

India

FY2021 Ex-Post Evaluation Report of Japanese ODA Loan Project
“Tamil Nadu Investment Promotion Program (Phase 2)”

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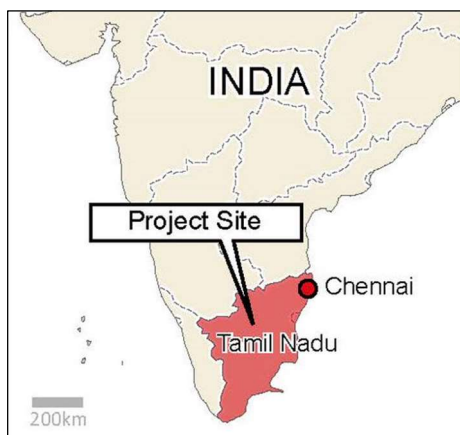
0. Summary

The Tamil Nadu Investment Promotion Program (Phase 2) (the Program) was implemented to enhance the investment climate in the southeastern Indian state of Tamil Nadu by facilitating the improvement of policies and systems related to private sector investment and industrial growth in the state as well as promoting early implementation of the development and improvement of urban infrastructure in the state, especially roads, power, waterworks, sewerage, and other infrastructure facilities, thereby contributing to more foreign direct investment (FDI) into the state. The Program is consistent with the development policies, the financial needs and the development needs of India, as well as with Japan’s ODA policy. The Program is internally coherent with JICA’s other projects and externally coherent with other donors and Japan External Trade Organization (JETRO)’s projects. Therefore, its relevance and coherence are very high.

The operation and effect indicators had fully achieved the targets set at the time of appraisal, except for the number of trainers of government training institutes trained under the private-sector company participation program, the number of days required to issue an investment clearance following receipt of the application through the single window clearance mechanism in Tamil Nadu Industrial Guidance & Export Promotion Bureau (Guidance Bureau), and the number of page views of the Single Window Portal, at the time of the Program completion. Regarding qualitative effects, all policy actions were also achieved. Regarding the impact, as the result of the development of infrastructure in Tamil Nadu under the small-scale infrastructure projects of the Program, improvement of the quality of the workforce through training provided by the Tamil Nadu Skill Development Cooperation (TNSDC), and the simplification by the Guidance Bureau of the investment licensing process through the online single window system, the amount of FDI in Tamil Nadu has been increasing year by year. The construction of new factories and the start of operations at industrial parks for Micro, Small and Medium Enterprises (MSMEs) established through the Program have created new employment opportunities for workers. No negative impact of the Program on the natural environment was observed, and land acquisition and resettlement are underway in accordance with Indian domestic laws. The Program has also had a positive impact on women and marginalized people by providing job training, employment opportunities and developing housing. Therefore, the effectiveness and impacts of the project are high.

Regarding the sustainability of the Program, no problem has been observed in terms of the policy and system and institutional/organizational aspects and, therefore, the sustainability has been ensured. Preventive measures/countermeasures to risks have been conducted.

1. Project Description



Project Location (Source: Evaluator)



Small-scale infrastructure project under the Program (Construction of a bypass road)
(Source: Evaluator)

1.1 Background

The Indian economy, which had been exclusive with foreign currency restrictions and import-substitution industrialization policy, began to grow at a higher rate after 1991, when deregulation and liberalization policies were introduced, and was booming at an average annual growth rate of over 7% after 2000, when the real results of the policies began to be seen. The annual amount of FDI hovered around US\$25 billion from FY2007 to FY2013, peaking at US\$35.1 billion in FY2011, but exceeded US\$40 billion in FY2015, and further expansion was expected. However, Japanese companies were facing challenges in making investment decisions, such as weak infrastructure, unclear legislation, and a complicated tax collection system. These needed to be addressed in order to further attract FDI.

Tami Nadu, a southeast state of India, is located along the shipping lane between India and Southeast Asia. Its abundant labor, consistent policy to lure foreign capital, and other measures attracted Japanese companies to the state, particularly those in the car and motorcycle industries. In fact, the number of Japanese companies that have their bases in the state was on the increase from 77 companies in January 2008 to 344 companies in October 2012, and 577 companies in October 2015. Moreover, being part of the Chennai-Bengaluru Industrial Corridor (CBIC), for which the Japanese and Indian Governments adopted the *Comprehensive Regional Perspective Planning and Master Planning* in July 2015, the state is recognized as an important region for industrial development. The Japanese Government was considering financial cooperation for priority infrastructure projects which would contribute to an improvement of the investment

environment for the CBIC. As the state of Tamil Nadu was ranked 12th among the 36 states and Union territories of India in terms of business environment in 2015 and 18th in 2016, while the capital of the state Chennai was placed 15th among the 17 major cities of India in a 2016 assessment by the World Bank, the region's investment environment needed to be further improved in terms of both systems and infrastructure.

1.2 Project Outline

The objective of the Program was to facilitate the improvement of policies and systems related to private sector investment and industrial growth in the southeastern Indian state of Tamil Nadu, while at the same time promoting early implementation of the development and improvement of urban infrastructure in the state, mainly of roads, power, waterworks, sewerage, and other infrastructure facilities, thereby attempting to increase FDIs in the state by enhancing its investment climate.

Loan Approved Amount/ Disbursed Amount	22,145 million yen / 22,122 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March 2017 / March 2017
Terms and Conditions	Interest Rate 1.4% Repayment Period 30 years (Grace Period 10 years) Conditions for Procurement General Untied
Borrower / Executing Agency	The President of India / Finance Department, Government of Tamil Nadu
Project Completion	February 2020
Target Area	Tamil Nadu
Main Contractor (Over 1 billion yen)	None
Main Consultant (Over 100 million yen)	None
Related Study (Feasibility Study, etc.)	None
Related Project	“Tamil Nadu Investment Promotion Program” (Phase 1) in India

2. Outline of the Evaluation Study

2.1 External Evaluators

Keishi Miyazaki, OPMAC Corporation

Kazuhiro Nakagawa, OPMAC Corporation

2.2 Duration of Evaluation Study

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

Duration of the Study: October 2021 – January 2023

Duration of the Field Study: March 20, 2022 – April 2, 2022

2.3 Constraints during the Evaluation Study

The Program is a program loan project (Development Policy Lending), which encourages to implement reforms through policy dialogue and provided it with funds once the reforms are accomplished. The funds provided are not earmarked for specific purposes and go into the general revenue. As a result, it is difficult to quantitatively compare inputs (expenses) and outputs (achievements), which is why efficiency is excluded from the analysis and evaluation. Sustainability is included in the analysis, but it is not subject to evaluation scope, and no sub-rating is conferred. Since no sub-rating is conferred on efficiency and sustainability, an overall rating has not been conferred either.

3. Results of the Evaluation (Overall Rating: N/A¹)

3.1 Relevance/Coherence (Rating: ④²)

3.1.1. Relevance (Rating: ④)

3.1.1.1 Consistency with the Development Plan of India

At the time of appraisal, the “*Make In India*” initiative announced by the Government of India was planned to promote economic growth and job creation by stimulating investment from private sector companies both inside and outside the country, and to increase the manufacturing sector share of GDP to 25% by 2022. The “*Skill India*” campaign also aimed to provide vocational skill training for 400 million young people by 2022. The development plan of the state “*Vision Tamil Nadu 2023*” (March 2012) aimed to deliver significant improvements in economic indicators through various ways, such as by setting an annual GDP growth target of 11% over the following 11 years as well as an annual per-capita income target of 450,000 rupees, six-fold compared to 2012, by 2023.

The “*Make In India*” initiative has remained an effective policy as information and

¹ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

² ④: Very High, ③: High, ②: Moderately Low, ①: Low

opportunities for investment by foreign companies were provided on the policy website at the time of the ex-post evaluation, while the policy continuously contributed to economic growth and job creation through the promotion of investment. Under the “*Skill India*” campaign, the Ministry of Skill Development and Entrepreneurship has provided various vocational training schemes. The “*Vision Tamil Nadu 2023*” has remained in place without any changes in its basic course and contents as the basic principles of the state's policies. In addition, various policies have also been announced after the appraisal such as “*Tamil Nadu Industrial Policy 2021*,” which is designed to provide incentives for companies investing in Tamil Nadu with the aim of creating 2 million job opportunities by 2025 with the manufacturing sector contributing 30% of total state value added by 2030, “*Tamil Nadu Investment Promotion Policy 2021*,” which is designed to increase the exports from Tamil Nadu to US\$100 billion by 2030, and “*Micro, Small and Medium Enterprises Policy 2021*,” which supports the development of MSMEs.

It has been recognized that the Program was consistent with the development policies at the time of the appraisal and at the time of the ex-post evaluation. At the time of the ex-post evaluation, there also still existed strategies and policies related to and consistent with the development policies at the time of the appraisal. The Program was implemented based on these strategies and policies, and it has been recognized that the Program was consistent with the development policies.

3.1.1.2 Consistency with the Development Needs of India

Table 1 shows the differences between the state budget of the Government of Tamil Nadu from the time of appraisal to the time of the ex-post evaluation. From the time of the appraisal to the time of the ex-post evaluation, expenditures constantly exceeded revenues, with the gap between revenues and expenditures mainly being covered by the issue of state bonds. However, the interest burden was not small, meaning that there was also a need for other funding sources. As the Program provided amount of 22,122 million yen (approximately Rs. 13,988 million) through the Program in financial support, contributing as much as 3% of the revenue and expenditure gap during the project period (FY2017-FY2019), there has been a need for other funding sources.

Table 1: State Budget of the Government of Tamil Nadu

Unit: million rupees

Item	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Revenue	1,296,917	1,593,630	1,762,510	1,977,212	2,193,751	2,189,920
Expenditure	1,623,192	1,752,930	1,937,420	2,120,359	2,409,928	2,466,947
Balance	△326,274	△159,300	△174,910	△143,148	△216,176	△277,027

Source: Finance Department, the Government of Tamil Nadu

In terms of development needs, at the time of appraisal, India was ranked first in the category “Promising Countries/Regions for Overseas Business Operations over the Medium Term (next 3 years or so)” of “FY2014 (26th) Survey Report on Overseas Business Operations by Japanese Manufacturing Companies” by the Japan Bank for International Cooperation (JBIC) for the first time, surpassing Indonesia, due to the scale and growth potential of the local market and inexpensive labor force, which was highly recognized. The same result was achieved in FY2015 and FY2016 (India has been ranked first as a “the promising countries/regions for overseas business operations over the long term (next ten years or so)” since the FY2010 survey). However, in the same survey, the weak infrastructure, opaque legal system, and complicated tax collection system were cited as challenges for Japanese companies when making investment decisions, and these issues needed to be addressed in order to attract more FDI in the future. As the state of Tamil Nadu was ranked 18th nationally in the 2016 Survey of the Investment Climate in Indian States, and Chennai was ranked 15th out of 17 major cities in a survey conducted by World Bank survey in 2016, further improvement of the investment climate, both in terms of institutions and infrastructure, was an issue.

At the time of the ex-post evaluation, small-scale infrastructure developed through the 30 sub-projects supported by the Program contributed to the promotion of investment in Tamil Nadu. On the other hand, as interviews with private companies have indicated that infrastructure in Tamil Nadu is still insufficient in terms of road networks and water supply and drainage networks, it has been recognized that there is the need for further infrastructure development. The training provided by the TNSDC for the development of industrial human resources has been provided in areas that will be needed in the future based on the results of the skills gap analysis conducted by the Program, contributing to the promotion of investment in Tamil Nadu. On the other hand, the need for industrial human resource development in the state has been continuously recognized, along with an expansion of employment opportunities. The number of types of permits and licenses for which online applications are available in the single-window system provided by Guidance Bureau has increased, and the system itself has been continuously updated, shortening the time required to obtain permits and licenses, which have contributed to the promotion of investment in Tamil Nadu. The amount of FDI in Tamil Nadu has been increasing year by year, and the need to strengthen the investment reception bureaus has been recognized. The launch of a single-window portal site for investment applications for micro, small and medium enterprises (MSMEs) has made it easier for MSMEs to collect information and apply for permits and licenses. Tamil Nadu aims to create and maintain multiple clusters of MSMEs in the state in the future, and the need to further strengthen its investment contact point and information provision for MSMEs has been recognized.

Thus, all four policy items have been recognized as meeting the development needs of Tamil Nadu at the time of the ex-post evaluation.

3.1.1.3 Appropriateness of the Project Plan and Approach

The Program is a program loan project (Development Policy Lending) and a scheme in which, based on the policy matrix agreed upon by both the Japanese and Indian governments (a table summarizing policy items to be improved, targets to be achieved for each item, and policy actions to be achieved each fiscal year), the executing agency and relevant organizations implement policy actions for each policy and field and to promote the achievement of the goals of each policy item and the achievement of the project objectives through periodic monitoring and evaluation of the results of the actions.

The policy matrix was drafted by the Finance Department based on the results of interviews with the relevant departments (Industries Department, Micro, Small and Medium Enterprises Department, Labor and Employment Department, etc.), and JICA then held individual consultations with the relevant departments during the appraisal, and considered the proposed revisions to the policy matrix. The final decision on the policy matrix was made on behalf of the state government at a meeting under the Additional Chief Secretary and attended by all the departments concerned, including the Finance Department. In the process, JICA also consulted with the JETRO Chennai Office and Japanese companies operating in Tamil Nadu to make clear their issues and requests in investing and doing business in the state, and then discussed with the Indian side to select policies with high potential for implementation for the policy matrix. As a specific example, the initial policy matrix proposal included “housing development projects,” but as a result of discussions with the Indian side, this component was deleted from the policy matrix because the Japanese side had a relatively low interest in the component and it was categorized as environmental category B. With regard to the policy item “Acceleration of Infrastructure Development,” the goal was set not to achieve the completion of the small-scale infrastructure projects themselves, but rather to ensure that budgets appropriately allocated and projects promoted. As a result, disbursements from JICA were made without delay and utilized as the budget for each small-scale infrastructure project. In addition, it was agreed between JICA and the implementing agencies that a Program Monitoring Committee (PMC) meeting would be held on a regular basis (once a quarter) to allow for timely input from the Japanese side in order to ensure steady and rapid implementation of the policy matrix.

Based on the above, it is evaluated that the project plan and approach were appropriate.

3.1.2 Coherence (Rating: ③)

3.1.2.1 Consistency with Japan’s ODA Policy

At the time of appraisal, according to *Japan’s Country Assistance Policy for India* (March 2016), the Program was positioned as a “regional economic development initiatives” with cooperative programs under the “enhancing connectivity” as a priority area for providing

assistance to eliminate impediments to investment and growth. In addition, it was noted as other considerations that “assistance based on a programmatic approach, in which policy matrices are mutually agreed through close and continuous policy dialogue; monitoring and review are conducted; and projects are guided by its progress” should be promoted gradually.

The JICA Country Analysis Paper for India (March 2012) also saw the “Development of Industrial and Urban Infrastructure” as a priority area and recognized as a key issue institutional improvements contributing to the following: “infrastructure development for the development of industrial infrastructure based on the needs of Japanese companies in India, especially infrastructure development that supports not only Japanese companies but also local industries as a whole (roads, railways, electricity, water, etc.) such as those related to the Delhi-Mumbai industrial corridor and Chennai-Bengaluru industrial corridor” and “an improved investment environment”. Therefore, the Program was consistent with this policy and analysis.

3.1.2.2 Internal Coherence

At the time of appraisal, based on the results of the “Tamil Nadu Investment Promotion Program” as the previous phase of the Program, the improvement of both its institutions and infrastructure in Tamil Nadu was continuously expected through this program. In addition, JICA implemented the “study for preparation of Comprehensive Integrated Master Plan for the Chennai Bengaluru Industrial Corridor” from October 2013 to July 2015 in order to support CBIC.

At the time of the ex-post evaluation, it was recognized that “dialogue with the private sector” and “bilateral policy dialogue based on JICA independent financing,” lessons learned from the “Tamil Nadu Investment Promotion Program,” were being utilized in the PMC in the Program.

The “Project for Construction of Chennai Seawater Desalination Plant” and the “Project for Installation of Chennai Metropolitan Area Intelligent Transport Systems,” which aimed at improving infrastructure in the Chennai metropolitan area of Tamil Nadu, are expected to contribute to improving the investment environment in the state.

3.1.2.3 External Coherence

(1) World Bank

At the time of appraisal, the World Bank (WB) identified “Integration, Transformation, and Inclusion” as its support policy in the *Country Partnership Strategy (CPS) for India* (2013-2017), and in the area of “Integration” the need to strengthen market mechanisms and improve the environment for emerging manufacturing industries was indicated. In addition, WB provided technical cooperation to the Ministry of Commerce and Industry (investment climate survey in each state in September 2015).

At the time of the ex-post evaluation, the “Chennai City Partnership: Sustainable Urban

Services Program” was approved by WB during September 2021 and being implemented by Tamil Nadu. The project aims to improve the quality and sustainability of services in the areas of water supply, wastewater, mobility, and waste management in the Chennai metropolitan area through organizational and financial strengthening, with financing contingent on the achievement of policy goals.

From the above, it can be seen that WB was supporting the improvement of the business environment in India at the time of appraisal. WB is also implementing a project to improve the quality and sustainability of administrative services in the Chennai metropolitan area at the time of the ex-post evaluation. The quality and sustainability of administrative services are closely related to the investment environment that the Program aims to create.

(2) Asian Development Bank

At the time of appraisal, the Asian Development Bank (ADB) identified “Inclusive Growth” as one of the axes of its support strategy in the CPS and identified job creation and support for the development of industrial corridors in the eastern coastal region as target areas. Under this strategy, the project supported the formulation of an industrial corridor between Visakhapatnam City, in Andhra Pradesh, and Chennai City. In addition, ADB was considering technical assistance to the Tamil Nadu Infrastructure Fund Management Corporation (TNIFMC), supported by the Program, for identifying and screening public-private partnership infrastructure projects.

At the time of the ex-post evaluation, the “Chennai-Kanyakumari Industrial Corridor: Power Sector Investment Project” was approved during November 2019, and the “Tamil Nadu Industrial Connectivity Project” was approved during April 2021, with Tamil Nadu Transmission Corporation Limited and Highways Department-Tamil Nadu as the respective implementing agencies and these projects were under implantation. Under the Chennai-Kanyakumari Industrial Corridor: Power Sector Investment Project, the construction of power grids and substations and capacity building for Tamil Nadu Transmission Corporation Limited are being implemented. Under the Tamil Nadu Industrial Connectivity Project, 16 state highways (total length 590 km) in the state are being upgraded and maintained. Through these projects, the infrastructure of the state's power sector and transportation sector is being developed. In addition, ADB implemented a technical assistance “Tamil Nadu Infrastructure Fund Management Company” (2017-2018) to TNIFMC to help improve TNIFMC's capacity to identify and screen public-private partnership infrastructure projects.

From the above, it can be seen that ADB was supporting the planning of the industrial corridor between Visakhapatnam City in Andhra Pradesh and Chennai City at the time of appraisal, and was implementing infrastructure development in the Chennai metropolitan area at the time of the ex-post evaluation, in addition to the Program. ADB also provided technical

assistance to TNIFMC, one of the implementing agencies of the Program, and contributed to improving its capacity for identifying and screening projects. The knowledge and know-how gained by TNIFMC through the technical assistance were utilized in the selection and screening of small-scale infrastructure projects under the Program.

(3) JETRO

Since 2014, JETRO has been dispatching investment promotion advisors to Japan Plus in Invest India under the National Investment Promotion and Facilitation Agency of India, Ministry of Commerce and Industry, to provide Japanese companies considering investment in India with comprehensive information on investment and with advice on licensing procedures. In addition, the advisors hold regular meetings with each state, including Tamil Nadu, to exchange information and approach to each state.

These investment promotion advisors provided comprehensive information and advice on investment and licensing procedures to Japanese companies considering investment in India, including Tamil Nadu, from the time of appraisal to the time of the post-evaluation, thereby contributing to the promotion of investment in Tamil Nadu.

Regarding the consistency with development policies, consistency with the Program has been confirmed as the policies at the time of appraisal were still in effect at the time of the ex-post evaluation. Meanwhile, the policies announced after the time of appraisal were also ones that contribute to the promotion of investment in the Tamil Nadu region.

The expenditures in Tamil Nadu consistently exceeded revenues from the time of appraisal up to the time of the ex-post evaluation, and there has been the need for funds to make up the difference between revenues and expenditures. The 30 subprojects as small-scale infrastructure projects supported by the Program were selected after listening to the development needs of the private sector, including Japanese companies. The small-scale infrastructure developed by the subprojects contributed to the promotion of investment in Tamil Nadu and met the development needs of the state. The above needs were still recognized at the time of the ex-post evaluation. In particular, the fact that JICA interviewed the industrial sector, including JETRO and the private sector, and developed a mutually complementary policy matrix based on their development needs is suggestive for other projects.

The Program was consistent with Japan's aid policy at the time of appraisal, as it was also consistent with the priority areas of Japan's Country Assistance Policy for India (March 2016) and JICA Country Analysis Paper for India (March 2012).

Regarding internal coherence, lessons learned from the previous phase of the Program have been applied, and other JICA-related projects are also related to infrastructure development, which is essential for improving the investment environment in Tamil Nadu. Thus, the internal

coherence has been observed. As for external coherence, other donors' projects in Tamil Nadu, such as those of WB and ADB, have been related to the improvement of administrative services and infrastructure development, and ADB has also provided technical cooperation to improve the screening capacity of TNIFMC, one of the implementing agencies of the Program. JETRO has also dispatched investment promotion advisors to Japan Plus in Invest India to support Japanese companies considering investment in India, including Tamil Nadu. Therefore, external coherence has also been observed.

Thus, its relevance and coherence are very high.

3.2 Effectiveness and Impacts³ (Rating:③)

3.2.1 Effectiveness

3.2.1.1 Quantitative Effects (Operation and Effect Indicators)

The operation and effect indicators of the Program are shown in Table 2.

Table 2: Operation and Effect Indicators

Operation and Effect Indicators	Baseline value	Target value	Actual value	
	2015	2019	2019	2021
		Completion Year	Completion Year	2 Years After Completion
1. Number of projects facilitated by Tamil Nadu Infrastructure Fund Management Corporation (cumulative total)	0	4	25 (625%)	43
2. Number of projects facilitated by the Small-scale Infrastructure Project Empowered Committee (cumulative total)	0	25	30 (120%)	30
3. Number of trainees trained by the state's Tamil Nadu Skill Development Corporation scheme and PPP mode institutions (persons/year)	150,000	250,000	210,000 (84%)	42,000
4. Number of trainers of government training institutes trained (persons/year)	0	100	0 (0%)	0
5. Number of days required to gain Single Window Clearances through the Guidance Bureau and the online system (at most)	-	≤ 30	45-60 (50-67%)	10.54
6. Number of page views of the Single Window Portal (monthly)	0	500	No Data (N/A)	No Data
7. Number of MSMEs utilizing the Single Window Portal for applications (yearly)	0	40	1,626 (4,065%)	6,100

Source: Documents provided by JICA, executing agencies and related organizations in Tamil Nadu.

Regarding 1. the number of projects facilitated by TNIFMC, the target was achieved as the actual number at the time of completion was 25 against the target of 4.

Regarding 2. The number of projects facilitated by the Small-scale Infrastructure Project Empowered Committee (SIPEC), the target was achieved as the actual number at the time of

³ When providing the sub-rating, Effectiveness and Impacts are to be considered together.

completion was 30 against the original target of 25. Thirty small-scale infrastructure projects were approved by SIPEC. The list of the small-scale infrastructure projects is shown in Table 3.

Regarding 3. the number of trainees trained by the state's Tamil Nadu Skill Development Corporation scheme and PPP mode institutions, the target was mostly achieved as the actual number at the time of completion was 210,000 against the original target of 250,000. However, since hands-on trainings could not be conducted due to the COVID-19, the actual number for 2021 decreased drastically compared to the value for 2019.

Regarding 4. the number of trainers of government training institutes trained, the target was not achieved with the actual number at the time of completion being nil against the original target of 100. This was because the training program for trainers to be developed under the private sector participation program had not been completed by the time of the Program completion. The development of the program has taken time since then due to the COVID-19. However, the training program for trainers is scheduled to be implemented from 2022.

Regarding 5. the number of days required to gain Single Window Clearances through the Guidance Bureau and the online system, the number of types of investment permits and licenses that can be applied for through the single-window system was larger as of 2019 than that estimated at the time of appraisal. The number of days required to issue these permits and licenses varies depended on the type of permit or license. The actual response time in 2019 ranged from 45 to 60 days, and the target of 30 days or less was not achieved. On the other hand, for environmental-related investment permits and licenses that can be applied for through the system, the approval process should be completed within 60 days according to the regulations. Therefore, it is not appropriate to judge the status of achievement based on the target value (within 30 days) set at the time of appraisal, as this does not reflect the actual situation. Note that with the introduction of the new service of the single-window system in FY2020, the actual number in 2021 improved over the actual figures for 2019, with approximately 6,300 applications processed in an average of 10.54 days.

Regarding 6. the number of page views of the Single Window Portal, actual numbers cannot be obtained. However, the next indicator, "the number of MSME investors utilizing the Single Window Portal for applications", had an actual number of 6,100 in 2021, which is an average of 508 views per month. From this, the actual number in 2021 for "the number of page views of the Single Window Portal" is likely to exceed the target value of 500 views/month at the time of the Program completion.

Regarding 7. the number of MSME investors utilizing the Single Window Portal for applications, the target was achieved as the actual number at the time of completion was 1,626 against the original target of 40. This was because the types of permits and licenses available through the single-window portal had increased.

Table 3: List of the Small-scale Infrastructure Projects

No.	Project	Progress
1	Upgrading of existing Avadi 110 KV SS to 230 /110 KV SS with associated lines - Thiruvallur district	Tenders awarded, project under progress
2	Establishment of 230/110 KV SS at BHEL Thuvakudi - Trichy district	Sub-station commissioned
3	Erection of 230 KV & 110 KV transmission lines associated with BHEL Thuvakudi - Trichy district	Work under progress
4	Establishment of Sojitz Motherson 110 KV SS with associated 110 KV lines - Kancheepuram district	Sub-station commissioned
5	Establishment of Mahindra World City II 110 KV SS with associated 110 KV lines - Kancheepuram district	Sub-station energised
6	Establishment of Thirumani 110/11 KV SS with associated 110 KV lines - Kancheepuram district	Line works under progress
7	Upgrading of existing Maduravoyal 33/11 KV SS into 110/33/11 KV SS with associated 110 KV Lines - Thiruvallur district	Re-tendering works under progress
8	Upgrading of existing Denkanikottai 33/11 KV SS into 110/33/11 KV SS with associated 110 KV Lines - Krishnagiri district	Sub-Station test charged, Line energised, Second Power Transformer test charged
9	Establishment of Pappambakkam 110 /33 -11 KV SS with associated 110 KV lines - Thiruvallur District	Sub-Station works completed. Other works are under progress
10	Establishment of Kunjallam 110 / 33-11 KV SS with associated 110 KV lines - Thiruvallur District	Works nearing completion
11	Establishment of Mangadu indoor110/11 KV SS with associated 110 KV lines - Kancheepuram District	Sub-station commissioned
12	Upgrading of the existing Pulianthope 33/11 KV SS into 110/33/11 KV GIS SS with associated 110 KV lines - Chennai district	Sub-station commissioned
13	Establishment of 110/33-11 KV indoor SS at Pallikaranai with associated 110 KV lines - Kancheepuram district	Sub-station commissioned
14	Establishment of 230/33 KV GIS SS at Thiruvanmiyur with associated lines - Chennai district	Retendering works under progress
15	Establishment of 230 KV Substation in Durainallur for Mahindra Industrial Park Chennai Ltd.	Tendering works under progress
16	Rehabilitation & Improvement work (including biogas generation) for the existing Zone - I & II (each 80 MLD) capacity Sewage Treatment Plant at Kodungaiyur	Modification works in existing STPs are under progress
17	Upgrading work for the existing 110 MLD capacity Sewage Treatment Plant at Kodungaiyur	Works under progress
18	Rehabilitation & Improvement work (including biogas generation) for the existing 34 MLD capacity Sewage Treatment Plant at Koyambedu	Modification Works under progress
19	Upgrading work for the existing 120 & 60 MLD capacity Sewage Treatment Plant at Koyambedu	Works under progress
20	Rehabilitation & Improvement work (including biogas generation) for the existing 23 MLD capacity Sewage Treatment Plant at Nesapakkam	Works under progress
21	Upgrading work for the existing 54 & 40 MLD capacity Sewage Treatment Plant at Nesapakkam	Works under progress
22	Upgrading work for the existing 12, 54 & 60 MLD capacity Sewage Treatment Plant at Perungudi	Works under progress
23	Eco Restoration of Peerkankaranai lake at Peerkankaranai T.P.	Works under progress
24	Improvement of Rajiv Gandhi Salai under Phase II proposed Construction of Bypass at Kelambakkam and Tiruporur	Land acquisition process is under progress
25	Phase-II-Widening from Intermediate Lane to Four lane and Strengthening at Km 2/0-6/2 of Pudukkottai-Pulicat Road (MDR 379)	Land acquisition process is under progress

No.	Project	Progress
	Including Land Acquisition (widening the approach to Mahindra Industrial Park Chennai Ltd.)	
26	Two-tier Skill Development Centers	Works under progress
27	Integrated Technical Textiles Park at Thandarai, Kancheepuram District	Works under progress
28	Integrated Textiles/Apparels Park at Punjaikalakurichi, Karur District	Works under progress
29	Integrated Food Park at Eachambadi, Dharmapuri District	Works under progress
30	Integrated Sea Foods Park at Sakkarakottai, Ramanathapuram District	Works under progress

Source: TNIFMC

3.2.1.2 Qualitative Effects (Other Effects)

(1) Achievement of Policy Actions

The policy matrix of the Program included four policy items, with corresponding achievement goals and policy actions, and regular monitoring and evaluation of the achievement of the policy actions were conducted by the PMC. The Program period was 35 months from March 2017, the time of signing of the loan agreement, to January 2020, the time of the final joint evaluation. The level of achievement of each policy item at the time of Program completion and its continuation at the time of the ex-post evaluation are described below.

Regarding “Policy Item 1: Acceleration of Infrastructure Development”, the Tamil Nadu Infrastructure Fund (TNIF) had been established and was being considered for investment in low-income housing development projects at the time of the Program completion. At the time of the ex-post evaluation, in addition to the TNIF being funded, the Tamil Nadu Shelter Fund (TNSF) and the Alternative Investment Fund (AIF) have been established by the TNIFMC. Moreover, investments in housing development projects for low-income people have been initiated. In addition, small-scale infrastructure projects have been under construction even at the time of the ex-post evaluation.

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)
1. Acceleration of Infrastructure Development	TNIF is established by TNIFMC to mobilize public and private funds for the implementation of large and social infrastructure projects, and funding for high priority large and social infrastructure projects is secured.	<p><Policy Actions> At least one fund-raising with the new financial instrument is to take place for the pipeline projects of TNIFMC</p> <p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> The TNIF declared its first close on October 2018 with commitments of USD 320 million including the First Loss Capital from the Tamil Nadu Infrastructure Development Board (TNIDB). <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> An investment of Rs.360 million was made in the TNIF, of which Rs.300 million in TNIDB and Rs.60 million in life insurance companies, of investment has been made to the TNIF. In addition to TNIF, TNIFMC has established a Tamil Nadu shelter fund and an alternative investment fund. For the Tamil Nadu Shelter Fund, Rs.6.58 billion has been committed, of which Rs.1.5 billion is from the State Government of Tamil Nadu, Rs.2.49 billion from WB, and Rs.2.59 billion from ADB. Of the Rs.6.58 billion of commitment, Rs. 830 million of investment has

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)
		<p>been realized.</p> <p><Policy Actions> At least one project is selected and facilitated by Government of Tamil Nadu and TNIFMC, to which the new funding model for social infrastructure development shall be applied</p> <p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> Affordable Housing Project at Manali was selected as a social infrastructure development project. Consultant has been appointed to study the development model, including the funding model. A new model for funding social infrastructure is being established for the Industrial Housing project in collaboration with State Industries Promotion Corporation of Tamil Nadu (SIPCOT). The new “Rent to Aggregator” model is being implemented, where the housing units are rented in bulk to the industrial houses, thereby reducing the risk of rent collection. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> TNIFMC has agreed the investment of Rs. 940 million to a private housing developer for the construction of up to 2700 affordable houses. An amount of Rs. 240 million was invested in the FY 2021-22. SIPCOT has approved the establishment of a Special Purpose Vehicle (SPV) for undertaking the development of the proposed industrial housing projects. Under this SPV, two industrial housing projects are being evaluated at two SIPCOT industrial parks. TNIFMC is finalizing investment terms with TATA Electronics Pvt. Ltd. (TEPL) for the development of a 14,300 bed accommodation facility for the use of female workers at TEPL. TNIFMC is also facilitating the development of hostels for female workers. The SPV for the development of these projects has been established and 16 hostels are being evaluated for investment.
	SIPEC selects the priority projects and allocates the budget properly. The administrative departments and implementing agencies will appropriately monitor and facilitate the priority projects.	<p><Policy Actions> Implementation of the priority small-scale infrastructure projects is facilitated in accordance with the established Project Monitoring Matrix.</p> <p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> 30 sub-projects are being facilitated using the Project Monitoring Matrix. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> 30 sub-projects have been under construction.

Source: Documents provided by JICA, Responses to questionnaires to executing agencies and related organizations in Tamil Nadu

Regarding “Policy Item 2: Skills Development for Employment”, a skill gap study was completed, and the priority sectors had been identified at the time of the Program completion. Skills training was continuously being conducted by the TNSDC and the TNSDC portal site was running. The above activities continued to be conducted at the time of the ex-post evaluation. Especially regarding skills training, more than half the candidates have been women, with transgender and differently abled workers also joining the training. Regarding the Apex Skill Development Centers (ASDC), although the decision to establish the ASDC was made only at the time of the Program completion, ASDCs have been established in 4 out of 5 priority sectors and have provided skills training.

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)										
2. Skills Development for Employment	The development of training courses that enable students to acquire the skills required by industry will improve the employment rate of graduates from polytechnics, engineering colleges and industrial training institutes.	<p><Policy Actions> The new sectors of skills training to be expanded are identified based on skill gap analysis.</p> <p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> A skill gap study had been completed by August 20, 2019, and was released on November 30, 2019 with an announcement by the Honorable Chief Minister. The following Priority sectors were identified. Apparel and Textile Manufacturing, Automotive and Metals, Agro & Food Processing, Healthcare, Chemical and Petrochemical, Traditional Industries, Building and Infrastructure, Tourism and Hospitality and IT/ITES. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> Skill gap studies have been conducted continuously beyond 2019. 										
		<p><Policy Actions> Skills registry database under the Skills Development Interactive Portal is strengthened.</p> <p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> The database was strengthened continuously. The number of total candidates registered was 5,761,465 (increased by 70,534 from 5,690,931 as of March 2019). The number of total skilled youths in the skills registry was 169,330 (increased by 10,470 from 158,860 as of March 2019). The number of training providers offering courses in 2018-19 was 757 (increased by 37 from 720 as of March 2019). <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> The status of training in January to December 2021 is shown below. <table border="1"> <thead> <tr> <th>Status</th> <th>Number of People</th> </tr> </thead> <tbody> <tr> <td>Registered Candidates</td> <td>59,685</td> </tr> <tr> <td>Enrolled Trainees</td> <td>29,911</td> </tr> <tr> <td>Training On-going</td> <td>17,588</td> </tr> <tr> <td>Training Completed</td> <td>11,382</td> </tr> <tr> <td>Certified Trainees</td> <td>8,596</td> </tr> </tbody> </table> <ul style="list-style-type: none"> More than half of candidates have been women. Transgender and differently abled workers have also joined the training. <p><Policy Actions> An action plan to improve placement services for trainees onto Multi-National Companies and MSMEs is implemented.</p> <p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> The action plan was improved continuously. The TNSDC Portal was upgraded and all the activities including placement went online soon. Records of the unified skills registry will be made available to all employers to recruit candidates from the Skills Registry. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> TNSDC Portal has been running. <p><Policy Actions> Pilot schools for vocational training through TNSDC empaneled training partners are rolled out in select districts.</p> <p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> 67 Schools were selected as pilot schools. The project was implemented and started in 67 schools and the scheme was running successfully. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> The pilot project has been completed. 	Status	Number of People	Registered Candidates	59,685	Enrolled Trainees	29,911	Training On-going	17,588	Training Completed	11,382
Status	Number of People											
Registered Candidates	59,685											
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Training On-going	17,588											
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Certified Trainees	8,596											
	The quality of training institutions in the whole	<p><Policy Actions> At least one Apex training institution in PPP mode is established.</p>										

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)
	state is enhanced, by creation of an Apex level training institution which acts as a training institution for trainers.	<p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> The MoU between TNSDC and Lead Implementation Partner (LIP) in selected industries for the establishment of ASDC in the three sectors (“Auto, Auto Components and machine Tools”, “Hospital and Healthcare” and “Logistics and Transportation”) was signed on November 30, 2019 in the presence of the Honorable Chief Minister. A detailed schedule was expected to be decided in April, 2020, and ASDCs were expected to start training from July, 2020. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> TNSDC identified the following priority sectors: “Auto, Auto Components and Machine Tools”, “Hospital and Healthcare”, “Logistics and Transportation”, “Building and Infrastructure”, and “Banking Securities Finance and Insurance”. The training has been provided in 4 sectors, “Hospital and Healthcare”, “Logistics and Transportation”, “Building and Infrastructure”, and “Banking Securities Finance and Insurance”. ASDC for “Auto, Auto Components and machine Tools” has not been established, while the LIP was selected.

Source: Documents provided by JICA, executing agencies and related organizations in Tamil Nadu

Regarding “Policy Item 3: Strengthening of the Guidance Bureau”, the improvement of the online single window clearance system, the increased staffing and the establishment of country desks had been achieved at the time of the Program completion. Further updating of the system and increasing the number of staff had been achieved at the time of the ex-post evaluation.

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)
3. Strengthening of the Guidance Bureau	<ul style="list-style-type: none"> Investment application process is streamlined by development of a fully functional Online Single Window Clearance System with the empowered responsible agency. More foreign investments are invited by the new Industrial Policy and incentives. 	<p><Policy Actions></p> <p>The fully functional Online Single Window Clearance System is regularly reviewed for improvement</p>
		<p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> Review was completed. Works under progress for adding 30 functions. The upgraded portal was expected to be launched in July 2020. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> The system is being reviewed regularly and the latest version was released in July 2021. In this version, more than 100 online applications under more than 24 public organizations are available. Within the next few months, further services are planned to be added and it will be possible to apply for more than 200 services through this system. Application for smartphones was launched in November 2021.
		<p><Policy Actions></p> <p>The action plan of upgrading the Guidance Bureau is implemented.</p>
		<p><Program Completion (2019)> (Achieved)</p> <ul style="list-style-type: none"> Staffing: The number of staff in the Guidance Bureau was 10 in FY2017-18. Out of them, only 2 officials were handling Investment promotion activities. The Guidance Bureau conducted two rounds of recruitment drive and increased the number of staff to 27, including contract and outsourcing, with 2 or more officials expected to join shortly. Including the two officials yet to join, the officials in the core activity of investment promotion was 14 (12+2).

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)
		<ul style="list-style-type: none"> Funding: State Government agreed to the proposal of the Guidance Bureau to retain the excess amount for the strengthening and restructuring of the Guidance Bureau. <Ex-post Evaluation (2021)> <ul style="list-style-type: none"> The number of staff in the Guidance Bureau reached more than 60 as of March 2022 and out of them 40 – 45 staff are full-time. In addition, consultants from PWC, Deloitte, Tata Consultancy Services have been employed.
		<Policy Actions> At least two specific country or regional investor desks are established.
		<Program Completion (2019)> (Achieved) <ul style="list-style-type: none"> 9 country/regional offices in Japan, Korea, UK, EU, USA, France, Germany, China, Taiwan were established. In addition, 2 overseas desks were established in Taiwan and USA. <Ex-post Evaluation (2021)> <ul style="list-style-type: none"> In addition to the above desks, another desk was established in Delhi in 2020.

Source: Documents provided by JICA, executing agencies and related organizations in Tamil Nadu

Regarding “Policy Item 4: Strengthening of a Single Window for MSMEs”, the Single Window Portal for MSMEs investors was running and the comprehensive investment guidebook had been updated at the time of Program completion. The services of the Single Window Portal have been expanded and utilized well, and the comprehensive investment guidebook had also been updated at the time of the ex-post evaluation.

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)
4. Strengthening of a Single Window for MSME	The Single Window Portal and comprehensive investment guidebook and/or website for improving access to investment information and simplifying application procedures are developed.	<Policy Actions> Guidance Bureau for MSMEs improves the Single Window Portal.
		<Program Completion (2019)> (Achieved) <ul style="list-style-type: none"> The MSME Single Window Portal was launched on May 04, 2018 and was functioning. 729 applications had been approved against 775 applications received in the portal so far. MSME Trade & Investment Promotion Bureau (MTIPB) was established on January 24, 2019. <Ex-post Evaluation (2021)> <ul style="list-style-type: none"> The number of services that could be applied for through the Single Window Portal has expanded to 190 up to March 2022. 4,677 applications have been approved against 6,250 applications received in the portal up to March 2022.
	Investment application procedures are streamlined so as to achieve a shorter period toward the statutory clearances	<Policy Actions> Comprehensive investment guide is updated.
		<Program Completion (2019)> (Achieved) <ul style="list-style-type: none"> The comprehensive investment guide for MSME investors was updated. The Tamil Nadu Electric Vehicles policy in the guide for MSME investors was expected to be updated. <Ex-post Evaluation (2021)> <ul style="list-style-type: none"> The Tamil Nadu Electric Vehicles policy in the guide has been updated. Micro, Small and Medium Enterprises Policy 2021 has also been released.
		<Policy Actions> DIC information aggregation system is developed.
		<Program Completion (2019)> (Achieved)

Policy Item	Goal	Progress of Policy Actions (2018 – 2019)
		<ul style="list-style-type: none"> The MSME Single Window Portal provided information about applications filed for getting clearances from various departments, applications under process with the competent authorities, and applications disposed. In all 32 districts in the state, these could be viewed and downloaded department wise and district wise. <p><Ex-post Evaluation (2021)></p> <ul style="list-style-type: none"> The MSME Single Window Portal has been providing information as of March 2022.

Source: Documents provided by JICA, executing agencies and related organizations in Tamil Nadu



Construction of Bypass Road



Skills Training
(Truck-Driving Simulator)



Industrial Park for SMEs

Source: Photos taken by evaluator (March 2022).

(2) Program Implementation Framework

The progress of policy actions was reviewed once a quarter in principle by the PMC, which is chaired by the Additional Chief Secretary of the Finance Department of Tamil Nadu and includes secretary-level officials of relevant departments of the state government. Based on the discussions at each PMC, Tamil Nadu prepared a joint evaluation sheet including a self-assessment sheet of the status of the achievement of each policy action, documents for evidence, and measures to implement the policy actions as scheduled. The loans disbursement process for each tranche was then carried out based on the joint evaluation sheet as expected. From the Japanese side, not only JICA, but also the Embassy of Japan and JETRO officials attended the PMC. Regarding the issues raised by the Japanese side at the PMC, the Additional Chief Secretary of the Finance Department of Tamil Nadu, as chairperson of the PMC, instructed each person in charge to respond to the issues. In addition, since many implementing agencies related to the Program were participating in the PMC, information was also shared among the implementing agencies. For an example, the Guidance Bureau shared information on companies and industries that were considering entering Tamil Nadu with the TNSDC, and the TNSDC identified the skills needed by these companies and provided training programs for workers to acquire these skills.

The Program Implementation Unit (PIU), established by the Finance Department of Tamil Nadu, was in charge of organizing the PMC and supervising and facilitating the implementation of policy actions. The PIU also coordinated with JICA. The PIU was led by the Secretary of Expenditure of the Finance Department, and consisted of an undersecretary,

a section officer and an assistant section officer in the same department.

The Finance Department was generally satisfied with the implementation and monitoring framework of the Program. However, according to the Finance Department, the Program monitoring consultant was expected to assist the implementing agencies in facilitating implementation and organizing the PMC, but did not provide as much support as expected, leading the Finance Department to have doubts about the need for the consultant.

3.2.2 Impacts

3.2.2.1 Intended Impacts

(1) Quantitative Effects

(i) Increase in FDI to Tamil Nadu and Puducherry Union Territory

The amount of FDI in Tamil Nadu and Puducherry union territory has increased rapidly since the completion of the Program in 2019, as shown in Table 4. Note that the amount of FDI until September 2019 was published for Tamil Nadu and Puducherry union territory as one segment. However, a comparison of the amounts of FDI in Tamil Nadu and Puducherry union territory, which were published separately after October 2019, shows that the amount invested in Puducherry union territory was less than 1% of the amount invested in Tamil Nadu. Therefore, most of the amount invested before September 2019 is surmised to have gone to Tamil Nadu.

Table 4: FDI to Tamil Nadu and Puducherry Union Territory

	2017	2018	2019	2020	2021 (January-September)
Foreign Direct Investment (FDI)	3,869.25	2,765.80	4,299.96	8,333.09	15,253.94

Unit: Million USD

Source: Department for Promotion of Industry and Internal Trade

(ii) Number of offices of Japanese companies in Tamil Nadu

The number of offices of Japanese companies in Tamil Nadu has decreased as shown in Table 5. The reasons for this were COVID-19 and a decrease in car sales which was due to the fact that, although 70% of Japanese companies in Tamil Nadu were automobile-related companies, it became difficult for consumers to apply for car loans due to new banking regulation. The number of Japanese companies in Tamil Nadu has increased with the entry of large anchor companies, but there have been no anchor companies entered in the state since 2018.

Table 5: Number of offices of Japanese companies in Tamil Nadu

	2016	2017	2018	2019	2020
Number of Offices	582	582	620	600	589

Source: JETRO

(2) Qualitative Effects

(i) Increase in FDI in Tamil Nadu

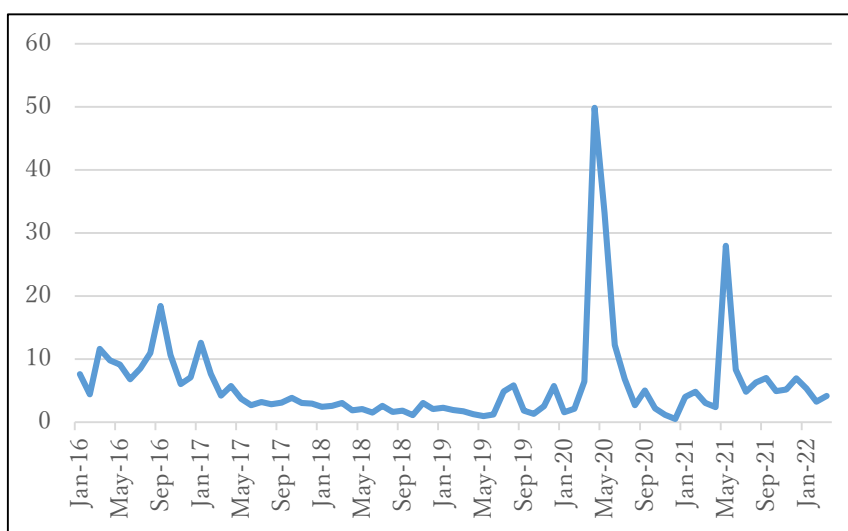
FDI in Tamil Nadu has been increasing year after year. Even after 2020, when COVID-19 spread, the request for consultations with the Guidance Bureau regarding FDI did not decrease, and the amount of investment increased rather than decreased. One of the reasons why FDI did not decrease even during the COVID-19 seems to be the fact that investors can obtain investment permits and licenses online, thanks to the strengthening and expansion of the single window system of the Guidance Bureau with the support of the Program.

On the other hand, the number of requests for consultations regarding FDI from Japanese companies to JETRO and operators of industrial parks in Tamil Nadu has declined significantly since 2020, when COVID-19 spread. It is surmised that this is partly because Japanese companies, which generally making investment decisions after conducting on-site surveys of a potential investment area, cannot travel to India due to COVID-19.

(ii) Job Creation

The unemployment rate in Tamil Nadu is shown in Figure 1. The unemployment rate was on a downward trend during the implementation of the Program. But after spiking to nearly 50% in April 2020 because of the lockdown in Tamil Nadu from March 2020 due to the COVID 19, the unemployment rate continues to fluctuate significantly. Therefore, a direct correlation between the Program and job creation cannot be verified from the macro data.

On the other hand, as there were development projects of some industrial parks for SMEs as small-scale infrastructure projects, factories were constructed by SMEs due to the development of such industrial parks and the jobs for workers were created.



Source: Centre for Monitoring Indian Economy.

Figure 1: Unemployment Rate in Tamil Nadu State

(iii) Satisfaction in Doing Business for Foreign Companies, Including Japanese Companies, by Improving the Investment Environment

In the Indian state-wise Ease for Doing Business (EODB) ranking published by the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Tamil Nadu rose from 15th place in 2017 to 14th place in 2019. (No ranking has not been published since 2019. It is presumed that this has been due to COVID-19.)

In the State Investment Potential Index published by the National Council of Applied Economic Research (NCAER), Tamil Nadu ranked 3rd in 2016, 6th in 2017, and 2nd in 2018. By sector, the quality of the workforce and the stability of the state government ranked 1st in all regions of India, contributing to the increase in ranking. (The rankings after 2019 have not been published. It is presumed that this has been due to COVID-19.)

The JETRO Chennai office has commented that the permission and approval procedures in Tamil Nadu have improved with the establishment of the Single Window System and its expansion. In addition, although it is taking some time, infrastructure development is being undertaken, taking into account the voices of the private sector. As an example, a Japanese company that was planning to start up business in an industrial park in Chennai was able to establish a factory as originally planned because it was able to obtain permits and licenses smoothly through online application under the Single Window System.

Some Japanese companies also have commented that, although there is still room for improvement in infrastructure such as port facilities, roads, and electricity supply, the quality of the workforce is high.

As a result of these improvements in the investment environment, satisfaction in doing business for foreign companies, including Japanese companies has improved.

3.2.2.2 Other Positive and Negative Impacts

(1) Impacts on the Natural Environment

The Program was classified as Category C, likely to have minimal or little adverse impact on the environment and society, based on the JICA Guidelines for Environmental and Social Considerations (April 2010). No negative impacts on the natural environment were observed due to the construction work of the small-scale infrastructure projects implemented under the Program.

(2) Resettlement and Land Acquisition

Among the 30 small-scale infrastructure projects, land acquisition is required for a bypass road construction project and a road expansion subproject, which are under the process in accordance with Indian domestic laws at the time of ex-post evaluation. In addition, the

resettlement of informal dwellers is required for the Eco Restoration of the Peerkankaranai lake Subproject, which, as mentioned above, is under the process in accordance with Indian domestic law at the time of the ex-post evaluation.

(3) Gender Equality

At the time of the ex-post evaluation, more than half of those registered and participating in training programs offered by the TNSDC were women. In addition, the TNSDC provided skills training to sexual minorities.

In addition, with the development of an industrial park for MSMEs as a small-scale infrastructure project, female managers employed female workers in the industrial park, thereby improving employment opportunities for women.

Furthermore, TNIFMC has invested in a housing development project for female workers at TEPL and is also facilitating the development of hostels for female workers to improve their conditions.

(4) Marginalized People and Human Rights

Although housing development for low-income workers was not included in the small-scale infrastructure projects, TNIFMC, which was supported by the Program, invested in housing development for low-income workers, and indirectly, loans from the Program were used for housing development projects for low-income workers.

In addition, the differently abled have registered and participated in the training programs provided by TNSDC. There were 156 differently abled persons out of approximately 60,000 persons in total registered in the training programs in 2021. Skill training opportunities were also provided to the differently abled.

Furthermore, with the development of an industrial park for MSMEs as a small-scale infrastructure project, the differently abled were employed in factories established in the industrial park.

From the above, it can be seen that the employment opportunities for the differently abled have improved.

(5) Other Positive/Negative Impacts

Information sharing and collaboration with other departments of the State Government of Tamil Nadu was facilitated through the PMC and by other means under the Program. As an example, the TNSDC obtained information from the Guidance Bureau on the industries of companies considering investing in Tamil Nadu, so that it could develop and provide training programs on the skills required in those industries.

In summary, the operation and effect indicators have fully achieved the target values, set at the time of appraisal, except for the number of trainers of government training institutes trained, the number of days required to gain Single Window Clearances through the Guidance Bureau and the online system, and the number of page views of the Single Window Portal, as of the time of the Program completion. Qualitative effects were also achieved for all policy actions.

Regarding “Increase in FDI in Tamil Nadu” as an impact, as the result of the development of infrastructure in Tamil Nadu by the small-scale infrastructure projects under the Program, the improvement of the quality of the workforce by providing job training to workers through TNSDC, and the simplification of the investment licensing process through the online single window system of the Guidance Bureau., the amount of FDI in Tamil Nadu has been increasing year by year. Regarding “job creation”, new factory construction and the start of operations at industrial parks for MSMEs established through the Program have created new employment opportunities for workers. Regarding “satisfaction in doing business for foreign companies, including Japanese companies, by improving the investment environment,” interviews with Japanese companies have indicated that they are satisfied with the quality of workers to a certain degree. It is thought that the support provided by the Program could be one of the key factors in this.

No negative impact on the natural environment was observed due to the Program, and land acquisition and resettlement are underway in accordance with Indian domestic laws. The Program has also had a certain impact on women and marginalized people by providing job training, employment opportunities and developing housing.

The Program has mostly achieved its objectives. Therefore, effectiveness and impacts of the project are high.

3.3 Sustainability (Rating: N/A)

3.3.1 Policy and System

As described in “3.1.1.1 Consistency with the Development Plan of India”, the “Make In India” initiative and “Skill India” campaign by the Government of India at the time of the ex-post evaluation have been effective in promoting private investment and improving the investment environment. In addition, “Vision Tamil Nadu 2023”, which expresses the basic principles of the policies of the state government of Tamil Nadu, the “Tamil Nadu Industrial Policy 2021”, “Tamil Nadu Export Promotion Strategy 2021”, and “Micro, Small and Medium Enterprises Policy 2021” have been also effective for promoting investment in the state, and there has been no change in their priority and positioning.

Therefore, the policies and the political involvement necessary to sustain their effectiveness has been ensured.

3.3.2 Institutional/Organizational Aspect

The following agencies are responsible for the sustainability of each policy action under the Program after completion.

(1) Acceleration of Infrastructure Development

At the time of the appraisal, TNIDB was coordinating and prioritizing infrastructure projects in Tamil Nadu, and TNIFMC was implementing infrastructure fund formation, financing, project evaluation, and project monitoring. TNIDB has continued to exist and function as the coordinating agency after the completion of the Program. TNIFMC is responsible for the establishment of infrastructure funds, financing, project evaluation, and project monitoring, and also monitors the progress of the small-scale infrastructure projects currently underway. Both institutions neither changed their organizations, systems, nor rules from the time of the Program completion to the time of ex-post evaluation.

(2) Skills Development for Employment

Regarding skills development for employment, TNSDC was the only institution providing skills training for industrial human resource development at the time of the appraisal, but at the time of the post-evaluation, in addition to TNSDC, ASDCs in the priority sectors identified by TNSDC in its skills gap study “Hospital and Healthcare”, “Logistics and Transportation”, “Building and Infrastructure”, and “Banking Securities Finance and Insurance”) had been established through the Program, and further promotion of industrial human resource development is expected in the future. (Preparations are being made for the establishment of ASDC for “Auto, Auto Components and Machine Tools”, as the other priority sector). In particular, regarding the Auto, Auto Components and machine Tools sector, 70% of Japanese companies in Tamil Nadu are automotive-related companies, and it is expected that workers trained at the ASDC will be active in the Japanese companies. The 5 ASDCs are expected to become financially independent within five years by receiving income from the companies and educational institutions that send trainees to the ASDCs.

(3) Strengthening of the Guidance Bureau

Regarding strengthening of the Guidance Bureau, the Guidance Bureau, as the implementing agency for this policy action, was continuing to play its role at the time of the ex-post evaluation. As FDI in Tamil Nadu has been increasing year by year, the number of staff has been increased from 10 at the time of completion of the Program to more than 60 at the time of the ex-post evaluation, and, therefore the Guidance Bureau has the capability to continue providing information and services to companies considering investment in Tamil Nadu in the future.

(4) Strengthening of the Single Window for MSME

Regarding strengthening of the Single Window for MSME, the implementing agency for this policy action has been Tamil Nadu Small Industries Development Corporation Limited (TANSIDCO), which has been playing its role with its line department the Micro, Small, and Medium Enterprises Department (MSMED). At the time of Program completion, the Industries Commissionerate and Director of Industries and Commerce under the MSMED were managing and operating the Single Window for MSME, and the MTIPB, which was newly established in 2019, provided a consultation service for MSMEs. At the time of the ex-post evaluation, those organizations were still in existence and functioning, and it is expected that they will continue to provide information as an investment window for MSMEs.

Therefore, the institutions and organizations have been ensured to sustain the effectiveness.

3.3.3 Preventative Measures to Risks

(1) COVID-19

A lockdown was implemented in Tamil Nadu from March to August 2020, forcing all workers from outside the state to return home, resulting in a shortage of workers and halting construction on small-scale infrastructure projects. In addition, hands-on training for workers was not allowed to take place in order to avoid density.

On the other hand, even under the impact of COVID-19, inquiries from foreign companies for FDI in Tamil Nadu and the amount of investment did not decrease, but rather increased. One factor may be that help desks and applications for permits and licenses were available online, allowing consultation and procedures to be carried out even from overseas.

(2) Heavy Rain in 2021

In Tamil Nadu, as heavy rains in November 2021 caused flood damage to the project sites of small-scale infrastructure projects, wastewater treatment was implemented by the respective implementing agencies supervising the construction.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The Program was implemented to facilitate the improvement of policies and systems related to private sector investment and industrial growth in the southeastern Indian state of Tamil Nadu, while at the same time promoting early implementation of the development and improvement of urban infrastructure in the state, mainly of roads, power, waterworks, sewerage, and other infrastructure facilities, thereby attempting to increase FDI in the state by enhancing its investment climate. The Program is consistent with the development policies, the financial needs

and the development needs of India, as well as with Japan's ODA policy. The Program is internally coherent with JICA's other projects and externally coherent with other donors and JETRO's projects. Therefore, its relevance and coherence are very high.

The operation and effect indicators have fully achieved the target values set at the time of appraisal, except for the number of trainers of government training institutes trained, the number of days required to gain Single Window Clearances through the Guidance Bureau and the online system, and the number of page views of the Single Window Portal, at the time of the Program completion. Qualitative effects were also achieved for all policy actions. Regarding the impact, as the result of the development of infrastructure in Tamil Nadu by the small-scale infrastructure projects under the Program, improvement of the quality of the workforce by providing job training to workers through the TNSDC, and the simplification by the Guidance Bureau of the investment licensing process through the online single window system, the amount of FDI in Tamil Nadu has been increasing year by year. The construction of new factories and the start of operations at industrial parks for MSMEs established through the Program have created new employment opportunities for workers. No negative impact on the natural environment due to the Program was observed, and land acquisition and resettlement are underway in accordance with Indian domestic laws. The Program has also had a certain impact on women and marginalized people by providing job training, employment opportunities and developing housing. Therefore, the effectiveness and impacts of the project are high.

Regarding the sustainability of the Program, no problem has been observed in terms of the policy and institutional/organizational aspects and, therefore, the sustainability has been ensured. The countermeasures have been conducted to the risks.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

The Program has contributed to infrastructure improvement in Tamil Nadu through small-scale infrastructure projects, but there is still room for infrastructure improvement in the state as a whole. The private sector has mentioned the need to improve port access roads, particularly as road access to ports is still time consuming. Therefore, it is recommended that TNIDB and TNIFMC should continue to promote infrastructure improvement projects in the state.

With the support of the Program, the Guidance Bureau has increased the number of staff and expanded the services of the single window clearance system. On the other hand, some private companies have not fully been aware of the existence of those services and the functionality of the system. The Guidance Bureau should continue to hold such seminars as held in Japan in 2019, to introduce these services, and should actively promote the single window clearance system, in addition to the incentives available when investing in Tamil Nadu, to foreign companies considering investing in Tamil Nadu.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

(1) Development of Mutually Complementary Policy Matrix

As JICA interviewed those involved in industries, including JETRO and private companies, and had discussions with the implementing agencies that were based on their development needs, the policy matrix developed in the Program was a well-designed policy matrix that works in a mutually complementary manner to achieve the objective of promoting investment in Tamil Nadu. In order to attract foreign investment, stable infrastructure such as roads, electricity, and water, quality workers, and a transparent legal system are essential, and the policy matrix was designed covering these elements so that each policy action functions in a mutually complementary manner. Therefore, FDI in the state did not decrease even during the COVID-19. In future similar projects, the possibility of achieving the project objectives could be increased by designing a policy matrix in which each of the elements necessary to solve the issues can interact in a mutually complementary manner, taking into account the needs of the industry when creating the policy matrix.

(2) Reasonable Policy Actions and Target Setting under Develop Policy Lending

When incorporating the development of small-scale infrastructure into the policy matrix, the goal should not be the completion of the small-scale infrastructure projects themselves, but rather the appropriate allocation of the budget and the promotion of the small-scale infrastructure project, so that the budget will also be allocated to each small-scale infrastructure project without delay.

(3) Utilization of PMC

Although the Program was related to multiple implementing agencies and their competent authorities, information sharing and collaboration with other departments were facilitated by holding PMC on a regular basis to check the implementation status of other policy matrixes and the progress of small-scale infrastructure projects among the organizations concerned. Not only JICA, but also the Japanese Embassy and JETRO participated from the Japanese side, which enabled the voices of Japanese companies to be shared with the Indian side. When problems arose, the Additional Chief Secretary of the Finance Department, as a chairperson the PMC, promptly instructed the agency responsible to deal with the problem. It is surmised that this was due to the strong leadership of the Additional Chief Secretary of the Finance Department, who could have a great influence on other state government agencies. In similar projects in the future, as in the Program, the project could be facilitated by appointing a PMC chairperson who can systematically

give instructions to subordinate organizations and regularly share the current status with the chairperson.

(4) All-Japan Approach, including both Public and Private Sectors, to the Program

As a result of the all-Japan approach, including both public and private effort, which continued from the Program formulation to the monitoring of implementation, the Program has generated effects and impacts that have benefited Japanese companies. JICA, through dialogue with the JETRO Chennai Office, the Japanese Chamber of Commerce and Industry, Chennai (JCCIC), and Japanese private companies in Tamil Nadu, identified the development needs of the state and proposed some projects as candidates for small-scale infrastructure projects in the Program at the time of the Program formation. During Program implementation, JICA was able to share with the state government the issues that had arisen during construction and to request improvements. As the result, the investment environment in Tamil Nadu improved, making it easier for private companies, including Japanese companies, to enter the state and do business there. Based on the above, in future similar projects, JICA could formulate and implement projects that will benefit not only the target country but also Japanese companies by closely exchanging information with government agencies and private companies and utilizing the results of these interviews.

5. Non-Score Criteria

5.1. Performance

5.1.1 Objective Perspective

JICA also shared the policy matrix with the JETRO Chennai office at the time of project planning and identified the needs of Japanese companies and the JCCIC. JETRO commented on the necessity of strengthening the authority and personnel of the investment promotion office and of carrying out human resource development projects such as the improvement of training at skills training schools, and these points were included in the policy matrix. In addition, JICA interviewed Japanese companies, especially developers and operators of industrial parks, about infrastructure impediments in Tamil Nadu, and proposed to the state government of Tamil Nadu some projects as small-scale infrastructure projects, based on the requests from these companies. As a result, some (but not all) of these projects were adopted as small-scale infrastructure projects. In addition, an ASDC is going to be established for the Auto, Auto Components and Machine Tools sector, as one of the priority sectors, and this is expected to be beneficial to automotive-related companies (70% of the Japanese companies in Tamil Nadu).

During Program implementation, in order to monitor the progress of the Program, the PMC meeting was held regularly (quarterly) and, from the Japanese side, not only JICA, but also the Embassy of Japan and JETRO officials attended the PMC meeting on a timely basis. The developers of industrial parks relating to small-scale infrastructure projects could convey the

progress and challenges to the implementing agencies through JICA, Embassy of Japan and JETRO.

As mentioned above, in the process of developing the policy matrix and selecting the small-scale infrastructure projects, JICA exchanged information with the Embassy of Japan, JETRO and Japanese stakeholders in India such as Japanese companies in India and a Japanese association, absorbed their requests, and through the process of a plenty of discussion and consensus-building with the state government of Tamil Nadu, the policy matrix was developed and the small-scale infrastructure projects which were highly beneficial to Japanese companies were adopted in the Program. During Program implementation, coordinating with JETRO, JICA checked the progress of the policy actions and facilitated the sharing progress and coordination of the Program by disseminating information to private sector.

(End.)