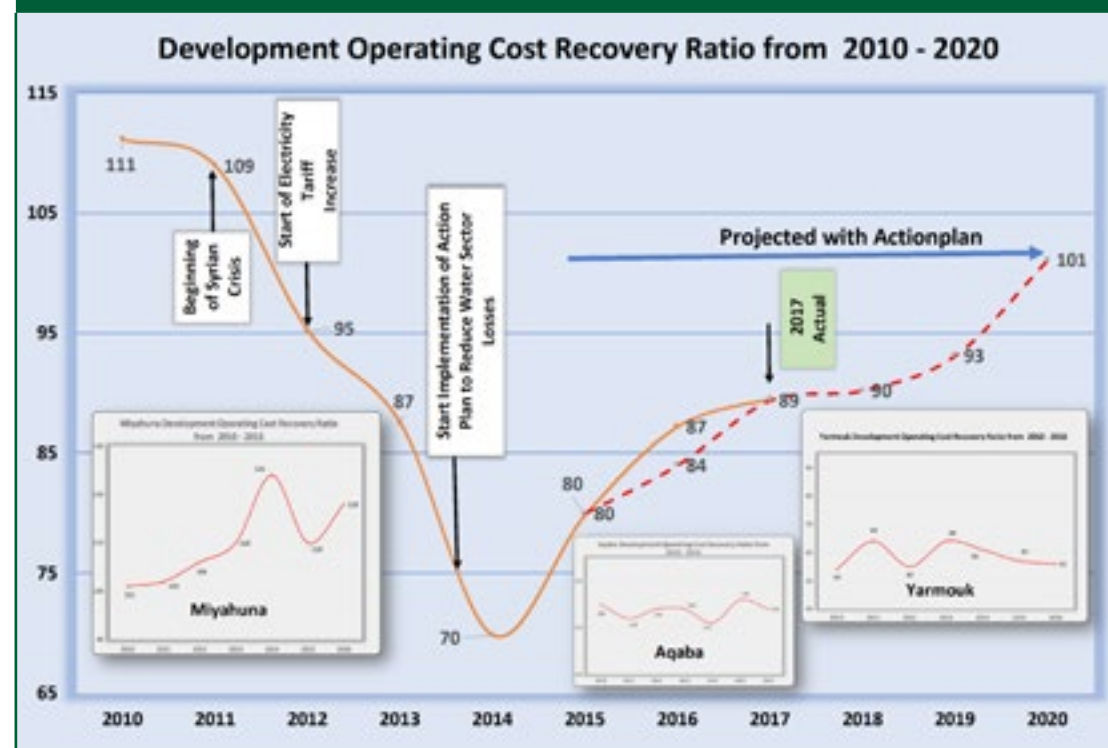
passing these onto consumers, including the Water Authority of Jordan (WAJ), the provider of municipal water services. With half the cost of municipal water service delivery driven by electricity for pumping and treating water and waste water, WAJ has struggled to cover the increase in electricity costs.

60. **Strong Government commitment to reforms in the water sector has led to some efficiency gains, partially absorbing these shocks.** In August 2013, the Government approved the Structural Benchmark - Action Plan to Reduce Water Sector Losses ('Action Plan'), to increase water sector revenues, thus enhancing cost recovery to cover operation and maintenance. The 'Action Plan' has become core to the policy dialogue and the resulting policy commitments in the water sector. With strong government leadership, the 'Action Plan' is supported analytically, technical and financially by a range of development partners. Since 2013, WAJ implementation of the 'Action Plan' has partially absorbed the above economic shocks through a combination of modest tariff increases, reductions in non-revenue water, replacing inefficient pumps and expanding renewable energy production. This progress between 2013-2017 led to improvements in the cost recovery ratio (figure 1). However, the positive projections after 2017 have not materialised due principally to increases in electricity costs and the need purchase additional bulk water.

62. **Despite making good progress in absorbing these shocks, the combination of increased electricity costs and the need to purchase additional bulk water has led to WAJ accumulating debt.** By the end of 2017 WAJ had accumulated JD 2.4 (US\$ 3.4) billion in debt as accounts payable to electricity companies, bulk water suppliers and as advances from MoF and larger annual deficits (Figure 10) and ultimately a JD 2.4 billion in debt (Figure 11).

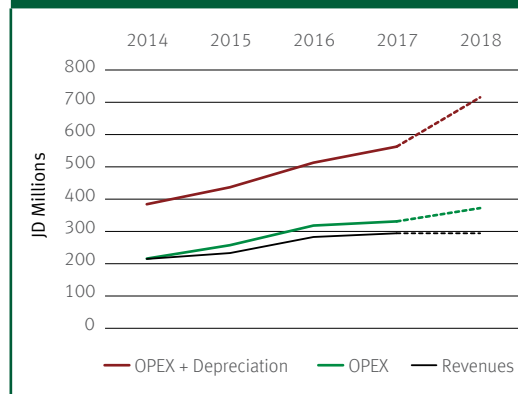
63. **At the end of 2017, the Ministry of Finance assumed WAJ's debt but further reforms are needed to ensure the financial viability of municipal water services.** In July 2018, a further 40 percent increase in

Figure 9: Evolution and planned trajectory of operating cost coverage ratio from 2010 to 2020



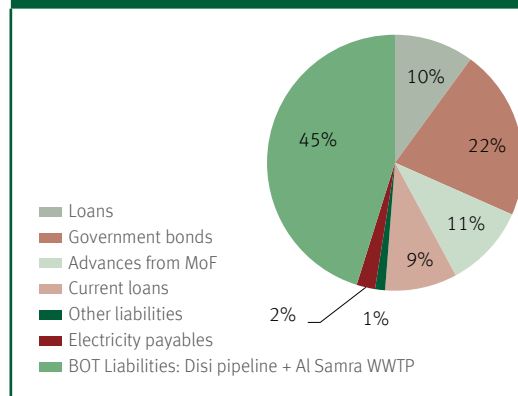
Source: MoWI 2017. Structural Benchmark - Action Plan to Reduce Water Sector Losses.

Figure 10: Consolidated revenues, operational expenditure and depreciation for WAJ and utilities



Source: WAJ audited financial statements.

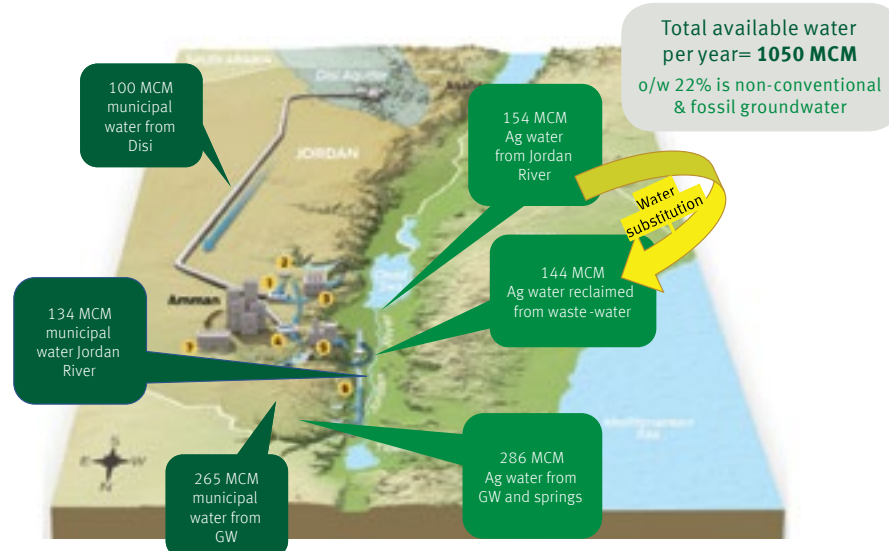
Figure 11: Composition of WAJ liabilities as at end 2017



Source: WAJ audited financial statements.

61. **Over the same period, coping with water scarcity in Jordan has required an expansion of bulk water production facilities, including the Disi Pipeline PPP, with high recurrent electricity costs.** The Disi Pipeline is a build-operate-transfer (BOT) PPP that pumps water from deep aquifers in the south of the country for 300 km to Amman over an elevation of 1000 m. The bulk water purchase of 100 million cubic meters a year from the Disi Pipeline has added significantly to the costs of municipal water supply. Though the pipeline was a necessary and appropriate response to water scarcity in Jordan, it has also added significantly to the operational costs of municipal water supply.

Figure 12: Jordan's 2016 water policy aims to increase the amount of water channeled from the Jordan River to municipal water and substitute this with an equal amount of treated waste-water for agriculture



Opportunities include:

- Reducing non-revenue in municipal water – currently 50%
- Reducing electricity expenditure for water pumping and treatment – currently JD 200m a year
- In turn, use savings from energy to compensate agriculture for reduced water use
- Increasing water substitution – currently 144 MCM a year – to avoid building a new desal plant
- Increasing control of year-round wastewater transfers for Ag productivity
- Improving aquifer management through better water accounting

Originally published in “IEEE Spectrum” Image © Emily Cooper 2009

the electricity tariff for water pumping created additional pressure on cashflow at WAJ leading to further accumulation of debt. By the end of 2018 this stood at JD 84 (US\$ 118) million in unpaid invoices to electricity distribution companies, the Disi Pipeline PPP and other contractors. These providers started charging WAJ and its utilities interest on unpaid invoices. The PPP commitments are underpinned by a sovereign guarantee and the Ministry of Finance is working with WAJ to prevent this cashflow constraint from escalating into disorderly debt accumulation and to push for further reforms in efficiency and cost recovery are needed.

- 64. Financially sustainable municipal water supply services are critical to Jordan's overall water security that underpins growth and job creation, including in the agriculture sector.** In line with Jordan's water reuse policy and along with investments in wastewater treatment,

such as the As Samra plant, Jordan is able to reuse fully treated municipal wastewater for irrigated agriculture. Jordan's success in advancing wastewater treatment had by 2017 enabled 164 million cubic meters of water to be reused. This is a 67 percent increase from 2007. Moreover, almost 91 percent of treated wastewater in Jordan is reused for agriculture. This critical link between municipal water services and irrigated agriculture currently relies on the financial viability of the municipal water supply services as the charges for agricultural water are very low. Policy actions to return municipal water services to financial viability, so that the sector can continue to support PPP projects, will include a combination of subsidy financing for WAJ and scheduled incremental increases in the municipal water tariff (see section on reforms)

B. State of Sector

- 65. Jordan ranks as the world's second most water-scarce country, thus, optimizing water allocation is a long-standing priority of the Government.** The per capita annual renewable water resource is about 105 cubic meters per capita, far below the threshold of severe water scarcity of 500 cubic meters per capita. This per capita water resources estimate does not even account for the Syrian refugee population hosted by Jordan. The country draws 60 percent of its supply from groundwater resources, which leads to unsustainable use (withdrawals greater than natural recharge). The first element for the optimization of the water allocation is to reduce groundwater overuse. Toward that objective, the Government increased groundwater tariffs and embarked on an aggressive anti-water theft campaign and strict groundwater licensing. A second element focused on the optimization of surface water resources. The Government has adopted several policies (see Figure 12) that aim to achieve more efficient use of existing surface water resources for municipal and agricultural water. The Government increased reliance on reuse of treated wastewater so that freshwater can increasingly be substituted by treated wastewater for farming and industry while allocating freshwater for drinking water. In spite of this chronic water scarcity, as of 2017, 95 percent and 90 percent of Jordan's population had access to piped water supplies in urban and rural areas, respectively.
- 66. Water services in Jordan are institutionally divided between water for municipal services and water for agriculture.** The Ministry of Water and Irrigation (MoWI) oversees both municipal water supply and sanitation (WSS) as well as irrigation. Jordan Valley Authority (JVA) manages irrigation. JVA is subsidized by the Government, which transfers around JD 35 (US\$ 50) million annually, whereas revenues amount to less than JD 10 (US\$ 14) million per year. Though accounting for half of the water sector's abstractions (around 400 MCM), irrigation consumes less than 2 percent of the electricity consumed by municipal WSS. Municipal

WSS is managed by three main utility companies: i) Miyahuna for the greater Amman area; ii) the Yarmouk Water Company for the north of Jordan; and iii) Aqaba in the south of Jordan. WAJ is the asset holding company for these three utilities and operates services in rural and small towns not covered by the three main utilities. WAJ is also the asset holding authority for the Disi Pipeline, which is a public private partnership with a bulk water supplier. The 25-year contract with Diwaco is a joint venture between a Turkish company (GAMA) and the US-based General Electric Financial Services. As the asset holding company, WAJ takes on all major borrowing for WSS, absorbs the annual losses made by the other three water utility companies and covers the bulk water purchases from the Disi pipeline.

C. Project Assessment

- 67. Project 1: PP18 — Aqaba-Amman National Water Conveyance Project (AAWDC Project)**
- The investment cost of this project is estimated at JD 1,100 (US\$ 1,551) million. The project aims to construct a desalinated water production facility in the Gulf of Aqaba and a pipeline to convey 150 million cubic meters per year system.
 - Given high operation costs, the financial ability of the sector to fund the project is limited; thus, external sources, grant, concessional financing or private sector will be needed. The design of the financing transaction will need to be adequately conducted and optimized to avoid risk of significant increase of cost.
 - There is a high need for the augmentation of the water supply for Amman; however, the current non-revenue water (NRW) is about 50 percent and needs to be urgently reduced for the AAWDC.
 - The environmental aspects related to the disposal of brines in the Gulf of Aqaba are critical.

68. Project 2: PP19 — As Samra Treatment Plant (third phase/second expansion)

- The investment cost of this project is estimated at JD 200 (US\$ 282) million. The project aims to expand the capacity of the As-Samra treatment plant from 365,000 cubic meters to 465,000 cubic meters per day. Additionally, the project will establish a solar power plant with 10 MW capacity and will serve the adjacent unserved communities with wastewater networks.
- Given high operation costs, the financial ability of the sector to fund the project is limited; thus, external sources, grant, concessional financing or private sector will be needed.
- There is a high need for the augmentation of the water supply for Amman; however, the current NRW is about 50 percent, and needs to be urgently reduced.
- The environmental aspects related to the disposal of sludge are important.

69. Project 3: PP20 – Non-Revenue Water (NRW) Reduction

- The investment cost of this project is estimated at JD 47 (US\$ 66.27) million. The project aims to develop appropriate techniques to reduce physical and commercial water losses in Amman through the preparation and implementation of a performance based non-revenue water (NRW) contract under a hybrid financing modality, including grants and private investment. This approach will start in Amman Governorate but will be rolled out to other governorates.
- This is a high priority project as the current NRW is about 50 percent and needs to be urgently reduced so that increases in water production such as the AAWDC, are not wasted.
- The opportunity for private financing contribution is high as typically the NRW projects have short to medium term returns on investment.

70. Project 4: PP21 — Hisban brackish water desalination

- The investment cost of this project is estimated at JD 35 (US\$ 49.35) million. The project aims to augment water sources by 10 to 15 million cubic meters per year and develop solar energy to provide about 15 Mw.
- While this can be a strategic project, the volume of water is limited compared to the above project. Given high operation costs, the financial ability of the sector to fund the project is limited; thus, external sources, grant, concessional financing or private sector will be needed.
- The environmental aspects related to the disposal of brine are important.

71. Project 5: PP23 — Al Ghabawi Wastewater Septic Tank Facility Project

- The investment cost of this project is estimated at JD 50 to 70 (US\$ 70.5 to 98.7) million. The project aims to construct a new septic tank facility to replace and relocate an existing facility currently co-located at Ain Ghazal Treatment plant due to odour, traffic, pollution and capacity concerns. The capacity will be 25,000 cubic meter per day. The proposed new replacement septic tank facility will be located at Al Ghabawi and is intended to serve the unsewered areas of Amman, Zarqa and the surrounding area.
- While this can be a strategic project, the volume of wastewater is limited. Given high operation costs, the financial ability of the sector to fund the project is limited; thus, external sources, grant, concessional financing or private sector will be needed.
- The environmental and social aspects related to the disposal of sludge are important.

D. Reform Needs

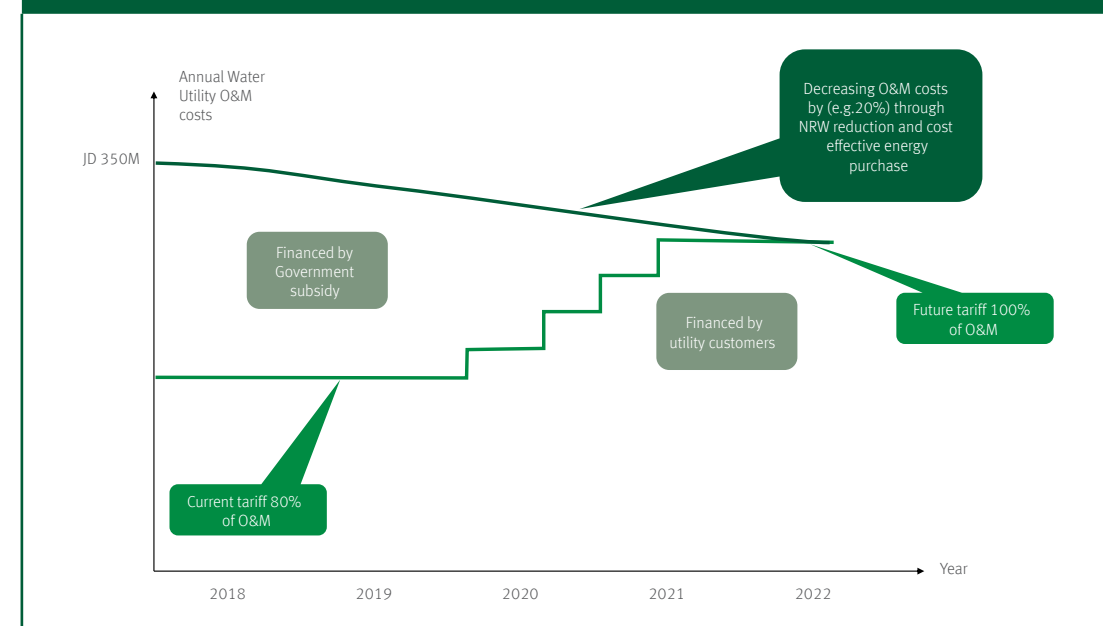
72. **Looking ahead, water sector reforms need to focus on the financial viability of the municipal water and wastewater services:** The electricity tariff for pumping water was increased to 140 fils/KWh in July 2018. This 40 percent increase in electricity costs has pushed WAJ and other utilities into a combined operating deficit of JD 12.5 million per month. For WAJ and its utilities to continue to provide uninterrupted services in 2019, a monthly subsidy will need to be transferred by the Government to WAJ to cover the increase in electricity prices and to pay down sector debt. In the medium-term, the increase in electricity costs will need to be passed through to water consumers to ensure that both the water and electricity utilities remain financially viable. In the short-term, however, additional analytical work and public consultation is required before implementing a water tariff increase. The analytical work required include (a) a tariff review and (b) a review of NAF targeting mechanisms and the extent of its coverage. These two studies will provide

options for both improving cost recovery of municipal water supply while protecting poorer households from those increases.

73. **Financially sustainable municipal water supply services are critical to Jordan's overall water security.** The goal of reforms and policy actions in the water sector is to return municipal water services to financial viability so that the sector can continue to attract new BOT projects that support the augmentation of water for municipal supply and treat wastewater for reuse in agriculture. Restoring financial sustainability to municipal water services requires a financing plan to sustain the viability of WAJ service delivery through a combination of subsidy financing (for deficit and debt) and scheduled water tariff increases supported by poverty and social impact analysis.

74. **This interim financing of WAJ's deficit and debt will enable small but steady water tariff increases to be made, smoothing the transition back to operations and maintenance cost recovery.** The debt that WAJ accumulated was short-term and at high interest rates compared to the finance

Figure 13: Implementing a financial sustainability plan for Water Authority of Jordan municipal water services through combination of tariff increases and reduction of operational costs



Source: World Bank staff.

that the Government is able to access. Government borrowing to refinance WAJ debt would provide short-term relief from the high interest rates that WAJ has been burdened with. In the medium-term, Government borrowing could also smooth the transition in bringing water tariffs back up to a sustainable level through small incremental tariff increases rather than by passing the increase in electricity costs through a one-time increase of 50 percent. The incremental increases would be made through the existing water tariff Input Indexation Factor over a three-year period from 2020 to 2022 (Figure 13). These tariff increases should be based on sound analytical work examining their poverty and social impact along with mitigation measures for the poorest and most vulnerable households.

75. **While WAJ is weaned off this interim subsidy, medium-term efficiency measures in the water sector would reduce the energy intensity of the sector and reduce non-revenue water.** Replacing old inefficient pumps and introducing renewable energy into the water sector was a good start to reducing energy costs. However, there is interest from both the water and energy sectors to identify further synergies including: (i) directly connecting heavy loads such as water pumping stations to the grid; (ii) time of day pricing for water pumping; and (iii) increasing water storage to reduce the need for 24/7 pumping. All these and other synergies require detailed technical analysis and planning based on improved data on water sector energy use. Providing experts to facilitate dialogue would help speed this process up by generating a series of projects that could be outsourced as performance contracts.
76. **Establishing an intersectoral committee MoWI, MEMR, MoAg at SG-level would facilitate actions such as optimizing energy-water linkages (e.g. time of day tariffs) and implementation of water substitution policy that generates treated wastewater for irrigated agriculture** (Figure 13). While a ‘soft’ policy action, it is seen as necessary to breakdown the policy silos that exist in government that are holding back innovation and intersectoral synergy. This intersectoral

committee would develop a plan with relevant stakeholders to reduce the energy intensity of municipal water services, which could bring a 20 percent reduction in the energy intensity of the sector over the next 4 years. This committee would also facilitate increasing control of year-round wastewater transfers for agricultural productivity and in improving aquifer management through better water accounting.

III. ENERGY



The 2019 PP contains a single project in the energy sector for a total investment of JD 1,140 (US\$ 1,600) million. The project PP3 is the Fourth Stage Expansion of Jordan Petroleum Refinery Company since current production is not sufficient to meet the growing demand in the Jordanian market. The Assessment recommends that this investment should be approached with caution. The attractiveness of Fourth Stage Expansion project would be critically dependent on securing Basra sweet crude through the proposed Basra-Aqaba oil pipeline and finding a strong strategic partner for the project.

Jordan should aim to reduce its dependence on imported fossil fuels and leap-frog to greater use of renewable energy (including for transportation) by leveraging its rich wind and solar energy resources. Investments in Concentrated Solar Power (CSP); strengthening Grid-Interconnection with neighboring countries (such as Egypt, Iraq, Saudi Arabia, Syria, Lebanon and Palestine); battery-based energy storage systems; energy efficiency measures; and an expedited transition to e-mobility are 'clean and green' projects that need significant investments.

A. Growth and Job Creation

77. **Since 2015, Jordan has achieved a strategic objective towards enhanced energy security.** Following the revolution in Egypt, interruptions in Egyptian gas supply, its sole source at the time for gas to operate power plants, forced Jordan to switch to more expensive and less efficient diesel and fuel oil. This, along with higher energy prices, had significant implications on Jordan's balance of payments leading to a 9.5 percent increase in imports and enlarging the trade deficit by almost 20 percent. In response, Jordan rapidly prepared and commissioned a Floating Storage and Regasification Unit (FSRU) to be deployed in Aqaba. By 2015, Jordan began receiving Liquefied Natural Gas via the FSRU in Aqaba establishing a key objective in energy security. However, for the bulk of its primary energy needs for non-electricity sector, Jordan remains dependent on imported fossil fuels. This

continues to impose an energy security risk as well as a balance of payment burden on the Jordanian economy.

78. **Jordan has emerged as a leader in private-sector owned renewable energy in the MENA region.** With more than 30 existing and upcoming renewable energy independent power producers (IPPs), Jordan has turned the energy security crisis into an opportunity. The total installed renewable energy capacity in Jordan is expected to exceed 2,200 MW by 2020. Electricity from renewable energy projects already accounts for about 14 percent of the total power generated and is set to achieve 20 percent by 2020. However, sustaining the pace of progress in renewable energy development hinges on the Government's ability to effectively integrate larger amounts of variable renewable energy into the grid.

79. **Efficiency improvements in the energy sector have been identified by the GoJ as a priority to support economic growth and job creation.** This translates into the following: reduction in overall cost of electricity, increased grid resiliency to high share of variable renewable energy, reduced dependence on imported fossil fuels, improved handling of excess contracted capacity, and a shift to more 'green-clean' energy. Specific approaches include: (i) setting up energy storage projects (hydro, thermal and battery storage) for grid stability; (ii) adding renewable energy capacity, which is 'schedulable' (concentrated solar power - CSP) and can help in load shifting; (iii) making transmission interconnections with larger grids (such as Egypt) for stability; (iv) retrofitting conventional power plants to allow flexible operation and shorter response time; (v) improved load despatch and control systems; (vi) renewable energy forecast systems; (vii) smart-metering for self-generating consumers to shift from net-metering to net-billing; (viii) faster transition to e-mobility and investments in charging infrastructure; (ix) enhanced energy trade with neighbours for import of cheaper piped gas and export of surplus electricity; as well as (x) demand side management initiatives. The projects

related to these approaches need to be the focus for Jordan's priority investment program over the next few years.

B. State of Sector

UPSTREAM PETROLEUM SECTOR

80. **Import of fossil fuels imposes a significant burden on the Jordanian economy.** Unlike its neighbours who have large fossil fuel reserves, Jordan is dependent on import of fossil fuels for all its non-power energy needs, as well as for bulk of its electricity generation needs. Jordan imports crude oil, refined distillates, including gasoline and diesel for transportation, and natural gas, which is imported through pipelines as well as via the LNG terminal in Aqaba. Import of fossil fuels imposes a significant burden on Jordan's balance of trade, while exposing the economy to significant energy security risks.

81. **Jordan should leap-frog to use of domestic renewable energy for transportation and expedite transition to e-mobility.** Oil shale projects are often viewed as a strategic solution to Jordan's critical dependence on energy imports. Jordan is among the ten largest oil shale endowed countries in the world. Economic attractiveness of such projects is likely to face pressure from lower global crude oil prices, fast reduction in global renewable energy prices, and transition towards e-mobility. Further, oil shale projects are environmentally harmful. Therefore, Jordan should consider leap-frogging to renewable energy by leveraging local high-quality wind and solar resources. Investments in concentrated solar power (or solar heat) and energy storage systems, and a faster transition to e-mobility can help transition to domestic clean sources of energy.

DOWNSTREAM PETROLEUM SECTOR

82. **Downstream petroleum refining and supply business is largely commoditized.** Jordan drives its petroleum supplies from Jordan Petroleum Refinery Company's plant at Aqaba as well as from imports. With no domestic production of crude oil, Jordan is dependent on crude oil imports via Aqaba port, where it receives crude oil as well as final distillates (diesel and gasoline). With no specific strategic advantage in the petroleum arena, Jordan faces the commoditized supply of crude as well as processed fuels. As such the import dependence of the downstream petroleum business does not pose a strategic bottleneck to economic growth and business competitiveness of Jordan.

ELECTRICITY SECTOR

83. **Jordan has a steady track record of electricity sector reforms.** As a result, the country today has an unbundled, single-buyer electricity market structure, an independent regulator, private sector participation in electricity generation and distribution, and significant installation of renewable energy capacity. This institutional set-up and asset base remained strong despite the strains caused by a major disruption in piped natural gas supply in 2011 and the lack of pass-through of the resulting fuel price increases. The electricity sector has since achieved cost recovery from tariffs by developing the LNG port at Aqaba to reduce fuel costs and by increasing tariffs under a structured plan. Further, an Automatic Tariff Adjustment Mechanism and a NEPCO Debt Management Plan were adopted to ensure continued financial sustainability. Jordan has also been continually taking measures to enhance its energy security. It has diversified LNG imports across multiple supply contracts and signed agreements to obtain piped natural gas from Egypt and the Leviathan. Further, Jordan is rapidly developing its domestic energy resources, including wind, solar and oil-shale projects to reduce its dependence on energy imports.
84. **Relatively high cost of electricity has been identified as a bottleneck to faster economic growth.** This is evident from prevailing high electricity tariffs for business consumers and institutions. Many have opted to self-generate electricity using solar photovoltaic systems, while availing the grid for capacity back-up, electricity-banking and balancing needs. Jordan is making efforts to reduce the cost of electricity by securing cheaper piped gas from Egypt and other sources, as well as by developing more domestic wind and solar energy resources. In addition, Jordan is planning policy actions to address large cross-subsidy in tariffs, which results in substantially high tariffs for businesses.
85. **The success in securing large quantities of renewable energy is now posing a concern for grid stability.** Jordan has been extremely successful in developing

a strong renewable energy sector, going through three rounds of bidding process. The price of renewable energy has seen a sharp decline across these three rounds, with price of electricity from solar photovoltaic (SPV) projects dropping from \$0.16 per kWh in 2013 (Round-1) to \$0.025 per kWh in 2018 (Round-3), compared to an average cost of generation paid by NEPCO today of about \$0.10 per kWh. However, a large share of variable renewable energy would make the grid unstable. Measures to enhance grid-stability and increase the share of domestic schedulable renewable energy are needed to address this challenge going forward.

C. Project Assessment

86. Project 1: PP3—4th Expansion of Jordan Petroleum Refinery Company (JPRC):

- The investment cost of project PP3 is estimated to be JD1,140 (US\$ 1,608) million. The project involves a Fourth Stage Expansion to the Jordan Petroleum Refinery, since current production is not sufficient to meet the growing demand in the Jordanian market.
- The viability of this project may be significantly enhanced by securing Basra sweet crude through Basra-Aqaba oil pipeline. Therefore, in case Jordan and Iraq can make tangible progress on the Basra-Aqaba oil pipeline, an expansion of the refining capacity may be considered to leverage the cheaper Iraqi oil. An earlier quick assessment of the options ahead for the Jordan Refinery identified two main scenarios for the Fourth Stage Expansion. In the scenario of low-cost secure supply of Iraqi crude via the pipeline, the study projected that the expansion would be inherently attractive, as Zarka will enjoy a US\$ 4 per barrel inland differential worth US\$ 170 million annually or US\$ 1 billion NPV. However, if this crude supply scenario does not materialize, aggressively optimizing the Fourth

Stage Expansion will be critical to achieve the minimum acceptable economic threshold for the project.

- The Jordanian Government is engaging closely with the Government of Iraq to secure crude (for transportation using trucks initially), as well as to initiate the design of Basra-Aqaba oil pipeline. However, the pipeline itself may take a long time to materialize. This dilutes the business case for priority investments in fourth stage expansion of Jordan Refinery, at least over the short term.
- Inadequate refining capacity does not pose a critical bottleneck for Jordan's economic growth or job creation. Refining margins are typically very thin globally and there is surplus refining capacity available in many countries. Further, Jordan does not have any strategic advantage in this sector in terms of having domestic oil resources, a large market, or technical knowhow to efficiently distil inferior crudes.

still better policy measure would be to include the energy sector projects under the PPP law.

89. **Additional reforms needed in the electricity sector.** These include (1) the introduction of cost-reflective wheeling charges for open access consumers (self-generation and third-party generation); (2) restructuring of electricity tariffs to rationalize cross-subsidy; (3) income-based targeting of subsidies for the poor and vulnerable consumers; (4) enhancing regulatory practices to meet global best practices; and (5) accounting and functional separation of NEPCO into Strategic Business Units (SBUs) for greater transparency and performance accountability.

D. Reform Needs

87. **Integrated National Energy Strategy (INES) and Electricity Master Plan (EMP):** There is a need for developing an 'Integrated National Energy Strategy (INES)'. The INES strategy should consider least cost and risk responsive approaches to address energy security concerns, strengthen business competitiveness and establish Jordan as a regional pioneer in the global transition towards more sustainable and clean energy.
88. **Mandatory competitive procurement of all energy sector projects:** Many of the projects in the energy sector have been bilaterally negotiated and awarded. These projects could involve suboptimal project selection, design, pricing and risk allocation. To address this problem, the World Bank has suggested that MEMR and EMRC are mandated under a cabinet directive to adhere to competitive selection for all future energy projects following the global best practices in procurement. A

IV. TRANSPORT



The 2019 PP contains 2 separately classified projects in the transport sector for a total investment of about JD 242 (US\$ 341) million. The King Hussein Bridge (PP36) is assessed as a priority for the short term, while Marka Airport (PP27) is assessed as needed for the medium term. These projects can be implemented by the private sector following the application of key sector reforms with minor public-sector investments. The Assessment also finds that indicated investment costs for both projects are reasonable. One additional project, the Amman Development Corridor Phase 2, is suggested as a priority that can be implemented within the coming few years as a Public Private Partnership (PPP).

A. Growth and Job Creation

90. The transport sector¹¹ contributes to over 10 percent of GDP while employing about 7.2 percent of the work force. The transport sector has consistently shown that it can be a major creator of employment opportunities in Jordan, especially for the disadvantaged and low-skilled (truck drivers, taxi drivers, workers at the airports, construction worker etc.). It can also be a major contributor to increasing female participation in the labor force.

91. Investments in key transport infrastructure including roads, airports, ports and railway should be looked at with a broader lens to understand the importance of the economic, public safety and environmental benefit. In addition to providing enhanced local and regional connectivity, and creating short term jobs during construction, key transport infrastructure leverage additional economic activities. Moreover, benefits would be extended to public safety and in particular to traffic safety, reducing loss of life and economic losses associated with fatalities and injuries; economic and environmental benefits would also be secured from relieving traffic congestions and associated losses from travel delays. In fact, these investments stimulate local economies, reduce costs of trade

11 Including aviation, public transport, marine, railways and roads

and create long term employment in maintenance for roads, and in operation and maintenance for airports, ports and railways, as well as related services.

92. Jordan has the potential to be a major trade and transport hub. Jordan has a geostrategic location and can be the gateway between Asia and Europe, as well as Turkey and the GCC. Jordan played a key role in regional trade until the beginning of regional turmoil, the resultant closure of the borders with Syria and Iraq and the imposition of stringent border crossing regimes with Saudi Arabia. These measures had a toll on the Jordanian economic activities in general and on the logistics and freight industries in specific. While the transport and logistics sectors can play a major role in the development of new export opportunities and reduction in import costs, transport infrastructure is the backbone on which transport and logistics services operate. Competitiveness and efficient logistics services are key for enhancing manufacturing and trade, as well as associated employment.

93. Improved public transport will likely result in reduced household expenditures and an enhanced labor force that will be more accessible to women and youth. Poor households' expenditures on transport were about 15 percent of the total in 2010,¹² and this has certainly increased after the removal of fuel subsidies. The fragmented public transportation is resulting in longer and more costly trips, impacting women in particular due to their childcare, household responsibilities and associated travel patterns. It is also impacting youth and it represents, on average, about 23 percent¹³ of employed youth salary. On another note, women tend to avoid public transportation due to personal safety concerns; about 40 percent¹⁴ of the surveyed public transport users reported

12 Review of the Transport Sector of the Hashemite Kingdom of Jordan, World Bank, 2014.

13 USAID, International Youth Foundation, and the Ministry of Social Development, 2014, *Transport Services and their Impact on Youth Employment and Development in Jordan*.

14 USAID, International Youth Foundation, and the Ministry of Social Development, 2014, *Transport Services and their Impact on Youth Employment and Development in Jordan*.

to have been subjected to harassment. In this context, when only 14 percent of women are currently involved in the labor force in Jordan as compared to 19 percent average for Middle East and North Africa, there is an obvious association between enhanced transport services, women's mobility and labor market outcomes, with the latter being the cornerstone of Jordan's reform agenda.

B. State of Sector

94. Investments in transport infrastructure are needed to align with international comparators of middle-income countries. Despite Jordan's investment of about US\$ 1.7 billion over the last 5 years, it remains less than 1 percent of GDP annually, compared to between 1 and 3 percent of GDP in middle income countries. Such investments require adequate financial allocations for maintenance to sustain the longer-term benefits. The neglect of such allocation will likely result in increased future costs as for every US\$ 1 spent in routine maintenance, US\$ 3 to 4 are saved in road rehabilitation cost. Moreover, this will cause an increase in the cost of movement of goods and people as they access services. It will also cause a deterioration of traffic safety and an increase in traffic related injuries and fatalities. As infrastructure development requires substantial budgets in construction and then recurring budgets for maintenance, and taking into account the fiscal situation in Jordan, PPPs are a solution for developing new infrastructure, and then operating and maintaining it for a long period of time.

95. Despite progress in recent decades, Jordan has not enjoyed full benefits due to inefficient and costly freight transport sector. The closure of the borders with Syria and Iraq, as a result of the heightened security, has resulted in a decrease in demand for the trucking industry, and hence an excess supply. Several actions have been introduced to safeguard the sector and in particular the truckers' livelihoods, but this has impacted competition and cost.

96. The refugee-induced abrupt population growth and associated rise in demand for transportation was difficult to meet by a corresponding development in public transportation, resulting in reduced public transport infrastructure and limited transport network. There are several government initiatives including the development of a Bus Rapid Transit (BRT) within Greater Amman Municipality (GAM) and extended to serve commuters from Zarqa, the second largest city in the Kingdom. Public transport strategies are also being developed for Irbid, Madaba, Zarqa and Salt with a clear implementation program. These programs also aim to coordinate the transport services, which are currently limited to buses and taxis operated by small sized companies and individuals. They will also contribute to alleviating longer, more expensive trips and unreliable and uncoordinated schedules, for many underserved urban and peri-urban areas.

C. Project Assessment

97. Project 1: PP36 – King Hussein Bridge (KHB) crossing terminal and truck yard

- The investment cost of the project is estimated to be JD 100 (US\$ 141) million. KHB crosses the Jordan River and connects Jordan to the West Bank, serving as the sole international entry/exit point for close to 3 million Palestinians living in the West Bank and East Jerusalem. KHB also processes a significant amount of trade in and out of the West Bank given that it serves West Bank businesses that import and export to and from Jordan and the wider region (to Aqaba Seaport, Queen Alia International Airport (QAIA), GCC, etc).
- The current KHB facility has become inadequate and is no longer capable of handling the increased number of passengers (2.6 million people traveled through KHB in 2017) and cargo volume (60,000 loaded truckloads passed the bridge in 2017) flows. The implementation of PP36

will enhance the efficiency and reduce processing time to enter and exist Jordan to the West Bank.

- KHB modernization and privatization will create sustainable employment for both high skilled and low skilled labor in logistics, IT, handling, security, services and ancillary activities.
- It is expected that investors (national and international) will be interested in investing in this border crossing. Similarly, this can be a first example of a PPP in border crossings in Jordan, and can be replicated on the borders with Iraq, and then potentially with Syria and Saudi Arabia.
- The historic growth track record is very strong, and this is occurring despite the fact that trucks and bus passengers are usually spending long hours moving across the borders. Unless there are major geopolitical changes in the region, the traffic is expected to continue growing, especially with an enhanced travel experience.
- Two major success factors for the project are: (i) ensuring a reasonable allocation of risks, and (ii) ensuring a good structuring of the PPP agreement.
- Necessary political enabling measures must be in place for this investment to pay off.
- The estimated investment cost of JD 100 (US\$ 141) million for the development of King Hussein Bridge and its related infrastructure seem to be reasonable.

98. Project 2: PP27 – Marka Airport

- The investment cost of the project is estimated to be JD 114-119 (US\$ 161-168) million. While the development of the Marka Airport is potentially a good project, it is not yet considered a priority. In fact, Queen Alia International Airport (QAIA) currently services 7.6 million passengers and has the capacity to serve up to 12 million passengers, expected in 8 to 10 years' time.

- Considering the limited capacity and resources for large scale project implementation, it is suggested to focus in the coming two years on enhancing key priorities in the transport sector, mainly freight transportation and logistics as well as public transport as they have direct impact on jobs and growth in the short term.
- In the medium term, Marka Airport can contribute to a reduction in the cost structure through the introduction of low-cost airlines and through streamlining procedures for transport of goods. It can potentially be an enabler for increasing exports. Investments by low cost airlines and logistics companies attracting foreign direct investment can be envisaged for the PPP.
- As Marka Airport's objective is to attract low costs as well as freight transportation, and as QAIA hasn't reached its capacity, the impact on growth will not happen immediately after implementation, and sustainability without public support will be moderate in the first few years.
- The estimated investment cost of JD 114-119 (US\$ 161-168) million is reasonable for an existing airport which needs to be rehabilitated and modernized.

99. The team also recommends the prioritization of Amman Development Corridor (Ring Road).

- The Amman Development Corridor (ADC) has a total length of 118 km out of which a first phase of 40 km has been built between the Airport HWY and Zarqa. This development has proven to have a very successful impact in terms of reduced travel time and cost, enhanced access to jobs and enhanced productivity. In addition, jobs have been created along the corridor catering to the poor residents living on the outer skirt of Amman and has opened up inexpensive vacant land for investment and development.

- The ADC Phase II is a continuation of Phase I; it is a 50 km highway linking the Airport Road to Jerash Road and going through Dead Sea Road and Salt Road. It will divert traffic away from the center of Amman and reduce traffic congestion and pollution along the primary urban corridors. In addition, ADC Phase II is expected to generate similar benefits of the existing Phase 1.
- This corridor will facilitate movement of goods from factories in Irbid, Salt and other locations in North West Amman towards QAIA, Aqaba Seaport and other border crossings with neighboring countries.
- This project will likely require public sector investments for expropriation and possibly to cover a proportion of the construction cost.
- The implementation of the ADC as a PPP would be a first step towards implementing tolling in Jordan and will serve as a pilot for the government as well as for users. This will secure the sustainable financing to maintain the key transport corridors.

100. The team also recommends the prioritization of the Urban Transport Project.

- The Urban Transport Project is clearly a strategic priority for Jordan as it has a significant impact on the economy as well as mobility and access to employment and services. The lack of an adequate, reliable and affordable public transportation is weighting on the household expenditures and is hindering the employability of women and youth.
- This project is expected to have long term economic and social return. The economic benefits are mainly: (i) reduced costs of transport, (ii) reduced travel time, (iii) reduced costs of congestion, (iv) reduced costs of environmental impact, (v) enhanced efficiency of workers, and (vi) creation of sustainable jobs in the public transport industry. This project will also allow for better mobility and access to jobs, education and health facilities.

- Enhancing the mobility improves the productivity, and therefore boosts the interest of foreign companies in establishing offices in Jordan. The Urban Transport Project also creates an opportunity to establish a private sector bus leasing company that supplies modern and environment friendly bus fleet, reducing health and medical related expenditures.
- The implementation of the Urban Transport Project might require investments in infrastructure, and short-term government support to public transport operators. However, this project should be sustainable without any public-sector contribution in the long term, while providing economic and social benefits.
- An estimated budget for each governorate is being studied by EBRD. Based on their preliminary assessment, the costs of implementation for the cities of Irbid, Madaba and Zarqa is 30 Million JD in fleet, 29 Million JD in infrastructure development and 0.5 Million JD for the ticketing system. For the city of Irbid, the needed investment is 16.5 Million JD for the renewal of buses, and 14.6 Million for infrastructure development.

D. Reform Needs

101. Reforms are needed for enhancing the quality of the road infrastructure in Jordan, and reducing future costs for rehabilitation. These include: (i) promoting PPPs for the development of key trade corridors; and (ii) introducing routine maintenance (Performance Based Contracts) to preserve the value of the assets, and generate opportunities for regular employment over an extended period of time.

102. Reforms in the freight transportation and logistics are needed to support reducing costs on the key trade corridor Aqaba-Amman. These include: (i) updating and revising the current incentives for fleet renewal, and implementing a scrapping program based on global best practice; (ii) carrying out competition advocacy

activities with associations along the transport & logistics value chain; (iii) enhancing the way bill; (iv) relaxation of regulations that are designed to spread demand between more operators than are needed; and (v) eliminating minimum prices for trucking services.

- 103. Reforms in the Public Transport Sector are needed to enhance the accessibility and employability of women and youth.** These include: (i) piloting new public transport service agreements with consolidated operators to ensure KPIs on quality, safety and reliability of service; (ii) revising the fare structure in the view of implementing an integrated fare collection system including flexible ticketing system for off-peak and multiple use to accommodate travel patterns of women and operation subsidies for poor and vulnerable group of population; and (iii) renewal and modernization of buses could also be facilitated through the creation of a privately-owned bus leasing company, considering the introduction of electric clean energy buses (CNG, LNG, or Electric to benefit from the excess electricity supply by 2020).

V. INFORMATION AND COMMUNICATION TECHNOLOGY



The 2019 PP contains a single classified project in the information and communication technology sector for a total investment of about JD 100 (US\$ 141) million. This project (PP34) proceeds with the rollout of a nationwide fiber-optic, high-speed network in support of e-learning, e-health and governmental e-services. PP34 is assessed as a priority and, under a PPP set up, can immediately commercialize current spare capacity and significantly expand the network to provide commercial wholesale services to other service providers.

A. Growth and Job Creation

104. With a GDP contribution worth around 12 percent, information and communication technology (ICT) has witnessed significant growth over the years, becoming an increasingly strategic sector for the economy. The services sector is the main source of employment opportunities for Jordanians, generating 60 percent of the around 54,000 new jobs (net) created in 2017. In 2016, 4.7 percent of total exports (amounting to US\$ 648 million) was also attributed to the ICT sector. A year earlier, in 2015, IT revenues reached more than US\$ 600 million, while the telecom sector's total revenues reached more than US\$ 1.35 billion.

105. The Hashemite Kingdom of Jordan identified digital development as a high priority for the country's social and economic development. Jordan formulated a comprehensive digital economy strategy, Reach 2025,¹⁵ with a vision to "have a digital economy that empowers people, sectors and businesses to raise productivity and ensure growth and prosperity, creating a highly attractive business destination for investments and international partnerships." Jordan also committed to the launch of the World Economic Forum "Internet for All Initiative." This initiative aims at ensuring inclusive digital development and focuses on creating opportunities for economic growth and jobs across the Kingdom. It also focuses on digital government

and using digital infrastructure to increase work efficiency, improving work mechanisms and promoting socio-economic development.¹⁶

B. State of Sector

106. The potential of technology-enabled services is still largely untapped in Jordan and may significantly contribute to increasing export revenues. Political stability, proximity to the Gulf Cooperation Council (GCC) market, bilingual university graduates, good infrastructure, tax exemption on sales, and custom exemptions on imports are competitive advantages for the Jordanian market. To leverage the competitive advantages of Jordan, key global businesses moved their operations to invest and serve the MENA region out of Jordan. Examples of these businesses include Amazon, Cisco, Microsoft and Expedia, all of which recruited hundreds of highly qualified Jordanians and trained them to deal with complicated cases around the globe. Private companies specialized in information technology outsourcing (ITO) and business process outsourcing (BPO) have expanded their operations in Jordan over the last decade to service regional and international clients. Key examples include Aspire, which is specialized in ITO services and targets the US market (retains 275 Jordanian employees); Extensya, which provides support to Vodafone, Saudi Airline, MBC and others (retains 1700 Jordanian employees); and Crystal, which is a call center that supports regional operation (retains 1000 Jordanian employees).

107. With a growing pool of talented Jordanians and relatively low running costs, Jordan is regarded as an ideal testing ground for any startup. Home to more than 600 tech companies, of which at least 300 are startups, Jordan continues to leverage its close-knit network of partners to promote the country as an ideal location to launch a business. The country has continuously

strived to develop internet infrastructure to make way for the robust diffusion of technologies to all sectors, undertaking projects such as the National Broadband Network. For these reasons, new generations of innovative entrepreneurs are continually emerging and coming up with more out-of-the-box ideas suited for the region.

108. Jordanian mobile and fixed broadband connections are adequate compared to the Arab region, however there is still room for development to catch up with developed economies in Europe and the US. While the usage of internet by individuals in Jordan (53.4 percent) is above the global average (44 percent), internet speed is below; in June 2018, average download speed in Jordan was 14.4Mbps, compared to 23.5Mbps globally. Jordan also has a fixed broadband download speed (21.6Mbps) that is lower than the global average (46.1Mbps download average in June 2018). Meanwhile, more than 75 percent of Jordan's population have access to mobile broadband (Q4 of 2017). Internet penetration reached 87.8 percent in Jordan, which is way above the Middle East average of 64.5 percent¹⁷. Jordan is classified as a Fast Grower market by GSMA.

109. There is currently a private fiber-optic MPLS network owned by GoJ, designed for the connectivity of all governmental entities to serve more than 4,000 nodes governmental institutions and entities across all areas of Jordan. The GoJ already invested \$US 200 million in a 6500 km country-wide fiber-optic MPLS network with a 10 Gb/s DWDM optical ring structure and point-to-point Giga Ethernet (GE) over fiber link technology to provide high availability and sufficient scalability for future use.

C. Project Assessment

110. Project 1: PP34 – Jordan National Broadband Network (NBN)

- The investment cost of the project is estimated to be JD 100 (US\$ 141) million. This project finalizes the rollout of a nationwide fiber-optic high-speed network, originally designed to connect all public educational entities, governmental entities and healthcare entities, and aimed at supporting the introduction and enhancement of e-learning, e-health and governmental e-services. Completion of the NBN rollout is expected by 2021 and in its final stage will feature 3,268 connected entities, 2,840 km of ring fiber cable, 4,200 km of access fiber cable and 130 Aggregation Sites.
- Since the NBN holds significant excess capacity the Government is evaluating options to commercialize this spare capacity through a PPP. The envisaged PPP setup will continue to provide connectivity and security services to the Government, which will be provided free of charge. The PPP can immediately commercialize current spare capacity and, with limited incremental investment, significantly expand the network to provide commercial wholesale services to other service providers. The service portfolio includes national and international leased lines and connectivity services, mobile backhaul, fiber-to-the-home connectivity as well as Value-Added-Services.
- The PPP is expected to invest an additional JD 100 (US\$ 141) million over 10 years. Revenues are projected to reach JD 45 (US\$ 63.5) million per year and EBITDA margin will reach 40 percent. The expected NPV is JD 22 (US\$ 31) million with an IRR of 13 percent and a payback period of 10 years. The largest portion of revenue contribution is projected to come from wholesale fiber access services (53 percent) followed by mobile backhaul (24 percent), Value Added Services (16 percent) and Leased Lines (7 percent).

¹⁶ <https://english.aawsat.com/mohamed-al-daameh/business/technology/world-economic-forum-launches-internet-initiative-jordan>

¹⁵ <http://www.reach2025.net/>

¹⁷ Source: Internet World Stats.

D. Reform Needs

111. To broaden the base of digital economy in Jordan, the Government has set an action plan (Reach 2025) to transform Jordan into a digital economy, creating a highly attractive business destination for investments and international partnerships. The Ministry of ICT has started initial steps in implementing the digital economy action plan by working on the following reforms:

- i. Approving the lease-out of the NBN through a PPP model;
- ii. Enacting the Data Privacy Law to enable access to unclassified data for businesses;
- iii. Championing digital payments by implementing a new policy that transforms all national aid, bread subsidies, transport, and health payments into digital modes during by end of 2019;
- iv. Leading a participatory approach to identify and tackle legal and regulatory constraints facing entrepreneurs, and
- v. Coordinating with relevant entities to enable digital ID and e-KYC implementation.



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VI. EDUCATION

The 2019 PP contains a single education project for an investment of about JD 88 (US\$ 123) million. The project (PP70) is a pilot to construct 15-20 schools through the private sector using a Build, Finance, Operate, Maintain and eventual Transfer (BFOMT) model. This would be in support of the Jordan Schools Program to build up to 300 new schools over the next decade. The Assessment finds that the project is aligned with the strategic objective of improving the physical learning environment in Jordanian schools. It is one of several initiatives the Ministry of Education is currently engaged in to leverage public-private partnerships to improve access to education. A thorough comparative analysis focused on education outcomes and cost-efficiency is recommended to be conducted prior to scaling up, considering the implications on public finances. The estimated investment cost of PP70 is assessed to be high.

A. Growth and Job Creation

- 112. Investment in human capital is critical for increased productivity and growth.** Based on Jordan's Human Capital Index (HCI), a child born in Jordan today will be 56 percent as productive when they grow up as they could be if they enjoyed complete education and health. Investments that would lead to increases in learning outcomes are critical to higher productivity for the Jordanian labor force. This is true especially so for men since boys are approximately one year behind girls in terms of learning-adjusted years of schooling.
- 113. The education sector is a key enabler for greater female labor participation.** Despite higher learning outcomes for girls than boys, female labor participation in Jordan is extremely low (at 14 percent in 2018) preventing the country from leveraging a significant part of its population for stronger economic growth and productivity. The education sector in Jordan can support in unleashing this potential through: (i) the expansion of early childhood education, which provides both skilled jobs for women and childcare options for working women; and (ii) stronger support for girls' careers

aspirations through reform of educational content and targeted teacher professional development.

- 114. Education sector is essential to close the skills gap in the labor market.** The Jordanian education system, including higher education and Technical and Vocational Education and Training (TVET) can support growth through a stronger alignment between skills and labor market needs. A new TVET law is currently being discussed in Parliament.

B. State of Sector

- 115. Jordan has made great strides towards improving education services to all children.** In 2016, the 10-year National Human Resource Development Strategy (NHRDS) was launched and the Ministry of Education (MOE) translated the strategy into an Education Sector Plan (ESP), finalized in 2018 with broad support from local and international partners and donors. The strategy targets critical elements in development including equity, increased efficiency and sustainable growth through investment in human capital. It also builds on significant achievements accomplished by Jordan during the past two decades in ensuring near universal enrollment in primary education.
- 116. Jordan is committed to investing in human capital starting with the early years.** The NHRDS recognized the importance of investments in Early Childhood Education (ECE), where enrollment in Jordan is still low¹⁸, leading to poor school readiness, particularly for children from poor households. Since 2016, the MOE has opened new Kindergarten 2 (KG2) classrooms raising enrollment in KG2 by 3 percentage points as of December 2018. The MOE has also been working on improving foundational literacy and numeracy skills of primary school children through the Early Grade Reading and Math Project (RAMP). A new National Center for Curriculum Development was established

¹⁸ Enrollment in ECE is at 65 percent for 5-year-olds, 15 percent for 4-year-olds and 6 percent for 3-year-olds.

in 2017 to reform the curricula starting with the introduction of new science and math curricula in Academic Year 2019/2020.

- 117. The Jordanian education system has shown great resilience by absorbing a large number of Syrian refugees in public schools.** Jordan has enrolled more than 130,000 Syrian refugee children in public schools as of December 2018, which corresponds approximately to 10 percent of the public education student population. The increase in enrollment has exacerbated a supply shortage of public schools and increased overcrowding in classrooms, leading to the operation of an increased number of second shifts in schools and the reliance on rented schools. These factors are major obstacles to the Jordanian Government's efforts to improve the learning environment in public schools and consequently the student learning outcomes. For example, double shifts in schools constrain instructional time for students in both shifts and large class sizes make the school environment less conducive for learning. The Government of Jordan estimates that in order to meet the demand for education services, it will need to construct 600 schools in the coming decade.
- 118. Jordan has been working on innovative tools for leveraging the private sector for improvement in access to education.** Through support from the World Bank Group, the Government of Jordan is conducting several technical assessments for different models of public-private partnerships for the provision of education services. These include the use of impact bonds as financing instruments, the introduction of vouchers for private schooling, the reform of licensing requirements for private education providers, and the construction and operation of schools by the private sector prior to the transfer of those schools to the government.
- 119. Jordan is committed to reform TVET to increase alignment between skills development and labor market needs.** A new law is being drafted for reforming TVET, which will place a larger emphasis

on the relationship with the private sector, in addition to financing skills development in critical sectors and in lagging regions.

C. Project Assessment

120. Project 1: PP70 – Support to the Jordan Schools Program to build up to 300 new schools over the next decade under a PPP scheme

- The investment cost of the project is estimated to be JD 75-100 (US\$ 106-141) million. The proposed project is a pilot to construct 15-20 schools through the private sector using a Build, Finance, Operate, Maintain and eventual Transfer (BFOMT) model. The MOE is expected to provide land for schools and teaching services while the private sector will be responsible for financing, building and providing non-pedagogical services (i.e. facilities management) under a long-term concession contract.
- The project is aligned with the overall strategic objective of improving the physical learning environment through replacement of second shift and rented schools and the reduction of class sizes, particularly in the most vulnerable regions of the country. Still, it is imperative to utilize limited resources on quality of education investments by prioritizing investments in early childhood education, teacher professional development, school leadership strengthening, and quality assurance and accountability systems. Quality improvement reforms are critical for the project to have an impact on growth and productivity.
- Given the limited fiscal space, it is essential that the technical assessment and the pilot be accompanied with an evaluation component for outcomes, including cost-efficiency. There are several impediments to the sustainability of the proposed project, including the lack of availability of land for construction and the teachers' recruitment and management practices in the public sector. Jordan is

planning to launch in the coming two years, several initiatives focused on increasing access through partnership with the private sector. In addition to the project proposed, a technical assessment for an impact bond targeting access to early childhood education is being undertaken and is expected to be completed by June 2019. Moreover, the Ministry of Education is procuring technical assistance to conduct a feasibility study for different types of voucher systems as one of many potential PPP solutions being considered. It is essential that a comparative analysis of all these instruments is conducted before scaling up, especially that all of them carry a burden on the public finances in either the medium or long-term.

- The investment cost of the project is proposed to be JD 75-100 million, with a median cost of JD 88 (US\$ 124) million for the construction of 15-20 schools as a pilot. The costing seems to be higher than the benchmark, as initial cost estimates for one school depending on the location, size, design and structure, were around JD 2.1 (US\$ 3) million, leading to an overall estimated cost of JD 43 (US \$60) million for 20 schools.
- Given that the project is one pilot among several different initiatives exploring private sector solutions to the school supply shortage, it is recommended that the pilot size be limited to 15-20 schools and the costing be closer to the initial estimate of JD 43 (US\$ 60) million.

D. Reform Needs

121. Strengthening the quality assurance and accountability system in education is vital for driving improvements in learning outcomes. This system would encompass both the public and the private education sectors and would support: (i) setting up of quality standards and benchmarks for all stages of education; (ii) measurement of education and learning outcomes

at the service delivery level; and (iii) establishment of a feedback loop allowing for evidence-informed policy making at all levels of the system.

122. Reforming teachers' recruitment, management and professional development practices is required for delivery of quality education services. The need to expand access to education to all children has put pressure on the Government of Jordan in the past to recruit large numbers of teachers, negatively impacting teacher performance which current professional development mechanisms are insufficient to offset. A particular focus should be on recognizing and incentivizing high performance. The MOE has been working toward reforming these mechanisms through the development and implementation of a comprehensive and integrated National Teacher Policy and Strategic Framework (NTPSF), which outlines policies for teacher preparation, selection, utilization, development, performance evaluation and career path.

123. Establishment and adoption of a comprehensive school maintenance system is needed for the sustainability of infrastructure investment in the sector. The existing maintenance system does not support schools in preparing maintenance plans and conducting preventive maintenance. In many cases, there are also significant differences in how girls' and boys' schools are managed and maintained. Moreover, the large increase in enrollment driven in part by the Syrian refugee crisis has exerted significant strains on schools' infrastructure. For example, the average number of maintenance requests from schools to the MOE has increased by 8.8 percent in the three-year period of 2013–2015 compared to the 2010–2012 period, and total spending by the MOE on maintenance has nearly doubled over this same period. An improved maintenance system is currently under development at the MOE and will include a reformed legal framework allowing higher autonomy and responsibility to schools in maintaining and upkeeping their premises

Annex A Priority Projects for Jordan

Priority #	Project ID	Project name	Entity	Source	Description/notes	GoJ readiness	USAID readiness assessment	Investment size (Million JD)	Median Investment size (Million JD) if applicable	Government contribution
1	PP34	Jordan National Broadband Network	Ministry of Information and Communications Technology	Cabinet list of current projects Cabinet	<p>The project aims at ensuring inclusive digital development and using digital infrastructure to increase work efficiency, improve work mechanisms, and promote socio-economic development.</p> <p>The government has invested in around 7000 KM of fiber optical cable laid around the Kingdom that MoICT is allowing it to be used by the private sector to create a whole sale operator through a PPP model which should:</p> <ul style="list-style-type: none"> • Allow Broadband internet nationwide and reach the untapped market. • Increase the overall internet speed by providing fiber connectivity. • Allow the Mobile operators to use the already made investment to be their shared infra-structure to make their investment more efficient. • Provide additional services on top of the connectivity services on scale, where security, Sandboxing and other value added services. 	Level 4	N/A	100	100	The GoJ already invested about JD 120M in a 6500 km country-wide fiber-optic IP PMLS network. And committed to continue additional 500 KM. This Infra-structure will be allowed to be used by the private sector in a PPP model.
2	PP19	As Samra treatment plant (third phase/second expansion)	Ministry of Water and Irrigation/ Water Authority of Jordan	Jordan Economic Growth Plan 2018-2022	<p>The objective of the project is to expand the capacity of the As-Samra treatment plant from 365,000 CM to 465,000 CM per day (i.e. additional treatment capacity of 100,000 CM per day). Additionally, the project will establish a solar power plant with 10 MW capacity and will serve the adjacent unserved communities with wastewater networks.</p>	Level 4	In market but contracts have not been awarded	200	200	Government contribution includes land use/existing infrastructure.
3	PP3	4th Expansion of Jordan Petroleum Refinery Company (JPRC)	Ministry of Energy and Mineral Resources	Jordan Economic Growth Plan 2018-2022	<p>The objective is to expand the Jordan Petroleum Refinery, since current production is not sufficient to meet the growing demand in the Jordanian market. The opportunity of converting the low value heavy fuel oil to more valuable products will allow the Refinery to cover most of the local demand, and this is the basis for the fourth expansion project of the Refinery.</p>	Level 4	N/A	1,140	1,140	No government contribution

Priority #	Project ID	Project name	Entity	Source	Description/notes	GoJ readiness	USAID readiness assessment	Investment size (Million JD)	Median Investment size (Million JD) if applicable	Government contribution
4	PP21	Hisban brackish water desalination 10-15 MCM/Year	Ministry of Water and Irrigation/ Water Authority of Jordan	Jordan Economic Growth Plan 2018-2022	The projects consists of: <ul style="list-style-type: none"> Drilling 10 wells (500 meters deep) in Hisban area to provide 20 MCM per year Constructing a water treatment plant to treat the salinity (TDS) of the water Constructing a water pipeline to deliver the water to pump station 2 of the Zara Main Water Conveyance System Constructing a pipeline to transfer the brine to the Dead Sea; as well as a solar power plant with a capacity of 15 MW to reduce operational costs 	Level 4	Level 3	35	35	Government contribution includes use of water assets/ infrastructure
5	PP18	Aqaba-Amman National Water Conveyance Project (AAWDC Project) (National Project)	Ministry of Water and Irrigation/ Water Authority of Jordan	Jordan Economic Growth Plan 2018-2022	The objective of the project is to construct a water conveyance system to enhance the Kingdom's national water security by producing potable water through desalination at the Gulf of Aqaba and transferring 150 MCM/year of additional water to Amman. These flows will be obtained from the identified two Project Components – Rum/ Disi Wellfield and a Reverse Osmosis Plant to the south of Aqaba the Red Sea. Phase I/ Component 1 of the Project will include the Rum/ Disi Wellfield systems with associated collection piping and conveyance transmission to Amman; while Phase II/ Component 2 will include the sea water intake, RO plant and conveyance to the wellfield area. This project is different from the Regional Project, however interfaces exist between both (Brine Disposal Facility)	Level 4	Level 3	1,100	1,100	Government contribution includes land use/existing infrastructure. Scope for additional contribution has not been determined yet

Priority #	Project ID	Project name	Entity	Source	Description/notes	GoJ readiness	USAID readiness assessment	Investment size (Million JD)	Median Investment size (Million JD) if applicable	Government contribution
6	PP23	Al Ghabawi Wastewater Septic Tank Facility Project	Ministry of Water and Irrigation/ Water Authority of Jordan	Ministry of Water and Irrigation	The objective of this project is to construct a new septic tank facility to replace and relocate an existing facility currently co-located at Ain Ghazal Treatment plant (AGTP) due to odor, traffic and pollution and capacity concerns. The capacity will be 25,000 m3 per day. The proposed new replacement septic tank facility will be located at Al Ghabawi and is intended to serve the unserved areas of Amman, Zarqa and the surrounding area.	Level 4	N/A	50-70	60	N/A
7	PP20	Non-Revenue Water (NRW) Reduction Project	Ministry of Water and Irrigation/ Water Authority of Jordan	Jordan Economic Growth Plan 2018-2022	The project aims to develop appropriate techniques to reduce physical and commercial water losses in Amman through the preparation and implementation of a performance based NRW contract under a hybrid financing modality including grants and Private investment. This approach will start in Amman Governorate but will be rolled out to other governorates.	Level 4	Level 3	47	47	Government contribution may include a sovereign-guarantee through MOF
8	PP36	King Hussein Bridge crossing terminal and truck yard	Ministry of Public Works & Housing	Jordan Economic Growth Plan 2018-2022 / IFC Jordan PPP Facility concept note / WB document/ MOF PPP Unit	The objective of the project is to expand a key land crossing for passengers and freight between Jordan and the West Bank.	Level 4	Level 2	100-150	125	N/A

Project ID	Project name	Entity	Source	Description/notes	GoJ readiness	USAID readiness assessment	Investment size (Million JD)	Median Investment size (Million JD) if applicable	Government contribution
9	Supporting the Jordan Schools Program. Build 15 schools using PPP model	Ministry of Education	IFC Jordan PPP Facility concept note	The aim of the project is to support the Jordan Schools Program, which entails building up to 300 new schools over the next decade under a PPP scheme. The IFC in partnership with the EBRD will provide advisory services to GoJ to assist in the design and implementation of a PPP transaction, including undertaking due diligence and structuring, to identify and select a private sector participant to implement the project. The agreement with IFC and EBRD was signed in Dec. 2018. 6000 students are expected to benefit from the pilot project.	Level 4	N/A	75-100	87.5	N/A
10	Marka Airport	Ministry of Transport	Jordan Economic Growth Plan 2018-2022/ 8 PPPs / WB document / Cabinet list of current projects	The project consists of the expansion of Marka Civil Airport as well as the rehabilitation of its existing terminals. The project will serve regular low-cost flights, commercial flights in addition to charter flights and offer aviation training. The expansion will increase the airport's capacity to host up to 2 million passengers in the future.	Level 4	level 2	114-119	116.5	N/A

Description of GoJ level of readiness

Level 4

Tender documents ready by end of 2019

Annex B

Priority Projects Assessment Framework

Strategic Assessment	
1- In Your View, Is the Project a Strategic Priority for the Sector?	<div>Score</div> <div></div>
Resounding yes	Y
"Good to have" but not a priority	E
No	N
I don't know/don't have enough information	D
1b- How Likely is it that the Project Will Alleviate Significant Supply Bottlenecks In the Sector or Industry	<div>Score</div> <div></div>
Very likely	Y
Not likely	N
Not relevant	L
I don't know/don't have enough information	D
1c- How Likely is it that The Project Will Help Reduce The Cost Structure Significantly In the Sector or Industry	<div>Score</div> <div></div>
Very likely	Y
Not likely	N
Not relevant	L
I don't know/don't have enough information	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	<div>Score</div> <div></div>
Very likely	Y
Not likely	N
I don't know/don't have enough information	D
1e- How Likely is it that The Project Will Contribute to Increasing Exports	<div>Score</div> <div></div>
Very likely	Y
Not likely	N
I don't know/don't have enough information	D
2- Does the Project Belong to an Official Sector Strategy/Plan?	<div>Score</div> <div></div>
Yes	Y
No	N
I don't know/don't have enough information	D
3- Is the Project an Appropriate Technical Solution to the Challenge Identified?	<div>Score</div> <div></div>
Yes	Y
No	N
I don't know/don't have enough information	D

Assessment for Growth, Employment and Inclusion

4- 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	

5- Sustainability of Growth Impact of Completed Project		Score
Highly sustainable without public support	3	
Moderately sustainable without public support	2	
Not likely to be sustainable or will require significant public resources	1	
I don't know/don't have enough information	D	

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

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

8- 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	

Feasibility Assessment

9- The Project Can and Should be 100% Financed by the Private Sector		Score
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	

10- Expected Public Finance Portion		Score
Public finance < 25% of total investment	3	
Public finance < 50% of total investment	2	
Public finance < 75% of total investment	1	
Needs 100% public financing of total investment	G	
I don't know/don't have enough information	D	

11- In Your Judgment, Readiness to Implement (Is Project Shovel Ready?)		Score
0-6 months for shovel readiness	3	
6-18 months for shovel readiness	2	
18+ months for shovel readiness	1	
I don't know/don't have enough information	D	

12- Does the Potential Implementing Agency have the Necessary Capacity (Staffing, Skills and Institutional Structure)		Score
Yes	Y	
No	N	
I don't know/don't have enough information	D	

Reform Needs Assessment

13- Reform Complement		Score
No reforms needed	3	
Only cabinet decrees needed	2	
Parliamentary legislation needed	1	
I don't know/don't have enough information	D	

14- Reform Timeline		Score
Reforms to be front ended	3	
Reforms to proceed with implementation	2	
Reforms to be post- implementation	1	
I don't know/don't have enough information	D	

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



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