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Report No. 10131

PROJECT COMPLETION REPORT

KOREA

PUSAN URBAN MANAGEMENT PROJECT
(LOAN 2801-KO)

NOVEMBER 26, 1991

Infrastructure Operations Division
Country Department II
Asia Regional Office

CURRENCY EQUIVALENTS

Currency Unit	=	Won (W)
US$1.00	=	W 860 (March 1, 1987)
	=	W 823 (1987 Average)
	=	W 731 (1988 Average)
	=	W 670 (1989 Average)

ABBREVIATIONS AND ACRONYMS

ERR	=	Economic Rate of Return
GA	=	General Account (of Pusan City Government)
LTFP	=	Long-Term Financial Plan
MOF	=	Ministry of Finance
MOHA	=	Ministry of Home Affairs
PCG	=	Pusan City Government
PCR	=	Project Completion Report
PED	=	Project Evaluation Division
PFMSA	=	Pusan Fund Management Special Account
PSIDP	=	Policy Statement and Institutional Development Program
SA	=	Special Account (of Pusan City Government)
TSM	=	Transportation System Management

FISCAL YEAR

January 1 to December 31

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

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Office of Director-General
Operations Evaluation

November 25, 1991

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on Korea
Pusan Urban Management Project (Loan 2801-KO)

Attached, for information, is a copy of a report entitled "Project Completion Report on Korea - Pusan Urban Management Poject (Loan 2801-KO)" prepared by the Operations Evaluation Department.

Attachment

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PROJECT COMPLETION REPORT

PUSAN URBAN MANAGEMENT (LOAN 2801-KO)

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PUSAN URBAN MANAGEMENT PROJECT (LOAN 2801-KO)

PROJECT COMPLETION REPORT

PREFACE

This Project Completion Report (PCR) summarizes the experience with the Pusan Urban Management Project, for which Loan 2801-KO in the amount of US$50 million was approved on April 28, 1987. The Borrower was the Pusan City Government, with the guarantee of the Republic of Korea. Due to the sector-type design of the project, disbursement of the Bank loan was very rapid, and the loan was closed on August 31, 1989, 16 months before the original closing date of December 31, 1990. The last disbursement was made on the closing date.

The PCR (Preface, Evaluation Summary, Parts I and III) was prepared by the Infrastructure Operations Division of the Asia Regional Office. The Government did not provide Part II.

Preparation of this PCR was started during the Bank's project supervision mission in June 1990 and was based, inter alia, on the Staff Appraisal Report, the Loan and Guarantee Agreements, supervision reports, correspondence between the Bank and the Borrower, and internal Bank memoranda.

KOREA

PUSAN URBAN MANAGEMENT PROJECT (LOAN 2801-KO)

PROJECT COMPLETION REPORT

EVALUATION SUMMARY

i. Objectives. During 1970-86, Pusan's population doubled to more than 3.5 million. The rapid population growth coupled with accelerated economic development and rising incomes contributed to an increased demand for services. However, the city's ability to finance such investments was threatened by its serious financial constraints, largely caused by the construction of a subway with short-term financing. Although the Pusan City Government (PCG) decided to scale down its subway construction plans, it still needed to address its institutional weaknesses which had resulted in poor investment planning and financial management. The Pusan Urban Management Project was intended to improve the city's urban management and finances by: (a) improving the city's organization and coordination; (b) strengthening project selection and investment planning; (c) coordinating and optimizing transportation planning and investments, the city's most critical problem; (d) strengthening the city's financial, planning and managerial systems; and (e) supporting priority investments and balanced development of the city.

ii. The project supported priority investments included in PCG's 1987-89 Investment Plan as well as implementation of a Policy Statement and Institutional Development Program (PSIDP) approved by PCG in March 1987. Investments for project financing emphasized small works complementing the benefits of existing infrastructure and were selected on the basis of agreed evaluation criteria. Subprojects included: construction and improvement of priority roads; construction of drainage, flood protection and sewerage works; construction of embankment and steep slope protection works; improvement and expansion of city services (markets, community facilities, etc.); implementation of a Transportation Management System (TSM) for the provision of low-cost transportation improvements; and provision of equipment and materials.

iii. The PSIDP included an action plan to strengthen PCG's management, organization and finances. It was expected to: consolidate all investment planning; improve the overall transportation system; establish an annual investment plan, long-term financial plan and performance monitoring system; strengthen project evaluation; and complete studies identifying mechanisms by which to improve the city's financial management and cash resources.

iv. Implementation Experience. The project loan was fully disbursed as of August 31, 1989, 16 months earlier than expected. All aspects of the project were completed satisfactorily. The PSIDP was carried out as agreed. Most of the institutional changes were made during the first project year and were followed up by the provision of technical assistance and training to augment or strengthen staff capabilities in newly-introduced areas like computer-based project evaluation and financial planning. Introduction of a computerized Long-Term

Financial Plan was, however, delayed by the need to make significant changes in the original design of the system due to the adoption in May 1988 of a decentralized system of fiscal responsibility within PCG which reassigned some taxes and expenses from the general city accounts to 11 administrative districts within the city.

v. With respect to investments, project funds were used to finance hundreds of subprojects distributed throughout the city, most of which were small but of high priority. About 71% of project investments went to road and highway improvements, 11% to drainage, sewerage and flood control, 8% to embankment and slope protection, 7% to community facilities and about 3% to traffic improvement measures. The subsectoral allocations were generally as envisioned at appraisal.

vi. Results. The Project investments improved living conditions in Pusan. Institutionally, the project helped to streamline and strengthen the city administration, particularly in financial management and investment evaluation, transport investment planning, public transport and traffic management, and water supply and sewerage services. Several of the institutional improvements have been crucial to the city's financial health: (a) the city's computerized budget and financial model developed with Bank support during project preparation is assisting PCG with general financial management and planning; (b) the computer-based investment plan and long-term financial projections called for under the project are used for the preparation of published annual plans which are regularly updated as a management tool for senior city officials; (c) formation of a Project Evaluation Division to assess investments on the basis of sound economic principles improved investment planning, thus benefitting the city's long-term financial health and rational development; and (d) subsidies for city-run public enterprises were significantly decreased, and a project study led to the establishment of a Pusan Regional Development Fund to finance projects through loans rather than grants. Furthermore, since Pusan shared its experience in implementing project reforms with other major cities in Korea, the project benefitted metropolitan areas countrywide.

vii. At project completion, PCG's financial condition had improved due to the transfer in mid-1988 of the city's subway assets and liabilities to a national government corporation. Partly due to institutional improvements made under the project, Pusan continues to show adequate financial performance as shown by several key indicators. General Revenue has been buoyant, growing at an annual rate of 22% over the period 1986 and 1989. The proportion of self-generated revenue has stayed approximately constant at a high level of 84%. The total taxes and fees collected for the combined Special Accounts (for city-owned public corporations, which were heavily subsidized prior to the project) has increased at 6% p.a. over the same period, reflecting improved cost recovery. Perhaps most important, outstanding debt has been reduced to less than half the burdensome level of 1986 (from W 1.4 trillion to W 0.6 trillion).

viii. The actual project cost was W 127.4 billion, 23% lower than the cost expected at appraisal due to changes in exchange rates. Subproject selection criteria were agreed to with the city and a minimum rate of return of 12% was required for all Bank-financed investments. The Economic Rate of Return calculated for about two thirds of the subprojects slated for the first year was estimated at 24%. Due to the numerous small investments, smaller than originally

expected, which were financed under the project, the rates of return were not recalculated for the PCR.

ix. Sustainability. The city's improved financial position has confirmed the value of the institutional, financial and management improvements introduced under the project. PCG has recognized the value of these improvements by maintaining the changes and even improving on them as circumstances warranted. For example, PCG used the experience it gained under the project with computerization and the preparation of financial projections to computerize a much larger financial planning model. It is now highly unlikely that the city would abandon the factors which contributed to its improved municipal management and sound development path for its former practices. The city's strengthened financial position will also ensure that the physical improvements introduced under the project are maintained and expanded in parallel with further growth and still rising demand for city services.

x. Findings and Lessons Learned. The project's success reflected PCG's firm commitment to improving city management. The following lessons were learned under the project. First, institutionally-focused projects, despite their lack of a quantifiable economic return, are sometimes more helpful to a borrower than investment projects by addressing core issues that affect many sectors and constrain overall development. Second, for a multisectoral project with a wide agenda, the Bank should be prepared to field a larger than normal supervision team, with wider skill ranges, to oversee the project's diverse aspects. Third, project staff need to be flexible and imaginative in handling their tasks. In this project, Bank staff helped PCG to redefine its needs and, during implementation, assisted PCG staff by providing training and hands-on assistance to local staff, by sending them relevant publications and by identifying training opportunities and arranging for both local and foreign consultants to give seminars and assist in specific areas. A related lesson is that, in areas where English is not generally spoken, greater reliance should be placed on well-qualified local consultants whose language ability renders them more effective than foreign consultants. Finally, multisectoral projects addressing a range of issues can be successfully implemented when clearly justified and fully supported by the borrower.

KOREA

PUSAN URBAN MANAGEMENT PROJECT (LOAN 2801-KO)

PROJECT COMPLETION REPORT

PART I: BANK REVIEW OF THE PROJECT

Project Identity

- Project Name: Pusan Urban Management Project
- Loan Number: Loan 2801-KO
- RVP Unit: Asia
- Country: Republic of Korea
- Sector: Urban
- Subsector: Urban Management

Background

1. Urbanization throughout Korea has progressed very rapidly, placing heavy demands on the major cities. In 1986, when the Pusan Urban Management Project was identified, Pusan's population had doubled since 1970 to more than 3.5 million, making it the second largest city in Korea. This rapid population growth coupled with accelerated economic development and rising incomes contributed to an increased demand for services, particularly in sewage treatment, water supply and urban transport, and in 1983-86 investments averaged US$400 million p.a. However, the city's ability to finance such investments was increasingly threatened by its serious financial constraints largely caused by the construction of a subway with short-term financing. With annual debt service payments averaging about US$120 million and continuing capital expenditures, Pusan faced serious cash flow problems. As a result, a large number of priority investments had to be postponed.

2. The city's financial problems were aggravated by declining tax revenues due to a slowdown in real estate transactions (the main source of taxes), poor investment planning, and the loss of industries to outlying areas. A review of Pusan's financial position at the time highlighted the following: (a) the city government had relied increasingly on debt financing, with borrowing growing by 69% p.a. during 1981-84 while non-borrowed resources had increased at only 32% p.a.; (b) debt outstanding had grown by 105% p.a. during the same period; (c) debt servicing costs, which had increased at a rate of 96% p.a., were large and increased the share of Pusan's total expenditures; (d) transportation investment including the subway had taken a growing share of capital expenditures (subway construction costs accounted for 45% to 55% of total capital expenditures during 1981-84); and (e) subway ridership was far below original estimates (90,000/day vs. 350,000/day) resulting in the need for a substantial operating subsidy from the city.

3. Although subway construction was to be indefinitely postponed after completion of the first line in early 1988, the Pusan City Government (PCG) still needed to establish an institutional framework for investment planning and

management to cope with its financial problems, manage its urban services, and maintain a balanced development path.

4. At the time of project identification, PCG was not fully aware of the scope of its financial problems due to deficiencies in its financial and management information systems. It initially requested Bank assistance in financing construction of an expressway to help relieve the city's serious traffic problems. However, a review of city accounts by Bank staff and discussions with city management indicated Pusan's even more pressing need for long-term funds for priority infrastructure investments and, more important, a financial restructuring program, the key ingredients of which would be: (a) preparation of a medium- to long-term financial plan and improved financial management through revised accounting practices and budgeting processes; (b) increased revenue generation by establishing pricing policies for city services to fully reflect costs and by undertaking a tax performance audit; and (c) improved investment planning and project evaluation through the development and application of standardized economic, financial and technical criteria for the selection of investments.

5. The project identified, though comprising only 4% of the city's borrowing needs in 1987-90, was expected to relieve some of the city's pressing financial needs (many short-term) through the provision of long-term funds for investments and, through various institutional reforms, to improve lenders' perceptions of the city's creditworthiness. The project conformed with the Bank's lending strategy for Korea's urban sector which was to support high priority investments included in Government's development plans and, through these operations, to improve the efficiency of sector institutions.

Objectives and Description

6. The project's general objective was to improve the city's urban management and finances. Its specific aims were to: (a) improve the city's organization and coordination; (b) strengthen project selection and investment planning; (c) coordinate and optimize transportation planning and investments, the city's most critical problem; (d) strengthen the city's financial, planning and managerial systems; and (e) support priority investments and the balanced development of the city.

7. The project supported priority investments included in PCG's 1987-89 Investment Plan as well as implementation of a Policy Statement and Institutional Development Program (PSIDP) approved by PCG in March 1987. Investments for project financing emphasized small works complementing the benefits of existing infrastructure and were selected on the basis of agreed evaluation criteria. Subprojects included: (a) construction and improvements of priority roads (expansion, rehabilitation, paving); (b) construction of drainage, flood protection and sewerage works; (c) construction of embankment and steep slope protection works; (d) improvements and expansion of Pusan City's services (markets, landfill, fire protection and community facilities); (e) implementation of Transportation System Management (TSM) for the provision of low-cost transportation improvements; and (f) provision of equipment and materials.

8. The PSIDP included strengthening of PCG's management, organization and finances, with a major reorganization of the city administration to address its main institutional constraints: a weak planning and policy-making capability, overlapping responsibilities, and dispersed and uncoordinated management of urban transport. With the aims of consolidating all investment planning, improving the overall transportation system, establishing an annual investment plan, long-term financial plan and performance monitoring system, strengthening project evaluation and completing studies for the implementation of mechanisms to improve cost recovery and integrate the city's financial management and cash resources, the PSIDP committed PCG to:

(a) establish a new Bureau of Transportation and Tourism to consolidate planning of all transportation systems and investments;

(b) establish a Transportation System Management unit to implement small but important improvements to optimize the capacity of the existing transport system;

(c) establish joint management of water and sewerage services to improve the efficiency, coordination and financing of these services;

(d) establish a new Regional Development Division to review and evalua te large investments and improve the guidelines for prioritizing small projects;

(e) establish a long-term planning and management information system, including performance monitoring of PCG's General Account (GA) (for the ten main administrative bureaus which were generally well run) and Special Accounts (SAs) (city-owned public corporations for water supply, the subway, toll roads, etc., which had shown varying financial performance);

(f) establish a yearly review of the city's Investment Plan to set priorities and maintain a satisfactory financial position;

(g) update at least annually and submit to the Bank for review, a Long-Term Financial Plan (LTFP) and Investment Plan (which would includ e a list of subprojects proposed for Bank financing). The LTFP, which was developed during project preparation and simulated in microcomputers, was intended to assist PCG in improving its financial planning and management. The computer model provided detailed projections for total city finances, as well as consolidated results and monitoring indicators for management use;

(h) expand existing in-house training programs to provide training in transportation management, urban planning, computer applications, budgeting and financial planning; and

(i) complete studies for establishment of a Pusan Fund Management Special Account (PFMSA) to foster cost recovery, integrated financial management and better use of the city's cash resources.

Design and Organization

9. The project was well designed by supporting needed investments in priority sectors while also addressing the city's need for a rationalized organizational structure, a sound system of financial management and an investment planning capability based on economic criteria. The policy and institutional changes fostered by the project were important to the city's continued development and financial health. Projections made during project preparation indicated that without the project the city would have had a cash deficit of some US$300 million during 1987-90 and limited external borrowing possibilities due to its shaky financial structure.

10. On the investment side, the project's emphasis on improving road infrastructure, transport and traffic management (which together received 74% of project expenditures) addressed the city's underdeveloped road network (indicated by a pre-project road-to-land-area ratio of 10.6%, as opposed to 15.3% in Seoul and 14.6% in Incheon), the relatively low standard of the roads that did exist (with only 53% paved, compared to more than 70% in Seoul and Incheon), and chronic traffic congestion due to rising traffic levels and an inadequately integrated public transport network. Project investments in road improvements and extensions, the construction of transit centers for bus-subway integration, and traffic management improvements accomplished through the TSM program were therefore important in improving living standards in the city.

11. The project's sector-type approach, with subprojects selected on the basis of agreed evaluation criteria, promoted efficient project implementation and a rapid flow of funds to PCG. The Investment Planning Department and Project Evaluation Division established for the project carried out their investment screening duties satisfactorily and were instrumental in helping to improve the city's financial condition. The project's overall organizational arrangements, with the Assistant Mayor for Planning and Management coordinating studies, planning, and the institutional development program, the Bureau of Construction supervising major works, and the County Engineering Offices supervising minor works, proved satisfactory.

Implementation

12. The project loan was fully disbursed as of August 31, 1989, significantly faster than the projected loan closing date of December 31, 1990. All aspects of the project were completed satisfactorily. The PSIDP was carried out as agreed, with most of the institutional changes made during the first project year (see Part III, Table 5.2). PCG followed up on the institutional, financial and procedural changes introduced under the PSIDP by seeking technical assistance to augment or strengthen staff capabilities, particularly for the introduction of computer-based project evaluation and financial planning, and provided staff with special training opportunities where necessary. Introduction of the computerized Long-Term Financial Plan was, however, delayed by the need to make significant changes in the original computer program due to the introduction of local autonomy in May 1988 and the consequent reassignment of PCG taxes and expenses among the city's central government and 11 administrative districts.

13. With respect to investments, project funds were used to finance hundreds of subprojects distributed throughout the city, most of which were small but of high priority. About 71% of project investments went to road and highway improvements, 11% went to drainage, sewerage and flood control, 8% went to embankment and slope protection, 7% to community facilities and about 3% to traffic improvement measures. The subsectoral allocations were generally as envisioned at appraisal.

14. The subprojects executed were much smaller than originally estimated. At appraisal, it was expected that international competitive bidding would be used for contracts worth over US$5 million (estimated to comprise about 28% of all project civil works), with local competitive bidding used for subprojects worth between US$1 million and US$5 million. However, most subprojects cost less than US$1 million since, as had been noted at appraisal, the city placed priority on small, complementary works to complete the benefits of existing infrastructure.

Project Results

15. The project improved living conditions in Pusan through the implementation of many, small investments which brought benefits to the neighborhood level. For example, the TSM improvements were found to be effective in enhancing the efficiency of the transport system, and in the case of one road artery, increasing the traffic speed from about 11 km/h in 1986 to 30 km/h in 1990.

16. Institutionally, the project helped to streamline and strengthen the city administration, particularly in overall financial management and investment evaluation, transport investment planning, public transport and traffic management, and water supply and sewerage services. Consultants engaged both under the project and directly by the Bank provided the city with expert advice that it normally would not have sought.

17. Several of the institutional improvements are particularly important to the city's financial health. First, the city's computerized budget and financial model developed with Bank support during project preparation is assisting PCG with general financial management and planning. Second, the computer-based investment plan and long-term financial projections called for under the project are now used for the preparation of published annual plans which are regularly updated as a management tool for senior city officials. Third, formation of the Project Evaluation Division (PED) to assess investments on the basis of sound economic principles has improved investment planning, thus benefitting the city's long-term financial health and rational development. For example, in 1988, only 26% of the 337 projects submitted for review were found acceptable, and the remainder were postponed or canceled. Finally, subsidies for the Special Accounts have been significantly decreased, cost recovery by the three largest Special Accounts has improved, and the city (prompted by the project's study of a possible Pusan Fund Management Special Account) has established a Pusan Regional Development Fund to finance projects through loans rather than grants. Furthermore, since Pusan was encouraged to share its experience in implementing project reforms with other major cities in Korea, the project presumably benefitted metropolitan areas countrywide.

18. By the time of project completion, PCG's financial condition had improved due to the transfer in mid-1988 of the city's subway assets and liabilities from one of the Special Accounts (continually in deficit and subsidized by PCG) to a corporation largely owned by the National Railroad Corporation and thus supported by central government funding. Pusan continues to show adequate financial performance as shown by some key indicators. General Revenue has been buoyant, growing at an annual rate of 22% over the period 1986 and 1989. The proportion of self-generated revenue has stayed approximately constant at a high level of 84%. The combined Special Accounts revenues have actually declined but only due to reduced borrowing. The total taxes and fees collected for the combined Special Accounts has increased at 6% p.a. over the same period reflecting improved cost recovery. Perhaps most important, outstanding debt has been reduced to less than half the burdensome level of 1986 (from W 1.4 trillion to W 0.6 trillion).

19. At completion, the project cost was W 127.4 billion, 24% lower than the cost expected at appraisal due to the appreciation of the won during the project period (see Part III, Table 4). The overall scope of project investments was essentially determined by the value of the Bank loan in won terms, with PCG expected to match the Bank's contribution on a 3-to-1 basis. With an exchange rate of W 860 to the U.S. dollar at the time of project approval, the Bank's US$50 million equivalent loan was worth about W 43 billion, implying a PCG contribution of about W 124 billion and a total project cost of W 167 billion. However, with the appreciation of the won to about W 730 to the U.S. dollar in 1988 (15% appreciation) and to W 670 in 1989 (22% appreciation compared to 1987), the value of the Bank loan declined, causing the overall scope of investments and project cost to also contract. The Bank loan of US$50 million was fully disbursed against the foreign exchange cost of subprojects qualifying for Bank financing. The remaining costs were covered by PCG.

20. Subproject selection criteria were agreed to with the city and a minimum rate of return of 12% was required for all Bank-financed investments. The Economic Rate of Return calculated for about two thirds of the subprojects slated for the first year was estimated at 24%. Due to the numerous small investments, smaller than originally expected, which were financed under the project, the rates of return were not recalculated for the PCR.

Sustainability

21. The city's improved financial position has confirmed the value of the institutional, financial and management improvements introduced under the project. PCG has recognized the value of these improvements by maintaining the changes and even improving on them as circumstances warranted. For example, when greater autonomy was introduced in the city administration, the city managers were keen to have a consultant assist them in revamping the computerized financial model originally developed for the project. It is now highly unlikely that the city will abandon the factors which contributed to its improved municipal management and sound development path for the former practices, which had made its financial position precarious and its administrative structure unwieldy and uncoordinated.

22. The city's strengthened financial position will also ensure that the physical improvements introduced under the project are maintained and expanded in parallel with further growth and still rising demand for city services.

Bank Performance

23. The Bank's role in the project was perhaps most important during the identification and preparation phases. At identification, Bank staff recognized that the management tools available to the city administration were no longer adequate to deal with the city's rapid physical development and complex financial structure, and were able to assist the city officials to identify how they might better deal with the major financial and administrative demands being placed on them. In particular, Bank technical specialists, with expertise in financial analysis, computer technology and transport planning, were able to provide valuable advice in their fields.

24. During project implementation, the Bank continued to provide technical advice on issues that arose, particularly regarding computerization of financial and investment planning and the selection of consultants to assist PCG with emerging problems. For example, Bank staff helped train PED staff in use of the financial model, arranged for a PED staff member to attend a Public Expenditure Programming and Management Course given by the Bank's Economic Development Institute, hired consultants at its own expense to conduct a seminar for PED staff in the economic evaluation of proposed investments and to assist PED in gathering data and updating financial projections, and assisted in the conversion of the computer model into Hangul. However, the smooth progress of implementation, reflecting PCG's commitment to the project, required comparatively little direct project supervision by Bank staff in the field, although project supervision from headquarters was a continuing process through review of project reports and communications with PCG.

25. The following lessons were learned under the project:

(a) Institutionally-focused projects, despite their lack of a quantifiable economic return, are sometimes more helpful to a borrower than investment projects, even with relatively high economic returns, by addressing core issues that affect many sectors and constrain overall development. In the case of this project, the skills transferred and institutional improvements made under the project were of far greater value to Pusan's overall development than the urban transport project originally requested.

(b) For a multisectoral project with a wide agenda, the Bank should be prepared to field a larger than normal supervision team with wider skill ranges to oversee the project's diverse aspects. Although implementation of the Pusan project was satisfactory, additional time spent on supervising the project's non-financial components might have brought about more significant institutional improvements in sectors like transport and water supply.

(c) Project staff need to be flexible and imaginative in handling their tasks. In this project, staff showed both qualities, first, at

project identification and preparation by helping PCG to redefine its needs and, second, during implementation, when skills in computerization, financial planning and investment analysis had to be transferred to a large number of staff, who did not speak English. Bank staff tackled this problem from various directions, by providing training and hands-on assistance to local staff, sending them relevant Bank publications and identifying training opportunities at the Bank's Economic Development Institute, and arranging for both local and foreign consultants to give seminars and assist project staff in specific areas.

(d) In areas where English is not generally spoken, greater reliance should be placed on well-qualified local consultants whose language ability renders them more effective than foreign consultants. For this project, a local computer expert provided valuable assistance to PCG in adapting its financial computer model when the city's administrative structure was decentralized.

(e) Multisectoral projects addressing a range of issues (so called "Christmas tree" projects) can be successfully implemented when clearly justified and fully supported by the borrower. The Urban Management Project, comprising many small but high-priority activities, succeeded because of PCG's concerted implementation efforts.

Borrower Performance

26. As just indicated, PCG's performance was very good throughout project preparation and implementation. Its staff accelerated the process of project preparation by readily providing the information requested and it continued to show enthusiasm during project implementation. PCG's compliance with Loan Agreement covenants was satisfactory (see Part III, Table 5.1), and its rapidly growing technical capabilities and experience were demonstrated by its efficient project execution and faster than expected project completion. It is particularly revealing that PCG saw the project, not as an end in itself, but as a means of learning valuable skills that could be applied in other contexts where needed. It therefore used the experience it gained under the project with computerization and the preparation of financial projections to computerize another, much larger financial planning model, called the PCG Model. This is an example of how the development process is supposed to work.

Project Relationships

27. The good working relationship developed between PCG and the Bank in the course of two previous Bank-supported projects (Pusan Port, Ln. 2726-KO and Water Supply II, Ln. 2350-KO) continued under this project and facilitated rapid project preparation and implementation. To some degree, it also contributed to the project's success in introducing major organizational changes and wide-spread use of new technologies and planning practices. Some changes, like that in the water and sewerage sector, had been identified and discussed informally in the course of the previous project, so that the groundwork had been laid for the organizational change introduced under the Urban Management Project. For other

changes, like the computerization of financial and planning systems, PCG and Bank staff worked together with project consultants in designing, implementing and adapting the system to the city's requirements.

Consulting Services

28. Consultants were engaged under the project (a) to carry out the TSM program (a Transportation Planner, Transport Economist, two TSM Engineers and a Public Transport Planner to carry out short-term training courses for staff from various transport-related city agencies), (b) to assess requirements for PCG's computerization and provide training in the preparation and use of financial projections and project evaluation, and (c) to undertake the Pusan Special Account Fund Management Study. The performance of these consultants was satisfactory.

29. Project civil works contractors, all Korean, performed satisfactorily, and the equipment suppliers, who were both local and foreign, generally performed satisfactorily and delivered equipment on time.

Project Documentation and Data

30. Project documentation was generally adequate. The availability of data for project monitoring was satisfactory: the system of computerized financial projections for Pusan, which was developed under the project, was used routinely and facilitated monitoring of PCG's performance.

PART II: BORROWER REVIEW OF THE PROJECT

Not Available.

PART III: STATISTICAL INFORMATION

Table 1. Related Bank Loans

Loan Title	Purpose	Approval	Status	Comments
Pusan Port Project (Ln. 2726-KO)	Provide equipment for efficient handling of containers and improve port management and financial control.	6/86	Satis-factory	Being implemented by the Korean Maritime and Port Administration, with no direct involvement of the Pusan City Government. Loan closing expected by end-1992.
Second Water Supply Project (Ln. 2350-KO)	To eliminate sea water intrusion in the Nakdong River delta by constructing a 510-m barrage downstream of Pusan City.	10/83	Completed	Implementing agency: Korea Water Resources Corporation. Pusan City receives about half the water made available by the barrage. Under the loan, the city agreed to use its own resources to construct an interceptor sewer and water treatment plant to divert industrial and domestic wastes to downstream of the barrage, preventing contamination of the barrage reservoir. Due to the City's financial constraints (which the Pusan Urban Management Project helped correct), interceptor construction was delayed by three years, but was completed in 1990.

Project Timetable

Table 2. Project Timetable

Item	Date Planned	Date Actual
Identification		05/86
Preparation		06/86
Pre-appraisal		11/86
Appraisal	The pre-appraisal mission was adequate for appraisal.	
Loan Negotiations	01/06/87	02/09-13/87
Board Approval	11/87	04/28/87
Loan Signing		06/11/87
Loan Effectiveness		08/07/87
Project Completion	06/30/90	06/30/89
Loan Closing	12/31/90	08/31/89

Issues Raised during the Project Cycle

Except for the change in the project's orientation from an urban transport to an urban management project, which occurred in the course of project identification, no major issues were raised during the project cycle.

Loan Disbursement

Table 3. Loan Disbursements
(US$ million)

Bank FY and Semester Ending	Appraisal Estimate	Actual	Actual as % of Appraisal
1988			
12/31/87	6	11.95	199
06/30/88	13	29.96	230
1989			
12/31/88	21	47.96	228
06/30/89	29	48.96	169
1990			
12/31/89	39	50.00	128
06/30/90	47		
1991			
12/31/90	50		

Date of Final Disbursement: August 31, 1989

Project Implementation

Since the project took a sector-type approach to the investments supported, by financing all projects meeting specified eligibility criteria, no implementation plan for project works was prepared at appraisal. Implementation was expected to take three years to complete, but in fact took only two years. Implementation of the Policy Statement and Institutional Development Program was generally in accordance with the timing included in the Loan Agreement (see Table 5 for details).

Project Costs and Financing

A. Project Costs

In terms of won, the project cost less than expected. This was due to the fact that the overall scope of project investments was essentially determined by the value of the Bank loan in won terms, with the Pusan City Government (PCG) expected to match the Bank's contribution on a 3-to-1 basis. With an exchange rate of W 860 to the U.S. dollar at the time of project approval, the Bank's US$50 million equivalent loan was worth about W 43 billion, implying a PCG contribution of about W 124 billion and a total project cost of W 167 billion. However, with the appreciation of the won to about W 730 to the U.S. dollar in 1988 (15% appreciation) and to W 670 in 1989 (22% appreciation compared to 1987), the value of the Bank loan declined, causing the overall scope of investments and project cost to also contract. The final project cost of W 127.4 billion was about 17% less than the originally projected base cost and 24% less than the projected total cost, including contingencies.

Table 4. Project Costs

	Projected	Actual
	(W billion)	
Roads and highways	107.4	88.1
Drainage, sewerage and flood control	12.9	12.4
Embankment and slope protection	11.4	12.7
Community facilities	11.4	7.7
Transportation system management	6.0	2.0
Transit centers	3.8	3.8
TSM technical assistance	0.8	0.7
Base cost	153.7	127.4
Physical contingencies	7.7	-
Price contingencies	5.4	-
Total Cost	166.8	127.4

B. Project Financing

Due to the proportional method of determining project financing, PCG provided about 74% of project financing as originally envisioned.

Project Results

Economic Impact. Subproject selection criteria were agreed to with the city and a minimum rate of return of 12% was required for all Bank-financed investments. The Economic Rate of Return calculated for about two thirds of the subprojects slated for the first year was estimated at 24%. Due to the numerous small investments, smaller than originally expected, which were financed under the project, the rates of return were not recalculated for the PCR.

Financial Impact. By the time of project completion, PCG's financial condition had improved due to the transfer in mid-1988 of the city's subway assets and liabilities from one of the Special Accounts (continually in deficit and subsidized by PCG) to a corporation largely owned by the National Railroad Corporation and thus supported by central government funding. Pusan continues to show adequate financial performance as shown by some key indicators. General Revenue has been buoyant, growing at an annual rate of 22% over the period 1986 and 1989, compared to 19% p.a. in 1983-85. The proportion of self-generated revenue has stayed approximately constant at a high level of 84%. The combined Special Accounts revenues have actually declined, but only due to reduced borrowing. The total taxes and fees collected for the combined Special Accounts has increased at 6% p.a. over the same period reflecting improved cost recovery. Perhaps most important, outstanding debt has been reduced to less than half the burdensome level of 1986 (from W 1.4 trillion to W 0.6 trillion).

Studies

Study	Purpose	Status/Impact
Pusan Fund Management Special Account Study (PFMSA)	To consider establishment of a PFMSA to secure better management of the city's cash resources. The study identified a means by which urban service funds recovered through user charges could provide financial resources for other projects and induce cost recovery.	Completed satisfactorily and resulted in establishment of a Pusan Regional Development Fund to finance projects through loans rather than grants.

Table 5.1. Status of Covenants

Section	Activity	Comments
3.03	Borrower to approve sub-projects in accordance with criteria agreed with the Bank.	Complied with. Project Evaluation Unit reviewed all medium and large projects.
3.04	Borrower to review with the Bank annually the progress achieved in implementing the Policy Statement. The first such review to take place not later than December 1987.	Complied with. Reviews carried out in August 1987, February 1988 and September 1989.
3.06	Borrower to update its long-term financial plan at least once every year, starting March 1988.	Complied with in September 1989, the delay caused by the need to design a new computer program for the plan to account for changed financial arrangements introduced with the provision of local autonomy to the city's 11 districts in May 1988.
3.07	Borrower to complete and furnish to the Bank by December 31, 1987, a study assessing the need to establish a Pusan Fund Management Special Account to improve management of financial resources.	Completed satisfactorily and resulted in establishment of a Pusan Regional Development Fund to finance projects through loans rather than grants.
4.01	Borrower to send audited financial statements and Special Account and a separate opinion on Statement of Expenditures, six months after the end of the fiscal year.	Complied with. Audit reports received for 1987 and 1988.

Table 5.2 Status of Policy Statement and Institutional Development Program

Activity	Comments
Create and staff Bureau of Transportation and Tourism by end-1987.	New Bureau established by May 1988 and operating satisfactorily.
Establish Traffic Planning Division for Transportation System Management by end-1987.	Operating by May 1988, with support of consultants.
Establish integrated Water and Sewerage Bureau by end-1988.	Carried out as planned.
Phase out subsidies for Special Accounts starting in 1988.	Subsidies significantly reduced and cost recovery by three largest Special Accounts improved.
By end-1987, study organization, financing and legal changes to establish Pusan Fund Management Special Account to improve city management of cash resources.	Study completed and Pusan Regional Development Fund established to finance investments through loans rather than grants.
Establish by end-1987 a Regional Development Division to review and evaluate large investments (above W 5 billion each) and improve guidelines for prioritizing small investments.	Project Evaluation Division established and satisfactorily staffed by May 1988. Additional staff training provided. Guidelines for investment evaluation issued to central and district authorities.
Establish a computerized long-term planning and management information system (MIS), including performance monitoring, by end-1987 and annually update Long-Term Financial Plan (LTFP).	Complied with in September 1989, the delay caused by the need to design new computer programs for the LTFP and MIS to account for changed financial and organizational arrangements introduced with the provision of local autonomy to the city's 11 districts in May 1988.
Review and update Investment Plan annually.	Plan reviewed and updated in 1988 and 1989.
Provide training in transportation management, urban planning, computer applications, budgeting and financial planning.	Training provided in TSM, computer applications, financial projections, and investment evaluation.

Table 6. Use of Bank Resources

A. Staff Inputs

Stages of Project Cycle	HQ.	Field staff-weeks	Total
Through Appraisal	28	12	40
After Appraisal to Board Approval	10	3	13
After Board Approval to Effectiveness	9	-	9
Supervision	23	6	29
TOTAL	70	21	91

B. Missions

Stage of Project Cycle	Month/ Year	Number of Persons	Days in Field	Specialty Represented	Performance Rating Status 1/	Type of Problems
Identification	01/86	1	2	Economist	n.a.	
	03/86	1	2	Chief	n.a.	
Identification	05/86	2	2	Economist Fin. Analyst	n.a.	
Preparation I	06/86	4	2	Economist Fin. Analyst Engineers (2)	n.a.	
Preappraisal	11/86	6	8	Economist Fin. Analyst Engineer (2) Transp. Planner Urban Planner	n.a.	
(NOTE: The Preappraisal mission was able to appraise the project.)						
Post-Appraisal	03/87	4	4	F.Analysts (2) Engineer (2)	n.a.	
Supervision I	06/87	2	2	Transp. Planner Engineer		
Supervision II	08/87	1	2	Fin. Analyst	1	
Supervision III	01/88	3	2	Fin. Analyst Engineer Transp. Planner	1	
Supervision IV	05/88	3	2	Fin. Analyst Engineer Water Engineer	1	
Supervision V	10/88	3	2	Fin. Analyst Economist Engineer	1	
Supervision VI	05/89	2	2	Economist Engineer	1	
Supervision VII	09/89	1	2	Economist	1	
Supervision VIII	05/90	1	1	Economist	1	

1/ Rating refers to overall project status; 1 = no significant problems.