Hashemite Kingdom of Jordan

FY2016 Ex-Post Evaluation of Japanese ODA Loan Project

"Human Resource Development and Social Infrastructure Improvement Project"

External Evaluator: Makiko Soma, Global Link Management Inc.

0. Summary

The objectives of "Human Resource Development and Social Infrastructure Improvement Project" (hereafter referred to as "the project") were to expand basic infrastructures for human resource development and to improve access to public services in Hashemite Kingdom of Jordan (hereafter referred to as "Jordan"), thereby contributing to the stability of its economy and society. For these objectives, the loan was provided for small-scale projects (hereafter referred to as "sub-projects") that had been implemented under public investments between 2012 and 2014 for facility improvements in the sectors of human resource development, healthcare, and primary/secondary education. The project has been consistent with the national development plans and development needs of Jordan both at the times of appraisal and ex-post evaluation, and was in line with the Japan's ODA policy at the time of the project appraisal; therefore, the relevance of the project is high. While the initial plan was to finance 55 sub-projects as outputs of this project, 66 sub-projects were actually implemented. Both the project cost and project period exceeded the plan, therefore, the efficiency is fair. Considering the nature of the project that provided funds for implementing many sub-projects in the sectors of human resource development and social infrastructures all over Jordan in line with their development plans, national level macro indicators were set to measure the effectiveness of the project after the project started. At the time of ex-post evaluation, it was confirmed that the project has contributed to achieving the targets of these indicators. Furthermore, several impacts such as improved access to social services including education and medical services among the poor have been reported in the beneficiary survey. Therefore, the effectiveness and impact of the project are high. The project was implemented by the respective ministries under the coordination by the executing agency, the Ministry of Planning and International Cooperation (hereafter referred to as "MOPIC"). The respective ministries have overseen operation and maintenance of each sub-project. At the time of the ex-post evaluation, there have been no major problems observed with the operation and maintenance of the facilities and equipment procured by the project in terms of institutional, technical, and financial capacities of such respective ministries. Therefore, the sustainability of the project is high.

In light of the above, the project is evaluated to be highly satisfactory.

1. Project Description

Location of the Project (Entire Jordan)

School Building of Al-Balqa Polytech University

1.1 Background

Jordan had achieved a steady economic growth in the mid-2000s. However, with the impact of the global financial crisis that had started from the United States, the economic growth rate of Jordan remained at a low level in the late 2000s. Due to the significant aftereffects of the "Arab Spring" in 2011, Jordan suffered from unstable social conditions. Against the backdrop of sharp rises in global food and fuel prices, there were increasing needs of public expenditures for the poor and maintaining the subsidies for food and fuel. The government suffered from high unemployment rate that greatly exceeded 10%. In particular, it was reported that more than 30% of the youth under the age of 30, who accounted for over 70% of the population, were unemployed, thus, youth employment was a great challenge[1]. There was also an income disparity between urban and rural areas. The poverty rate in some of the rural areas, for example, was twice[2] as high as the capital, Amman. Likewise, development gap in the sectors of healthcare and primary/secondary education between the urban and rural areas was an issue. Under these circumstances, as socioeconomic situation of Jordan became unstable, the government needed to work on human resource development and social infrastructure improvement to create employment opportunities especially among the youth and to address regional disparities.

1.2 Project Outline

To foster industries and strengthen the public services specifically by improving the facilities for vocational training, primary / secondary and higher education, and health and medical services, thereby contributing to Jordan's economic and social stability.

[1] Documents provided by JICA
[2] Same as above

Loan Approved Amount/ Disbursed Amount	12,234 million yen / 12,128 million yen	
Exchange of Notes Date/ Loan Agreement Signing Date	August 2012/ August 2012	
Terms and Conditions	Interest Rate	0.95%
	Repayment Period	20 years
	(Grace Period)	(6 years)
	Conditions for Procurement	General Untied
Borrower / Executing Agency(ies)	The Government of the Hashemite Kingdom of Jordan/Ministry of Planning and International Cooperation	
Project Completion	March 2017	
Main Contractor(s) (Over 1 billion YEN)	-	
Main Consultant(s) (Over 100 million YEN)	None	
Feasibility Studies, etc.	"Human resource development and social infrastructure improvement project implementation support in Jordan" (Technical Assistance related to ODA Loan) (2013-2015)	
Related Projects	-	

2. Outline of the Evaluation Study

2.1 External Evaluator

Makiko Soma, Global Link Management Inc.

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: December 2016 – December 2017

Duration of the Field Study: March 14 – March 24, 2017; July 12 – July 13, 2017

3. Results of the Evaluation (Overall Rating: A[3])

3.1 Relevance (Rating: ③[4])

3.1.1 Consistency with the Development Plan of Jordan

At the time of appraisal, improvements of income generation opportunities, living standards, and social welfare were listed as main purposes of *The National Agenda: 2006-2015* that was publicized by the Jordan Government in 2006. In the agenda, development targets were set in three phases as follows. In Phase 1, the goal was to provide employment opportunities for all people; in Phase 2, it was to improve and strengthen the industrial base; and in Phase 3, it was to improve global competitiveness in the knowledge economy.

At the time of the ex-post evaluation, the *Executive Development Program 2016-2018* of the Jordanian Government stresses the importance of addressing the needs in human resources development and poverty alleviation, and responding to the social needs of vulnerable groups. In addition, among the eight national strategies listed in the program, three strategies emphasize the importance of human resource development and improvement of social infrastructure. The three strategies are the following: (1) poverty reduction and improvement of unemployment rate, establishment of effective social security system, (2) narrowing the development gaps among different regions, facilitation of decentralization, and (3) fostering highly creative, innovative and productive generations.

From the above, the project has been consistent with Jordan's development plan at the time of appraisal and ex-post evaluation.

3.1.2 Consistency with the Development Needs of Jordan

At the time of appraisal, it was urgent in Jordan to take measures against employment problems and narrowing the social and economic disparities in urban and rural areas. The unemployment rate greatly exceeded 10%. The high unemployment rate of the youth under 30 years old who accounted for over 70% of the total population, was more than 30% and was deemed particularly serious. To train the human resources who were highly demanded in industry, it was expected that vocational training institutes would improve the quality of their vocational trainings by rehabilitating the equipment and facilities. In addition, the facilities of higher education institutions and vocational training institutes needed to be expanded in order to solve the unemployment issues of highly educated workers and encourage them to participate in industry. Improvement of social infrastructure was also an urgent task to narrow the social and economic disparities between the poor and rich, and urban and rural areas. It was desired, among others, to improve the services in health and education for the poor by constructing health care and educational facilities and enhancing the equipment in poor areas.

[3] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
[4] ③: High, ②: Fair, ①: Low

According to the data provided by MOPIC, the unemployment rate at the time of ex-post evaluation (2016) was 15.8% which worsened compared to the data at the appraisal. The unemployment rate of the youth also did not show much improvement and remained at 28.5% in 2016. Jordanian government has been plagued by financial difficulties since the Arab Spring in 2011. In addition, influx of Syrian refugees as cheap labor force started to affect the labor market of Jordan since the Syrian crisis that occurred at the end of 2011[5]. The *Executive Development Program* points out that vocational training continues to be important for reduction of the unemployment rate. It also points out that higher education needs to be further enriched to develop domestic and international competitiveness of human resources. Meanwhile, the poverty rates of 2010 and 2015 (prospect) were both 10.5% and no improvement was observed during the period. Jordanian government aimed to reduce it to 9.5% by 2018[6]. The Gini coefficient was 37.6% in 2010 and 36.5% in 2015 (prospect), and was aimed to be reduced to 34% by 2018[7]. The *Executive Development Program* stresses the importance of improving the school enrolment rate in poor areas that has continued to be low. The infant mortality rate had improved from 20.2% in 2011 to 17.9% in 2015[8]. On the other hand, in response to the inadequate access to primary health care especially in remote areas, the *Executive Development Program* points out that the importance of increasing investments in primary health care and improvement of infrastructure development of hospitals and health centers.

From the above, this project is consistent with the development needs of Jordan at the times of appraisal and ex-post evaluation.

3.1.3 Consistency with Japan's ODA Policy

Japanese government stipulated "boosting of independent and sustainable economic growth" as a priority area of *Japan's Country Assistance Policy for Jordan (June 2012)*. Accordingly, JICA upheld "planning of development policy/ implementation support" and "vocational training", and "independent and sustainable industrial promotion and improvement of the quality of industry" as cooperation programs. The assistance policy also included "poverty reduction and resolving social inequality," which covered supporting of civilian sectors such as education and healthcare for the socially vulnerable population.

The project has been highly consistent with Jordan's development plan and development needs, as well as Japan's ODA policy, and therefore, its relevance is high.

[5] According to the data provided by Department of Statistics in Jordan, the number of Syrian refugees is 1.38 million in 2017, accounting for 14% of the total population of Jordan which is around 9.92 million.
[6] Executive Development Program
[7] Ditto
[8] UNICEF database

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

Since the sub-projects had not been selected at the time of appraisal, MOPIC and JICA mutually agreed to implement 55 sub-projects in December 2012. The sub-projects were selected based on the following criteria that had been set at the time of appraisal.

- The sub-projects fall under the following sectors: vocational trainings, pre-primary, primary, secondary and higher education, or health and medical care.
- The sub-project would be under category "C" of *JICA Guidelines for Environmental and Social Considerations*."
- The main objective of the project should not be to procure the expendable goods.

Jordanian side suggested JICA to add highly needed sub-projects after the initial agreement. By the end of 2014, a total of 12 sub-projects were newly added by the official agreement with JICA and the number of sub-projects increased to 67 (six sub-projects were added in April 2013; five in April 2014; and one in November 2014). After that, one sub-project "Establishing university college in Jerash" was cancelled due to financial difficulties encountered by the Jordanian government. Therefore, there were finally 66 sub-projects (120% of the initial plan). Table 1 shows the 66 sub-projects summarized by assistance area.

Table 1 Summary of Sub-projects

Areas	Summary	Number (Plan) 2012	Number (Actual) 2017
Human Resources Development	Improvement and installing of equipment and fixtures at vocational training institutes all over Jordan.	9	9
	Construction and improvement of school buildings at higher education facilities and national universities all over Jordan, improvement of education management information system at the Ministry of Higher Education and Scientific Research (MOHESR) etc.	4	5
Social Infrastructure	Facility improvement and equipment procurement for pre-primary, primary, secondary schools as well as construction of education facilities for deaf students etc.	14	18
	Improvement and rehabilitation of healthcare facilities such as public hospitals, serum and vaccine centers (including installation of medical equipment)	28	34
	Total	**55**	**66**

Source: Documents provided by JICA and MOPIC

The project implementation structure consisted of MOPIC and focal points assigned from each of the respective ministries, and jointly coordinated, communicated and managed the progress of the project. In order to support project implementation, consultants through

technical assistance related to ODA loan were dispatched to assist MOPIC in coordinating with other ministries for selection, implementation, and monitoring of sub-projects. The consultants contributed to facilitating smooth operation of the project. Two out of 66 sub-projects are incomplete at the time of the ex-post evaluation (See 3.2.2.2 Project Period for details).

3.2.2 Project Inputs

3.2.2.1 Project Cost

The total project cost was significantly higher than planned. The actual cost was 59,248 million yen and exceeded the planned cost of 33,226 million yen by 178%. However, the project output, as mentioned in the above section, was 120% of the plan. If 120% of the planned project cost (39,871 million yen) is used for the comparison, the actual project cost is calculated to be 149% of the plan. The actual project cost provided by Japanese ODA loan was 12,128 million yen, which was almost the same as the planned amount (99%) of 12,234 million yen. The total project cost exceeded the plan because of the addition of sub-projects during the project implementation and significant increase of the Jordanian side costs for operation and management. The project had principally intended to utilize the loan in yen for the cost of facilities and equipment. During the project implementation, proportion of facility construction decreased significantly as the Jordanian side had encountered financial difficulties and they had also tried to avoid overlaps with assistance by other donors. Instead, the number of sub-projects supporting operation and management such as improving facilities and replacing equipment increased. As a result, Jordanian side cost also increased greatly because many expenses such as personnel cost and consumables included in these sub-projects were not covered by the yen loan portion. Table 2 and 3 show the breakdown of the planned and actual project costs.

Table 2 Planned Project Cost

Unit: Million Yen

Items	Foreign Currency		Local Currency		Total	
	Total	JICA loan	Total	JICA loan	Total	JICA loan
1) Human resource development and promotion of employment	0	0	16,031	3,935	16,031	3,935
2) Improvement of social infrastructure	0	0	11,631	8,004	11,631	8,004
3) Interest during construction	258	258	0	0	258	258
4) Commitment charge	37	37	0	0	37	37
5) Taxes (added value tax and tariffs)	0	0	5,269	0	5,269	0
Total	**295**	**295**	**32,931**	**11,939**	**33,226**	**12,234**

*Exchange rate: 1 USD =78.5 yen, 1 USD =0.71 Jordanian Dinar (JOD), 1 JOD=110 yen (February 2012)

Source: Documents provided by JICA

Table 3 Actual Project Cost

Unit: Million Yen

Items	Foreign Currency		Local Currency		Total	
	Jordanian side	JICA loan	Jordanian side	JICA loan	Total	JICA loan
1) Human resource development and promotion of employment	0	0	25,690	1,334	27,024	1,334
2) Improvement of social infrastructure	0	0	21,430	10,553	31,983	10,553
3) Interest during construction	0	239	0	0	239	239
4) Commitment charge	0	2	0	0	2	2
5) Taxes (added value tax and tariffs) (Note 2)	0	0	0	0	0	0
Total	**0**	**241**	**47,120**	**11,887**	**59,248**	**12,128**

Note 1: Exchange Rate:1 USD =94.2 yen (average from 2012 to 2014), 1 USD =0.71 JOD (both rates are from International Financial Statistics), 1 JOD=132.7 yen

Note 2: Taxes are included in Jordanian side cost of 1) Human resource development and promotion of employment and 2) Improvement of social infrastructure.

Source: Documents provided by MOPIC

3.2.2.2 Project Period

The planned project period at the time of appraisal was 36 months from January 2012 to December 2014. However, for comparison of the plan and actual periods, the planned project period is recomputed to be 43 months, 20% more than the plan, considering that the project output was 120% of the plan as mentioned in the earlier section. Completion of the project was defined as "operationalization of facilities/equipment and completion of vocational trainings." At the time of the ex-post evaluation, 64 out of 66 sub-projects were completed as planned but the two sub-projects, namely, construction of Al-Salt New Hospital and Al Iman Hospital, have not been completed. Assuming the completion of these two sub-projects in March 2017 as of the ex-post evaluation, the project period was 63 months from January 2012 to March 2017 (147% of the plan). Construction of the hospitals in two sub-projects was delayed due to the following reasons. Construction of Al-Salt New Hospital was prolonged because the Ministry of Health (MOH) expanded the scale of the hospital from the initial plan to better respond to the medical needs in the target areas. The start of Al Iman Hospital construction was delayed because the budged was not approved within the original project period.

3.2.3 Results of Calculations for Internal Rates of Return (Reference only)

At the time of appraisal, there was a plan to calculate the internal rates of return (IRR) for this project as part of the baseline survey after the start of the project. However, due to the nature of the sectors that are covered in the project, a quantitative analysis of the benefits was considered difficult, and IRR was not calculated. Therefore, at the ex-post evaluation stage, IRR was not calculated.

Both the project cost and project period exceeded the plan. Therefore, efficiency of the project is fair.

3.3 Effectiveness[9] (Rating: ③)

3.3.1 Quantitative Effects (Operation and Effect Indicators)

Indicators for the quantitative effects of the project were set based on the baseline survey that was conducted after the project began. The project intended to provide ODA loan to a number of sub-projects that were needed to implement development plans in the sectors of human resource development and social infrastructure. It should be noted that, due to the nature of the project, the indicators identified during the baseline survey were national-level indicators of each respective sector and not the project-level indicators that were designed to measure the specific contributions of the project.

[9] Sub-rating for Effectiveness is to be put with consideration of Impact.

<Vocational Training>

1) The increase rate of "number of registered trainees at vocational training institute (VTI)" achieved 127% of the target. The project provided equipment and training materials to 44 VTIs in all 12 governorates of Jordan and appeared to have contributed to the improvement of the learning environment and training contents of these VTIs. Male students outnumbered female students in the VTIs with the ratio of male to female being 7:3. According to the VTI staff interviewed, they had more male students than female students as the majority of the courses offered at VTIs such as welding, plumbing, and mechanic were more popular among male students than female students.
2) The number of "satellite factories" that are operated by the Ministry of Labor (MOL) as an employment measure increased from six at the time of appraisal to 14 at the time of the ex-post evaluation and achieved 127% of the target. In the satellite factories, the factory spaces are rented out for private and government companies with 10-year contracts by MOL as an employment measure mainly for the poor. The companies bring in their machines and equipment to operate the factories. Out of the eight factories that were newly operated, three factories received support from the project in construction or operation. Therefore, 38% of the increment in the achievement was brought by the project.

Table 4 Achievement of Quantitative Indicators (Vocational Training)

Indicators	Baseline	Target	Actual	
	2012	2016	2014	2016
	Appraisal Year	Two years after completion	Planned Completion Year* (Achievement ratio %)	Ex-post evaluation Year (Achievement ratio %)
1)Number of registered trainees at VTI	10,833	11,200	12,564 (112%)	14,168 (M:9,643, F:4,525) (127%)
2)Number of satellite factories for vocational training & employment services in poor areas operated by MOL	6	11	14 (127%)	14 (127%)

* Planned year of the project completion at the time of appraisal
Source: Documents provided by JICA and MOPIC

<Higher Education Facilities Development>

1) The "number of students enrolled in bachelor's degree studies" increased from 226,713 at the time of appraisal to 278,949 at the time of the ex-post evaluation and achieved 98% of the target. The project appeared to have contributed to the improvement by increasing the capacity through expanding buildings, improving laboratories and auditorium at nine national universities including undergraduate and graduate schools in eight out of 12 governorates. The male-to-female ratio among the enrolled students in bachelor's degree was roughly 1:1.
2) The "number of students enrolled in graduate programs (Masters' and Doctoral programs)" increased from 17,532 at the time of appraisal to 21,432 at the time of the ex-post evaluation and achieved 97% of the target. The project contributed to the increase in the same way as 1). There are a greater number of female students than male students in the graduate of doctoral programs.

Table 5 Achievement of Quantitative Indicators (Higher Education)

Indicators	Baseline	Target	Actual	
	2012	2016	2014	2016
	Appraisal Year	Two years after completion	Planned Completion Year* (Achievement ratio %)	Ex-post evaluation Year (Achievement ratio %)
1)Number of students in bachelor degree studies	226,713	285,000	No data	278,949 (M:139,510, F:139,439) (98%)
2)Number of students in graduate programs (Masters' and Doctoral programs)	17,532	21,992	No data	21,432 (M:9,057, F:12,375) (97%)

* Planned year of the project completion at the time of appraisal
Source: Documents provided by JICA and MOPIC

<Facility improvement and equipment procurement of pre-primary/primary/secondary education and construction of education facilities for people with hearing disability>

1) The "gross enrolment rate in preschools in rural and poor areas[10]" was 57.7% at the time of appraisal and increased to 62.7% at the time of the ex-post evaluation and achieved 105% of the target. The project appeared to have contributed to the increase in intake of children through expansion of the buildings and improvement of equipment and fixtures at 23 kindergartens in poor areas all over Jordan.
2) The "students' ratio in rented school buildings" has increased over the period and it did not

[10] The areas designated by Ministry of Education as "the least developed areas with highest needs."

reach the target. The Ministry of Education (MOE) attributes the increase to the influences of influx of Syrian refugees. The number of Syrian pupils has increased by 30% in three years from 111,589 in 2013 to 143,259[11] in 2016. Thus, an increasing number of schools reportedly decided to use rented buildings to respond to the rapid increase of pupils.

3) The "students' ratio in double shift schools" has also increased despite the target set by the Jordanian government to decrease it to 10.8% by 2016. Thus it did not reach the target due to the increasing number of schools adopting double shifts for the same reason as 2).
4) To assess the project's effects on the "gross enrolment rate in elementary school," this indicator was added at the time of the ex-post evaluation. It increased from 88.72% at the time of appraisal to 97.34% in 2014. There was no major difference between male and female in school enrolment data in 2012 and 2014. The project supported expansion and maintenance of the school buildings and provision of improved equipment and fixtures such as chairs and desks at 31 schools in 10 governorates, which appeared to have contributed to increasing capacity of the schools.
5) "Grade 5 completion rate" remained at 99% both at times of appraisal and ex-post evaluation and achieved the target. In Jordan, the curriculums are designed to enable pupils to be able to read and write by grade 5. This indicator, therefore, is frequently used to measure the number of pupils who can read and write.
6) The "number of special education schools for children with disabilities" was 26 at the time of appraisal and increased to 27 at the time of ex-post evaluation, and achieved the target. The project contributed to the achievement as the school "Handicapped center in Ain El-Basha" was established by the project.
7) "Ratio of students benefiting from disability programs provided by the government in the total students with special needs" was 13.4% at the time of appraisal and increased to 15% at the time of the ex-post evaluation and achieved 110% of the target. The project appeared to have contributed to achieving the target through the construction of new buildings of deaf school in Karak governorate, and expansion of buildings and provision of educational equipment in special education schools in six remote governorates.

[11] Data provided by Statics Department in Jordan.

Table 6 Achievement of Quantitative Indicators (Education)

Indicators	Baseline	Target	Actual	
	2012	2016	2014	2016
	Appraisal Year	Two years after completion	Planned Completion Year* (Achievement ratio %)	Ex-post evaluation Year (Achievement ratio %)
1) Gross enrolment rate in preschools in rural & poor area	57.7%	60%	60.1% (100%)	62.7% (105%)
2) Students' ratio in rented school buildings	10.6%	10.0%	11.2% (-12%)	11.06% (-11%)
3) Students' ratio in double shift schools	10.78%	10.8%	16.8% (-56%)	18.65% (-73%)
4) Gross enrolment rate in elementary school[12]	88.72% (Female:88.16%, Male:89.25%)	No indicator	97.34% (Female: 97.61%, Male: 97.08%)	No data
5) Rate of pupils who complete Grade 5	99%	99%	99% (100%)	99% (100%)
6) Number of special education schools for children with disabilities	26	27	27 (100%)	27 (100%)
7) Ratio of students benefiting from disability programs in the total students with special needs	13.4%	13.6%	15% (110%)	15% (110%)

* Planned year of the project completion at the time of appraisal
Source: Documents provided by JICA and MOPIC

<Expansion and Rehabilitation of Health and Medical Facilities>

1) The "number of comprehensive health centers" increased from 86 at the time of appraisal to 99 at the time of the ex-post evaluation. The project supported the construction of two comprehensive health centers, therefore, contributed to 15% of its increment. The project also appeared to have contributed to the improvement of existing comprehensive health centers by expanding the buildings or improving the equipment.
2) The "number of primary health centers" increased from 371 at the time of appraisal to 378 at the time of the ex-post evaluation. The project supported construction of one primary health center, therefore, contributed to 14% of its increment. The project also appeared to have contributed to the improvement of existing primary health centers by expanding the buildings or improving the equipment.
3) The "number of hospital beds" increased from 4,572 at the time of appraisal to 5,077 at the

[12] UNESCO database

time of the ex-post evaluation, and achieved 96% of the target. Although the number of the beds procured by the project was unknown, the project was considered to have contributed to the achievement as there were many sub-projects that improved equipment and fixtures of public healthcare facilities including beds.

4) "Hospital beds per 10,000 citizens" decreased from 18 at the time of appraisal to 14 at the time of the ex-post evaluation. This was 78% of the target, lower than planned. According to MOH, as mentioned in the section "3.1.2 Consistency with the Development Needs of Jordan" under Relevance, the population in Jordan has been increasing rapidly due to influx of Syrian refugees and this negatively influenced the achievement of this indicator.

5) The "number of Health Care Accreditation Center (HCAC) accredited hospitals" increased from two at the time of appraisal to five at the time of the ex-post evaluation. The project was considered to have contributed to the achievement as some of the HCAC related training costs were covered by the project.

6) The "number of HCAC accredited health centers" increased from 21 at the time of appraisal to 98 at the time of the ex-post evaluation. The project was considered to have contributed to the achievement as some of the HCAC related training costs were covered by the project. There had been 105 accredited health centers in 2014 while there were only 98 in 2016. The number decreased as some of the health centers failed to meet the new HCAC's certification criteria which were renewed in 2015.

Table 7 Achievement of Quantitative Indicators (Health)

Indicators	Baseline	Target	Actual	
	2012	2016	2014	2016
	Appraisal Year	Two years after completion	Planned Completion Year* (Achievement ratio %)	Ex-post evaluation Year (Achievement ratio %)
1)Number of comprehensive health center	86	90	98 (109%)	99 (110%)
2)Number of primary health center	371	378	378 (100%)	378 (100%)
3)Number of hospital beds	4,572	5,272	4,768 (90%)	5,077 (96%)
4)Hospital beds per 10,000 citizens	18	18	18 (100%)	14 (78%)
5)Number of HCAC accredited hospitals	2	6	5 (83%)	5 (83%)
6)Number of HCAC accredited health center	21	96	105 (109%)	98 (102%)

* Planned year of the project completion at the time of appraisal
Source: Documents provided by JICA and MOPIC

3.3.2 Qualitative Effects (Other Effects)

At the time of appraisal, the qualitative effects of the project namely "stability of economy and society" and "narrowing of income gaps" were expected to be observed. Since these can be regarded as "impacts" considering the project purpose, they were moved to the "impact" section of this ex-post evaluation report. In this ex-post evaluation, a beneficiary survey[13] was conducted with 100 beneficiaries (100 valid answers) to study about the extent of expansion of the facilities and equipment in the field of human resource development and about improvement made in people's access to public services. The results are summarized as follows.

<Vocational Training>

Results of the interviews with 21 beneficiaries (managers, vice managers, instructors, and staff) are shown in Figure 1. All respondents (100%) answered that the project had contributed to the improvement of the students review on the courses offered through improvement and replacement of the equipment. Ninety five percent of the respondents answered that the quality of the courses offered had improved and 80% answered that the project had contributed to the increases in the numbers of courses and students.

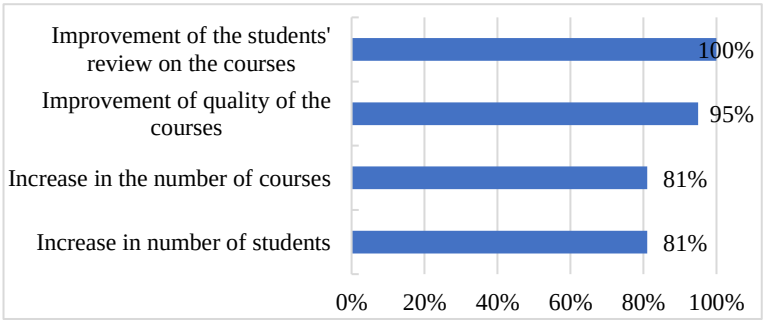

Figure 1 Beneficiary Survey (Vocational training institutes)

[13] The beneficiary survey was conducted from March 16, 2017 to April 10, 2017 to cover almost all of the governorates, namely, Amman, Aqaba, Jerash, Karak, Tafilah, Zarqa, Irbid, Madaba, Mafraq, Balqa, Petra in Jordan. A total of 100 beneficiaries (male: 60, female: 40), or 20 to 30 beneficiaries from each of the four sectors of sub-projects were purposely selected for face-to-face interviews taking into consideration the geographical distribution and the amounts of sub-projects. The interviews were conducted with staff members at the facilities that received assistance by the sub-projects as follows. 1) vocational training institutes (managers, vice managers, instructors, staff), 2) expansion of higher education facilities (vice dean, department heads, finance heads, faculties), 3) Facility improvement of preprimary/primary/secondary education and education for people with disability (principals, administrative staff, teachers, speech therapists), 4) Expansion and Rehabilitation of Health and Medical Facilities (vice president of the hospital, department/division heads, doctors). There was no major difference in the answers between men and women in the results of the beneficiary survey in the four sectors.

<Expansion of Higher Education Facilities>

Results of the interviews with 22 beneficiaries (vice dean, department heads, finance heads, and faculties) are shown in Figure 2. Ninety one percent of the respondents answered that the project had contributed to the improvement of the students review on the classes through improvement of buildings, laboratories, and auditoriums, and replacement of the equipment. Ninety five percent of the respondents answered that their quality of education had improved, and 86% answered that the number of students had increased.

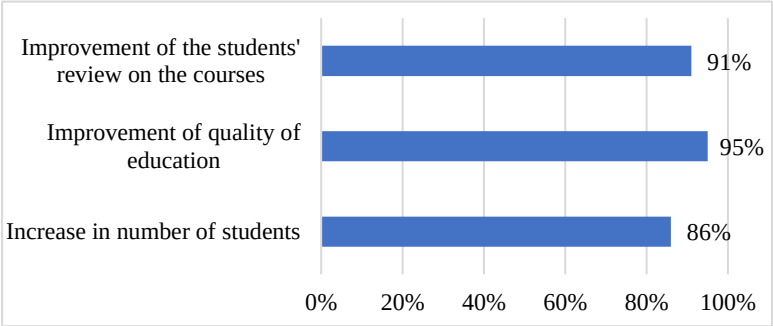

Figure 2 Beneficiary Survey (Higher Education)

<Facility improvement and equipment procurement of pre-primary/primary/secondary education and construction of education facilities for people with hearing disability>

Results of the interviews with 27 beneficiaries (principals, administrative staff, teachers, and speech therapists) are shown in Figure 3. Eighty percent of the respondents answered that the project had contributed to the improvement of the graduation rates of the pupils in poor areas through expanding the primary school buildings and improvement of equipment and fixtures. Seventy six percent of the respondents answered that educational attainment of pupils in poor areas had improved, and 68% answered that the enrolment ratio of the pupils in poor areas had improved.

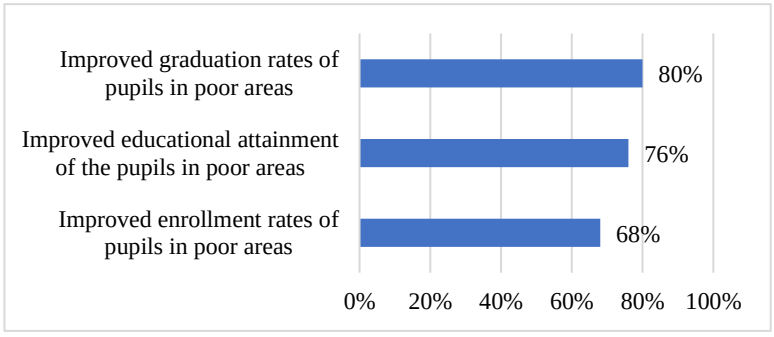

Figure 3 Beneficiary Survey
(Pre-primary, Primary and Secondary Education)

<Expansion and Rehabilitation of Health and Medical Facilities>

Results of the interviews with 30 beneficiaries (vice president of the hospital, department/division heads, and doctors) are shown in Figure 4. Eighty three percent of the respondents answered that the project had contributed to the improvement of the quality of healthcare through construction of the facilities and improvement of the equipment. Eighty percent answered that the number of patients among the poor including children, pregnant women and elderly had increased.

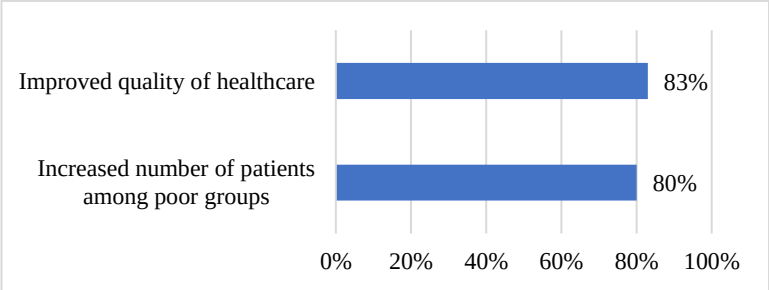

Figure 4 Beneficiary Survey (Healthcare)

As described above, the macro level indicators that had been set at the time of the baseline survey have largely been achieved as of the ex-post evaluation and it was confirmed that the project contributed to the achievements to a certain extent. The beneficiary survey also revealed several positive findings such as greater satisfaction of trainees at VTIs and public university students, improved enrolment and graduation rates of children and pupils among the poor in public pre-primary and primary schools, and improved access to healthcare among the poor.

3.4 Impacts

3.4.1 Intended Impacts

At the time of appraisal, impacts such as economic and social stability and employment promotion had been expected. Due to prolonged financial difficulties that had continued since the Arab Spring and the start of Syrian refugee influx after the Syrian crisis at the end of 2011 as mentioned in the section of 3.1.2 Consistency with the Development Needs of Jordan, the macro-level data related to these impacts have not seen improvement and the unemployment rate has been worsening since 2011. With regard to “narrowing income gaps,” the Gini coefficient slightly improved from 37.6% in 2010 to 36.5% in 2015 (prospect) as mentioned in Relevance section. While the project was considered to have contributed to the improvement of access to education and healthcare among the poor through improvement of social infrastructure in remote areas to a certain extent, it is difficult to prove a direct causal relationship between the project and the above impacts.

3.4.2 Other Positive and Negative Impacts

The project did not include any sub-projects that required Environmental Impact Assessment (EIA). According to MOPIC, as of the ex-post evaluation, no negative environmental impacts have been reported. There were no cases of resettlement, land acquisition, or negative impacts reported. It appeared that the project has contributed to improving access to health care, expanding access to education among people with disabilities, and strengthening the measures against communicable diseases.

This project has largely achieved its objectives. Therefore, effectiveness and impact of the project are high.

3.5 Sustainability (Rating: ③)

3.5.1 Institutional Aspects of Operation and Maintenance

In the project implementation, MOPIC was in charge of overall coordination with focal points from seven respective ministries, namely, MOHESR, MOE, MOH, the General Directorate of Civil Defense (GDCD), the Vocational Training Corporation (VTC), the Ministry of Social Development (MOSD), and MOL to carry out coordination and monitoring. As the sub-projects involved wide range of implementers, consultants through technical assistance related to ODA loan were dispatched to assist MOPIC in coordination and monitoring for smooth implementation of the project.

Table 8 shows how the sub-projects are operated, managed and maintained at the time of the ex-post evaluation. From the appraisal stage to the ex-post evaluation, no major changes were made to the operation, management and maintenance systems of sub-projects except inclusion of GDCD when a sub-project for improvement of emergency vehicles was added. Each ministry has ultimate responsibilities in implementation of the sub-projects in the respective sector; and therefore, there are no issues with the institutional aspect of operation, maintenance, and monitoring of the facilities/ equipment constructed or improved by 66 sub-projects including the two incomplete ones, and there is no shortage of staff reported.

Table 8 Operation and Maintenance of Sub-projects

Area	Sub-projects	Ministry	Ways of Operation & Maintenance
Human Resources Development	Improvement of equipment and fixtures at MOL and VTIs	MOL VTC	Each VTI operates and conducts periodic inspections and maintenance of the equipment. Problems are reported to the respective ministries, VTC or MOL.
	Expansion of Higher Education Facilities	MOHESR	MOHESR operates and maintains its own equipment. National universities operate and maintain the facilities and equipment on their own with a supervision by MOHESR.
Social Infrastructure	Facility improvement and equipment procurement of pre-primary/primary/ secondary education and education for people with disability	MOE MOSD	Each school/facility operates and conducts daily maintenance of the facilities, equipment and fixtures. Problems are reported to the respective ministries, MOE or MOSD.
	Expansion and Rehabilitation of Health and Medical Facilities (including installation of medical equipment), emergency vehicles	MOH GDCD	Operation and maintenance of the facilities such as hospitals, health centers, vaccine/ serum center, and medical equipment are outsourced to private firms by MOH. Problems are solved jointly by MOH and the private firms. GDCD is in charge of operation and maintenance of emergency vehicles.

Source: Documents provided by JICA, Answers to the questionnaire by MOPIC

Considering the above, there are no issues with the institutional aspects of operation and maintenance of the project.

3.5.2 Technical Aspects of Operation and Maintenance

In the project, based on the standard procurement process of the respective ministries, the specifications of facilities and equipment were determined through the same procurement process that has been normally applied. Every ministry is obliged to confirm the plans for maintenance and spare parts when it carries out procurement, and to ensure that trainings and technical guidance are conducted by the companies upon delivery to each facility. Internal regulations of MOH, GDCD, MOHESR and national universities[14] stipulate that they should enter into an agreement for maintenance for about three years with the companies when procuring medical equipment, vehicles, and large equipment. In the project, most of the facilities and equipment were procured for the purposes of renewal and replacement of the old ones, which did not require new technologies for operation and maintenance. Therefore, there are no issues in technical aspects of the respective ministries and facilities.

[14] Tri-partite agreements were signed among MOHESR, national universities, and private companies for equipment procured by national universities.

3.5.3 Financial Aspects of Operation and Maintenance

Table 9 shows the budgets, disbursements, operation and maintenance expenses of the respective ministries in the past three years from 2014 to 2016. There have not been substantial fluctuations in this period. Every year, all facilities assisted by the project except national universities, submitted the next year budget plan for necessary maintenance to the respective ministries. The facilities and equipment are maintained by the budget allocated based on the plan. The specifications and prices of facilities and equipment were determined through the same procurement process as the usual processes in conformity to the procurement standards of respective ministries. Therefore, there were no facilities or equipment whose maintenance cost would exceed the financial capability of the ministry. In addition, as stated in the section "3.5.2 Technical Aspects of Operation and Maintenance," most of the facilities and equipment were procured for the purposes of renewal and replacement of the old ones, which did not require special expenditures for maintenance. The ratio of operation and maintenance expenditures at MOHESR is lower than other ministries because the national universities operate and maintain the facilities and equipment using their own budgets under the supervision of MOHESR. Internal regulations of MOH, GDCD, and national universities stipulate that they should enter into an agreement for maintenance for about three years with the companies when procuring equipment. Therefore, the maintenance costs during this period are covered by the equipment purchase costs. After expiration of the contract with the companies, respective ministries have been covering the maintenance expenses as mentioned.

Table 9 Budget, Disbursement, Operation & Maintenance Expenses of Ministries

Unit: Thousand JOD

Ministries		2014	2015	2016
VTC	Budget allocation	13,338	13,575	13,441
	Disbursement	11,731	11,929	11,562
	(Operation & Maintenance)	1,559	1,844	1,826
	(General Administrative expenses)	8,889	8,939	8,848
MOL	Budget allocation	20,415	20,521	21,346
	Disbursement	17,856	18,986	19,861
	(Operation & Maintenance)	1,860	2,111	2,238
	(General Administrative expenses)	3,685	4,283	4,936
MOHESR	Budget allocation	100,145	123,684	125,712
	Disbursement	93,612	119,846	119,869
	(Operation & Maintenance)	412	429	411
	(General Administrative expenses)	2,262	2,599	2,741
MOE	Budget allocation	903,129	910,171	906,131
	Disbursement	892,021	897,321	899,639
	(Operation & Maintenance)	57,319	58,871	47,009
	(General Administrative expenses)	56,501	56,143	52,524
MOSD	Budget allocation	20,415	20,521	21,346
	Disbursement	17,856	18,986	19,861
	(Operation & Maintenance)	1,860	2,111	2,238
	(General Administrative expenses)	3,685	4,283	4,936
MOH	Budget allocation	650,445	641,559	651,942
	Disbursement	612,697	615,155	609,921
	(Operation & Maintenance)	15,411	17,820	17,387
	(General Administrative expenses)	225,144	232,120	233,365
GDCD	Budget allocation	105,400	205,185	305,335
	Disbursement	105,400	205,185	305,335
	(Operation & Maintenance)	1,200	1,785	1,735
	(General Administrative expenses)	3,200	3,400	3,600

Source: Documents provided by MOPIC

From the above, there appears to be no problems in the financial aspects of operation and maintenance of the facilities constructed and equipment installed in the project.

3.5.4 Current Status of Operation and Maintenance

All the facilities and equipment, except those at the two hospitals that are incomplete, have been operated and maintained through the same process as the usual process in conformity to the standards of the respective ministries. There were not problems observed in operation and maintenance of some of the facilities and equipment during the site visit at the time of the ex-post evaluation. This could be partly because it had not been long since the completion of many sub-projects as of the ex-post evaluation. Therefore, there appears to be no major problems with the conditions of operation and maintenance of the project at the time of the ex-post evaluation.

No major problems have been observed with the institutional, technical, financial aspects, and current status of the operation and maintenance system. Thus, sustainability of the project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objectives of the project were to expand basic infrastructures for human resource development and to improve access to public services in Jordan, thereby contributing to the stability of its economy and society. For these objectives, the loan was provided for sub-projects that had been implemented under public investments between 2012 and 2014 for facility improvements in the sectors of human resource development, healthcare, and primary/secondary education. The project has been consistent with the national development plans and development needs of Jordan both at the times of appraisal and ex-post evaluation, and was in line with the Japan's ODA policy at the time of the project appraisal; therefore, the relevance of the project is high. While the initial plan was to finance 55 sub-projects as outputs of this project, 66 sub-projects were actually implemented. Both the project cost and project period exceeded the plan, therefore, the efficiency is fair. Considering the nature of the project that provided funds for implementing many sub-projects in the sectors of human resource development and social infrastructures all over Jordan in line with their development plans, national level indicators were set to measure the effectiveness of the project after the project started. At the time of ex-post evaluation, it was confirmed that the project has contributed to achieving the targets of these indicators. Furthermore, several impacts such as the improved access to social services including education and medical services among the poor have been reported in the beneficiary survey. Therefore, the effectiveness and impact of the project are high. The project was implemented by the respective ministries under the coordination by the executing agency, MOPIC. The respective

ministries have overseen operation and maintenance of each sub-project. At the time of the ex-post evaluation, there have been no major problems observed with the operation and maintenance of the facilities and equipment procured by the project in terms of institutional, technical, and financial capacities of such respective ministries. Therefore, the sustainability of the project is high.

In light of the above, the project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

MOPIC should continue to monitor and follow up the progress of construction of Al-Salt New Hospital and Al Iman Hospital with MOH to make sure that all the sub-projects under the project will be completed.

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

None

Comparison of the Original and Actual Scope of the Project

Item	Plan	Actual
1. Outputs Sub-projects <Human Resources Development> <Social Infrastructure>	● Improvement of equipment and fixtures at vocational training institutes all over Jordan. (9) ● Construction and improvement of school buildings at higher education facilities (national universities) all over Jordan, improvement of education management information system at MOHESR etc. (4) ● Facility improvement and equipment procurement for pre-primary, primary, secondary schools as well as construction of education facilities for deaf students etc. (14) ● Improvement and rehabilitation of healthcare facilities such as public hospitals, serum and vaccine centers (including installation of medical equipment) (28)	● Improvement of equipment and fixtures at vocational training institutes all over Jordan. (9) ● Construction and improvement of school buildings at higher education facilities (national universities) all over Jordan, improvement of education management information system at MOHESR etc. (5) ● Facility improvement and equipment procurement for pre-primary, primary, secondary schools as well as construction of education facilities for deaf students etc. (18) ● Improvement and rehabilitation of healthcare facilities such as public hospitals, serum and vaccine centers (including installation of medical equipment) (34)
2. Project Period	January 2012 – December 2014 (36 months)	January 2012 – March 2017 (63 months)
3. Project Cost Amount Paid in Foreign Currency Amount Paid in Local Currency Total ODA Loan Portion Exchange Rate	295 million yen 32,931 million yen (299 million Jordanian Dinar) 33,226 million yen 12,234 million yen 1 Jordanian Dinar = 110 yen (As of February 2012)	241 million yen 59,007million yen (445 million Jordanian Dinar) 59,248 million yen 12,128 million yen 1 Jordanian Dinar = 132.7 yen (Average between January 2012 and December 2014)
4. Final Disbursement	March 2015	