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**Report No. 12036**

**PROJECT COMPLETION REPORT**

**REPUBLIC OF FIJI**

**ROAD UPGRADING PROJECT  
(LOAN 2871-FIJ)**

**JUNE 30, 1993**

**MICROGRAPHICS**

**Report No: 12036  
Type: PCR**

**Infrastructure Operations Division  
Country Department 3  
East Asia and Pacific Region**

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**Republic of Fiji**  
**Road Upgrading Project - Loan 2871-FIJ**

**CURRENCY EQUIVALENTS**

Currency Unit - Fijian Dollar (F\$)

US\$1 = F\$1.49 (at completion - June 30, 1992)  
US\$1 = F\$1.16 (at appraisal)

**WEIGHTS AND MEASURES**

1 meter (m)	= 3.28 feet (ft)
1 kilometer (km)	= 0.62 miles (mi)
1 square meter (sq m)	= 10.76 square feet (sq ft)
1 square kilometer (sq km)	= 0.4 square miles (sq mi)
1 hectare (ha)	= 2.47 acres (ac)
1 kilogram (kg)	= 2.2046 pounds (lbs)
1 metric ton (mt)	= 2,205 pounds (lbs)

**ABBREVIATIONS AND ACRONYMS**

DEO	- Divisional Engineer's Office
MCTW	- Ministry of Communications, Transport and Works
MIPU	- Ministry of Infrastructure and Public Utilities
ICB	- International Competitive Bidding
IBRD	- International Bank for Reconstruction and Development
LCB	- Local Competitive Bidding
PCR	- Project Completion Report
PMU	- Project Management Unit
PPAR	- Project Performance Audit Report
PWD	- Public Works Department
SAR	- Staff Appraisal Report
VOC	- Vehicle Operating Costs
vpd	- vehicles per day

**FISCAL YEAR**

January 1 - December 31

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

Office of Director-General  
Operations Evaluation

June 30, 1993

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on Fiji Road Upgrading Project  
(Loan 2871-FIJ)

Attached is the "Project Completion Report on Fiji - Road Upgrading Project (Loan 2871-FIJ)" prepared by the Infrastructure Operations Division, Country Department 3, of the East Asia and Pacific Regional Office and the Infrastructure Division of the Asia Technical Department, with the Borrower providing Part II.

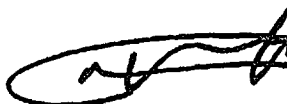
Because of political upheavals, the start-up of project implementation was somewhat delayed. Subsequently, however, implementation of the road upgrading generally went well and the closure of the loan had only to be postponed by six months. The quantity and quality of the civil works were higher than expected at appraisal; the re-estimated economic rate of return was 24% (at appraisal:22%).

Also as a result of the political upheavals, the implementing agency lost a considerable number of its staff. This in turn affected the institutional development impact of the project, which was less than expected, as the implementing agency was not able to make all the necessary counterpart staff available to work with the technical assistance personnel provided under the project. Moreover, the technical assistance personnel had to assume line rather than advisory functions to make up for the shortage of local staff. This resulted in considerable on-the-job training of local field staff. The follow-on project, the Second Road Upgrading Project, continues the institution building efforts of its predecessor.

Overall, the project's outcome is rated satisfactory, its sustainability likely and its institutional impact partial.

The PCR is of good quality: clear, cogent and to the point. However, documentation for the cost benefit analysis is missing. No audit of the project is planned.

Attachment



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**REPUBLIC OF FIJI**  
**ROAD UPGRADING PROJECT - LOAN 2871-FIJ**  
**PROJECT COMPLETION REPORT**

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**REPUBLIC OF FIJI**  
**ROAD UPGRADING PROJECT - LOAN 2871-FIJ**

**PROJECT COMPLETION REPORT**

**PREFACE**

This is the Project Completion Report (PCR) for the Road Upgrading Project in the Republic of Fiji, for which IBRD Loan 2871-FIJ in the amount of US\$23.4 million was approved on 3 September 1987. The loan was closed on 31 December 1991, after being granted an extension of six months. The loan was fully disbursed. the final disbursement being made on 16 January 1992.

The PCR was jointly prepared by the Infrastructure Operations Division, Country Department 3 of the East Asia and Pacific Region (EA3IN) and the Infrastructure Division of the Asia Technical Department (ASTIN) (Preface, Evaluation Summary and Parts I and III), and by the Borrower (Part II), and is based, inter alia, on the Asian Development Bank's (ADB) Staff Appraisal Report (SAR); the International Bank for Reconstruction and Development (IBRD) President's Memorandum; the Loan Agreement (DCA); supervision reports; the Borrower's own records, project completion report and monthly progress reports; correspondence between IBRD and the Borrower; and internal IBRD memoranda.

**REPUBLIC OF FIJI**  
**ROAD UPGRADING PROJECT - LOAN 2871-FIJ**  
**PROJECT COMPLETION REPORT**  
**EVALUATION SUMMARY**

**Objectives**

The aim of the Road Upgrading Project was to support the Government's road subsector strategy of upgrading and rehabilitation of priority road segments and selective construction of rural roads in areas with the greatest development potential. The main objectives were to:

- (a) upgrade and rehabilitate existing roads and construct a limited number of new roads as described below;
- (b) strengthen PWD's institutional capacity in road subsector management, especially in regard to road maintenance and project implementation; and
- (c) improve cost effectiveness in engineering design, construction standards and methods.

To accomplish these objectives the project components included:

- (a) road upgrading - 107.4 km consisting of three sections of main roads (40.6 km) and seven sections of secondary roads (66.8 km) which were narrow gravel roads in badly deteriorated condition and carrying considerable traffic;
- (b) procurement of road construction equipment - required to help PWD carry out by force account the upgrading of 88.9 km of the 107.4 km;
- (c) provision of consultancy services - to assist PWD in the preparation of the detailed engineering of the road and bridge works and the supervision of the construction of these works; and
- (d) provision of technical assistance to PWD - for the implementation and monitoring of the road works to be carried by force account, for strengthening its organization in planning, programming, implementing and cost monitoring of road maintenance operations, and for preparing a cost comparison study for works carried out by force account and by contract.

**Implementation Experience**

The original Road Upgrading Project was appraised jointly by IBRD and ADB in May 1986. At negotiations, the Government and ADB could not agree on terms for the ADB part of the loan. The project was reduced in scope, reappraised in February 1987, and financed solely by IBRD and the Government. The Loan was approved on September 3, 1987 and became effective on February 2, 1988. The IBRD Loan (Ln 2871-FIJ) for the project amounted to US\$23.4 million. The Loan was fully disbursed and the account closed on January 16, 1992.

The project made a good start, but because of a delay to loan effectiveness caused by political upheavals in 1987, hiring of consultants and procurement of equipment had to be halted until the situation was clear. As a result, orders for equipment could not be placed until February 1988 and the supervision personnel did not arrive until mid-1988. The equipment, which was a vital ingredient for the successful implementation of the force account work, arrived more than one year late and the ICB contract was also delayed by a year.

Once started, the road works progressed well and the quality of work was good, both in the ICB contract and the force account work. The ICB contract was awarded to a foreign contractor which had put in a low tender, 35% below the engineer's estimate, and there was some

doubt that the company would be able to complete the contract for the amount tendered, but eventually it did. All works overran the original implementation schedule because of the delayed start and because there were still some 180 man-months of design work to be done on the force account works when the project started. The Borrower was unable to provide all the counterpart staff for the consultants hired under the project because many of the PWD staff left the country after the political events of 1987.

Because of the 17.5% and 15.25% devaluations of the Fijian Dollar in 1987, there were some savings in the loan proceeds which were applied to upgrading an additional 13.8 km of roads, making a total of 121.2 km, and purchasing additional construction equipment. Work finished about one year late, which caused the six-month extension to the loan closing date.

### **Project Results**

The project achieved its objectives except, because of staff constraints in PWD, for the study and report comparing the costs of force account work with those of contracted work. This was probably just as well because the study, in order to be completely objective, should perhaps be carried out by an independent consultant rather than by PWD. However, the fact that the final costs of the ICB contract came out well below the initial estimate, has given a boost to the use of contracting as a means of carrying out roadwork. This principle has been incorporated into the Second Road Upgrading Project.

The post-project Economic Rate of Return (ERR) for the all the road sections in the project was estimated to be a very satisfactory 24%, which is an improvement over the 22% estimated at appraisal. This good result was achieved because traffic levels on the roads upgraded under the project increased by rates which varied between 2.4% and 14.5% per annum over the period 1985-1992, with an average of 5.8%, compared with the 2% used in the SAR. This figure of 5.8% corresponds closely to the rate of increase in vehicle registrations over the last few years. In order to be conservative, the rates of increase of traffic for the post project evaluation of ERR for each road section were assumed to be lower than the rates emerging from the traffic counts. On the other hand, the improvement in the ERR was adversely affected by construction costs in terms of 1985 dollars, which increased from a forecast at appraisal of F\$209,200 per km to an actual cost of F\$236,000 per km over the period of the project, an increase of 12.8%. From the limited information available, it would appear that the roughnesses of the finished roads are lower than forecast at appraisal and pavement strengths are higher, both of these were the result of tight quality control, frequent testing, use of appropriate plant and close supervision, all of which engendered good workmanship during construction. These two additional factors, which would have reduced vehicle operating and road maintenance costs, thereby increasing the net benefits and improving the ERR, have not been taken into account in the evaluation.

### **Sustainability**

It is expected that the economic benefits generated by the project road works will be sustained in view of the good quality of construction and the higher than forecast traffic levels.

The various management tools introduced during the project are now in use within the PWD organisation. In order that the benefits of these may be sustained, follow-up components to strengthen their use have been incorporated into the Second Road Upgrading Project

The main risk to the sustainability of the project benefits is that no provisions are made for routine and periodic maintenance in future years. This risk has been addressed by the ongoing and upcoming road maintenance and upgrading projects financed by ADB and the Bank, which have tackled the backlog of maintenance and are aiming to put in place the institutional changes required.

### **Findings and Lessons Learned**

This was overall a successful project, much of the credit for which must go to the consultants who staffed the PMU and supervised the ICB works. The difficulties caused by the

wholesale departure of PWD staff after the events of 1987 could have brought the project to a halt, or, at best, delayed it for much longer than was the case. Quality was good because supervision and management were tight.

The main lessons learned by the Bank have been: (a) supervision missions should have been mounted more regularly; (b) their composition should have been stronger in view of their infrequency; and (c) the Bank should respond faster to requests from the Borrower.

The main lessons learned by the Borrower were: (a) the PMU was crucial to the successful outcome of the project and should be included in future projects; (b) the vital necessity for a well-planned project cost monitoring system; (c) carrying out road construction works by contract can be cost effective if well planned, properly packaged and carefully controlled and supervised; (d) the need to develop a strategic planning capability; (e) the need for procurement procedures to be streamlined and future documents to be more carefully designed to achieve better reliability and more standardisation of the equipment fleet; and (f) before future projects, the current manpower needs should be carefully evaluated to determine whether a component providing further structured training should be incorporated.



**REPUBLIC OF FIJI**  
**ROAD UPGRADING PROJECT - LOAN 2871-FIJ**  
**PROJECT COMPLETION REPORT**

**PART I. PROJECT REVIEW FROM BANK'S PERSPECTIVE**

**1. Project Identity**

- Project Name.....Road Upgrading Project
- Loan No. ....2871-FIJ
- Loan Amount.....US\$24.3 million
- RVP Unit.....East Asia Region
- Country .....Republic of Fiji
- Sector.....Transport
- Subsector.....Road

**2. Background**

2.01 The Republic of Fiji comprises 322 islands, of which about 105 are inhabited. They cover a total area of 18,320 sq km and are scattered over 150,000 sq km of the south Pacific Ocean. The two largest islands, Viti Levu and Vanua Levu respectively account for 57 and 30 percent of the land area and for 75 and 14 percent of the population, which was about 700,000 in 1986. The population is roughly equally divided between indigenous Fijians and more recent immigrants of Indian origin, many of whom were originally brought to Fiji to work in the sugar plantations. The islands are of volcanic origin, and the larger ones are generally mountainous, covered with rain forest, and having narrow valleys and limited coastal plains. The capital, Suva, on the island of Viti Levu, is the country's major urban centre, accounting for more than 20% of the population in 1986.

2.02 The Fijian economy, while being basically agricultural, is more diversified than the economies of other South Pacific developing countries. In 1986, agriculture accounted for about 24% of gross domestic product, and was dominated by sugar, which has long been the main source of cash income and export earnings. Tourism and related industries have been gaining in importance since the 1960s and are increasingly contributing to export earnings. Government development objectives emphasized the need for an efficient transport network to reduce transport costs, assist in the equitable distribution of development benefits, and promote tourism.

2.03 Fiji's road network of about 4,650 km, of which, in 1986, only 680 km were paved to bituminous standards, have generally kept up with increasing traffic levels near major towns and on the main routes. Traffic levels on the busiest roads were estimated at over 1,000 vehicles per day (vpd), but were much lower in rural areas. From Independence in 1970 until 1986, under three successive development plans, the Government's twin objectives of improving access between commercial centres and developing areas and of opening up new areas with the greatest agricultural potential, had largely been achieved. However, the condition of most of the gravel roads was poor and in the implementation of the road development program the following technical and institutional shortcomings surfaced: (a) inadequate design and construction standards; (b) inefficient construction methods and supervision; (c) weak planning and monitoring of maintenance; and (d) inefficient maintenance operations. These shortcomings were mainly related to the shortage of experienced staff in the Public Works Department (PWD) in the Ministry of Communications, Transport and Works (MCTW) (now the Ministry of Infrastructure and Public Utilities (MIPU)) and inadequate institutional arrangements. To alleviate these shortcomings the PWD employed expatriate technical staff and undertook training programs for local staff with considerable success.

### **3. Project Objectives and Description**

**3.01 Project Objectives.** The project was designed to support the Government's road subsector strategy which was focussed on the upgrading and rehabilitation of priority road segments and selective construction of rural roads in areas with the greatest development potential. The principal objectives of the project were to:

- (a) upgrade and rehabilitate existing roads and construct a limited number of new roads as described below;
- (b) strengthen PWD's institutional capacity in road subsector management, especially in regard to road maintenance and project implementation; and
- (c) improve cost effectiveness in engineering design, construction standards and methods.

**3.02 Project Components.** To accomplish these objectives the project components included:

- (a) road upgrading - 107.4 km consisting of three sections of main roads (40.6 km) and seven sections of secondary roads (66.8 km) which were narrow gravel roads in badly deteriorated condition and carrying considerable traffic;
- (b) procurement of road construction equipment - required to help PWD carry out by force account the upgrading of 88.9 km of the 107.4 km;
- (c) provision of consultancy services - to assist PWD in the preparation of the detailed engineering of the road and bridge works and the supervision of the construction of these works; and
- (d) provision of technical assistance to PWD - for the implementation and monitoring of the road works to be carried by force account, for strengthening its organization in planning, programming, implementing and cost monitoring of road maintenance operations, and for preparing a cost comparison study for works carried out by force account and by contract.

### **4. Project Design and Organization**

**4.01** This project was the first road sector project for some years in which the Bank had been involved. The First Highway Project (Loan 771-FIJ), which was completed in 1978, had not been wholly successful and this had discouraged further dialogue between the Bank and the Government in the road subsector, except for the emergency Cyclone Reconstruction Project (Loan 1921-FIJ), which was completed in 1984. This project was designed to enable PWD to complete the first phase of a much deferred and critically needed rehabilitation and upgrading program during a period of tight budgetary constraints. It also focussed the attention of policy-makers on key issues in the management of the road subsector—cost effectiveness in road maintenance, relative cost effectiveness of carrying out road works by contract and by force account, and the adequacy of construction standards and methods. Moreover, the project aimed to strengthen PWD's transport development and road maintenance planning and monitoring capabilities.

**4.02** Originally, the project was prepared and appraised jointly by the World Bank and the Asian Development Bank (ADB), which prepared a Staff Appraisal Report (SAR) in 1986. The aim was that the Bank and ADB would equally co-finance the project components. However, during negotiations in October 1986, the Government and ADB could not agree on ADB's variable interest rate spread and the Government subsequently declined ADB's financing offer. The Bank proceeded to use ADB's SAR, with its permission, and prepared a scaled down project, as described above. The project was reappraised in February 1987, renegotiated in March 1987 and approved by the Board in September 1987. There was a considerable delay between negotiations and Board approval because, in April 1987, a General Election was held, when the opposition Fiji National Party gained the majority of seats. This precipitated a military coup in May 1987, and therefore the results of the negotiations could not be approved by the Government. Eventually the

negotiations were approved by the Governor-General, who requested the Bank to present the project to the Board. There was a further military coup in late September 1987, which delayed the process of signing and effectiveness until early 1988.

4.03 An important feature of the project was the combination of contracting through International Competitive Bidding (ICB) in accordance with the Bank's Procurement Guidelines and the utilization of force account in implementing project road works. During preparation of the project there was considerable debate between the Government and the Bank over the incorporation of an ICB component. The Government's previous experience under the First Highway Project (Loan 771-FIJ) was unfortunate as the ICB contract cost the Government dearly and this had overshadowed the Bank's sector dialogue with Fiji for many years. Supporting the Government's view was the satisfactory outcome of the works carried out by force account under the Cyclone Reconstruction Project (Loan 1921-FIJ), which was completed within the forecast time and budget. Both the Project Performance Audit Report (PPAR) for Loan 771-FIJ and the PCR for Loan 1921-FIJ argued in favour of force account work for roads in Fiji, and this view was firmly adopted by the Government. It was equally clear, however, that the experience of Loan 771-FIJ was an aberration and was caused by overdesign, incomplete field investigations and poor supervision, which resulted in substantial claims by the contractor. In addition it was clear that the cost-accounting for force account work left much to be desired, as several critical items were not accounted for, which therefore distorted the final picture. After much discussion it was agreed that one major contract should be carried out through ICB and the remaining works, which were small and scattered and unlikely to be attractive to international contractors, would be executed by force account. Additionally, it was agreed that a detailed comparison of the costs of each method would be carried out as a part of the project.

4.04 Primary responsibility for implementation was to be vested in MCTW, acting through the PWD. MCTW would be the recipient of loan funds and would also provide the local funds. The force account works were to be executed by the respective Road Construction Units (RCU), which had been formed within each Divisional Engineer's Office (DEO) in the PWD, to carry out major road construction and maintenance works. Much of the plant and equipment held by the PWD plant pool was nearing the end of its economic life and was in urgent need of replacement. A large number of items of construction plant, equipment and vehicles required by the RCUs to carry out the force account works were therefore to be provided under the project.

4.05 The loan for the scaled down project was approved in the sum of US\$23.4 million, which was to finance 100% of foreign expenditures or 68% of the total project costs, estimated at US\$38.0 million. It was decided to retain the original implementation schedule in the SAR, which showed all works being completed by the end of 1990. In retrospect, this was ambitious in the light of the delays that had already been imposed on the project. The timing of the project was suitable because of the deteriorated state of many of the roads, the urgent necessity to rehabilitate them, and the budget constraints that prevented the Government from carrying out the works with its own funds.

## **5. Project Implementation**

5.01 As described above, it had been expected that the loan would be approved in April 1987, but the General Election in that month and the subsequent military coups in May and September of that year imposed considerable delays to the planned start of project works. In expectation of the planned approval date, recruitment of supervision personnel and tenders for the supply of equipment were in an advanced state by early 1987. In the light of events, these procurement actions had to be put on hold until it was clear to the Government that the loan would be approved, because the US\$1.0 million allowance for retroactive financing had already been consumed. As a result, orders for equipment could not be placed until February 1988 and the supervision personnel did not arrive until mid-1988. The equipment, which was a vital ingredient for the successful implementation of the force account work, did not, therefore, arrive until more than one year late and the ICB contract was also delayed by a year.

5.02 As a result of the military coups, there was a major exodus from Fiji of professional and skilled Fijians of Indian origin, and PWD lost a large percentage of its staff. The three maintenance engineers recruited to carry out the Maintenance Strengthening component were placed in line positions in the three DEOs with responsibility for maintenance and construction, and it was not possible to provide Fijian counterparts for all the other expatriate staff. This situation continued for the duration of the project, with the result that the Cost Comparison Study was not completed. However, in an attempt to alleviate the acute shortage of staff, there was a concentration on training, which made an appreciable difference to the situation.

5.03 Because of the political disturbances during 1987, the Government devalued the Fiji Dollar twice, first by 17.5% and then by 15.25%, the net result of which was the force account works were completed at well under the estimated cost in US\$ terms and the savings thereby accrued were used for further purchases of construction equipment and for some additional road works, after obtaining the approval of the Bank. In the event, an additional 13.8 kms of various roads were upgraded (making a total of 121.2 km compared with the original 107.4 km) at a cost of F\$2.25 million and an additional F\$3.0 million worth of equipment was purchased. Because these additions to the project scope involved the use of savings from the loan proceeds, the approval had to be taken up to vice-presidential level. This process took 5 months, from August 1989 to January 1990, and elicited considerable criticism from the Government

5.04 While the original project was being prepared, the Government had been told that the loan would cover retroactive expenditures up to US\$1.0 million incurred after the original appraisal mission in May 1986. Consultants were accordingly hired and some force account works were started, when the Bank announced that retroactive financing under the revised loan arrangements would only cover work started after the reappraisal in April 1987. The outcome of this was that the Government was not reimbursed for about US\$1.5 million of expenditures incurred during 1986/87.

5.05 Once started, the road works progressed well and the quality of work was good, both in the ICB contract and the force account work. The ICB contract was awarded to a foreign contractor which had put in a low tender, 35% below the engineer's estimate, and there was some doubt that the company would be able to complete the contract for the amount tendered, but eventually it did. All works overran the original implementation schedule because of the delayed start and because there were still some 180 man-months of design work to be done on the force account works when the project started. While subgrade conditions were not generally a problem and the construction materials available in Fiji were of adequate quality, initial problems arose with the surface dressing with stripping of the aggregate being severe. The problem was eventually overcome by washing the aggregate and precoating it, often with the use of an adhesion agent in the bitumen. The awarding of equipment contracts to the lowest evaluated bidder in accordance with Bank Guidelines, often resulted in acute problems of reliability, especially in the case of the asphalt plants, which suffered from frequent electrical failures in the complex electronic control equipment, and, to a lesser degree, the crushers. It took more than two years to make the asphalt plants acceptably reliable, resulting in financial losses because of non-availability. Experience showed that the best type of crusher for the river gravels was a cone crusher and this should be specified in future purchases. Procurement of other equipment in accordance with Bank Guidelines also resulted in the PWD receiving a variety of makes and models. In this respect the procurement documents were at fault, in that they should have specified that, in the evaluation, weight would be given for standardisation with existing equipment.

5.06 The Government accounting system was not satisfactory for generating the information needed for estimating and costing project works, so the Senior Cost Accountant, hired under the project, developed and put in place during 1987 a system that addressed these shortcomings. The system was used for all works undertaken after 1 January 1988. Its main features, the operation of which were described in an estimating and costing manual were:

- (a) establishing unit rate estimates from first principles into standardised sub-tasks; the estimates included a resource schedule and works programme;
- (b) a system for monitoring project performance and costs;

- (c) a clear description of responsibilities from cost clerk, field supervisor and supervising engineer through to principal accounts officer; and
- (d) a system for keeping task journals, carrying out reconciliations and preparation of programme cost statements.

These cost statements were submitted on a regular basis as part of the monthly progress report and formed a most useful financial management tool. The Senior Cost Accountant was very diligent in introducing the system to all the various sections of PWD, but the principles involved were unfamiliar to many of the staff and the usefulness of the results obtained were not always fully appreciated. How well the system will be used after the departure of the expatriate accountant, will depend on the energy and commitment of the PWD accounting department.

5.07 Supervision of the force account works was carried out by the Project Management Unit (PMU), which was formed within PWD and staffed by five expatriate staff. Because of the shortage of local staff and the workload that fell on the PMU, the responsibilities of the staff changed frequently to satisfy the demands placed on the PMU.

## 6. Project Results

6.01 The project achieved its objectives except, because of staff constraints in PWD, for the study and report comparing the costs of force account work with those of contracted work. This was probably just as well because the study, in order to be completely objective, should perhaps be carried out by an independent consultant rather than by PWD. Moreover, the fact that the final costs of the ICB contract came out well below the initial estimate, has given a boost to the use of contracting as a means of carrying out roadworks, and this principle has been incorporated into the Second Fiji Road Upgrading Project (FRUP II). The project objectives changed during the implementation period in that about US\$3.4 million of additional roadworks and equipment were procured utilising savings from the loan funds caused by the two devaluations of the Fiji Dollar in 1987.

6.02 The post-project Economic Rate of Return (ERR) for the all the road sections in the project was estimated to be a very satisfactory 24%, which is an improvement over the 22% estimated at appraisal. This good result was achieved because traffic levels on the roads upgraded under the project increased by rates which varied between 2.4% and 14.5% per annum over the period 1985-1992, with an average of 5.8%, compared with the 2% used in the SAR. This figure of 5.8% corresponds closely to the rate of increase in vehicle registrations over the same period. In order to be conservative, the rates of increase of traffic for the post project evaluation of ERR for individual road sections were assumed to be lower than the rates emerging from the traffic counts. On the other hand, the improvement in the ERR was adversely affected by construction costs, which increased, in 1985 terms, from a forecast at appraisal of F\$209,200 per km to an actual cost of F\$236,000 per km over the period of the project, an increase of 12.8%. From the limited information available, it would appear that the roughnesses of the finished roads are lower than forecast at appraisal and pavement strengths are higher, both of these were the result of tight quality control, frequent testing, use of appropriate plant and close supervision, all of which engendered good workmanship during construction. These two additional factors, which would have reduced vehicle operating and road maintenance costs, thereby increasing the net benefits and improving the ERR, have not been taken into account in the evaluation.

6.03 The project had a beneficial effect on the road sector, in that it reduced the number of roads in need of urgent upgrading. It also demonstrated the benefits of carrying out work by contract instead of the prevailing force account system. The establishment of the PMU was crucial to the execution of the project and the enhanced supervision and management capabilities made this project more successful than others in the sector through the maintenance of high standards of workmanship and construction quality. A similar unit should be a standard feature of future projects and will probably need continuing support from expatriate staff until the local staff has accumulated the necessary experience. The establishment of a unit rate costing system was an important part of the management requirements of the project, which has lapsed somewhat since the departure of the expatriate cost accountant running it, but it should be an integral part of all

future projects until the system is fully accepted and becomes firmly embedded into the day-to-day operations of the PWD.

6.04 The Maintenance Strengthening component has had a positive effect on the sector in that it developed operational improvements and was used as a springboard for the Maintenance Sector Project (MSP) funded by ADB and for the recently approved FRUP II (Loan 3491-FIJ), financed jointly by the Bank and ADB.

6.05 Another area where the project has had considerable impact is that of training. After many local staff left Fiji after the military coups of 1987, the requirement to replace them became a priority. Training courses were put in hand by PWD with practical experience being obtained from involvement in project works. This process is still continuing as there is still an acute shortage of experienced staff in PWD.

6.06 During the execution of the project a number of matters connected with it emerged, some of which are being addressed in future projects:

- (a) PWD has in the past tended to react to the prevailing situation instead of having a clear strategic plan because of a shortage of skilled personnel; PWD's purpose, goals and objectives should be developed into an action plan, which should form the basis of its forward planning of operations and transport corridors; under their past and ongoing projects, IBRD and ADB are continuing to provide technical assistance which is helping to rectify the situation;
- (b) the necessity of developing a strong domestic road contracting industry was a very important outcome of the project, but it is equally important to have a regular flow of work, otherwise contractors will not invest in equipment; the inefficiencies of maintaining a large pool of labour and plant are self-evident as these tend to be used on works that are not necessarily the most important or cost-effective for the sake of keeping them employed; PWD should concentrate more on developing an efficient management, supervision and testing system and allow the private sector to do the actual work; similarly the plant fleet needs to be replaced from a fund set up for that purpose, rather than relying on successive donor-assisted projects for the renewing of the fleet; all these concerns have been addressed in the ADB MSP and the ongoing IBRD/ADB FRUP II; and
- (c) a system of reporting for all projects should be introduced, similar to that used in this project, so that proper control can be exercised by management and considered decisions arrived at.

## **7. Project Sustainability**

7.01 It is expected that the economic benefits generated by the project will be sustained over the life of the roads in view of the good quality of construction and the higher than expected traffic levels.

7.02 The various management tools introduced during the project are now in use within the PWD organisation. In order that the benefits of these may be sustained, follow-up components to strengthen their use have been incorporated into FRUP II.

7.03 The main risk to the sustainability of the project benefits is that no provisions are made for routine and periodic maintenance in future years. This risk has been addressed by the MSP and FRUP II financed by ADB and the Bank, which have tackled the backlog of maintenance and are aiming to put in place the institutional changes required.

## **8. Bank Performance**

8.01 The project was well prepared and regularly, if not frequently, supervised. During preparation, the Bank dealt firmly with the issue of contracting through ICB, which was ultimately to the benefit of this project and subsequent ones. The Bank displayed the necessary flexibility to take on the whole of the reduced project after the Government's negotiations with ADB failed.

8.02 The Bank came in for some criticism from the Government on two counts. First, for the infrequency of supervision and, second, for the apparent slowness in responding to requests. More frequent supervision was considered to be unnecessary as the project generally went smoothly, with few pressing problems, but there were some very long gaps. In view of the infrequency of missions, the Bank should perhaps have fielded a stronger supervision team than the lone consultant sent in the early stages of the work, especially as there was no mission between May 1986 and August 1988. The matter of speed of response has been covered in para 5.03 above.

8.03 The main lessons learned by the Bank were:

- (a) supervision missions should have been mounted more regularly; there should have been at least two more, one in the early part of the project, at the beginning of 1988, and another during 1990;
- (b) the composition of supervision missions should have been stronger in view of their infrequency;
- (c) the Bank should respond faster to requests by the Borrower, be they routine procurement matters or more complex ones requiring the decision of senior management.

## 9. Borrower Performance

9.01 The Borrower generally performed very well during the preparation and implementation of the project. The Government can in no way be blamed for the stand it took over the question of ICB, in view of its previous poor experience with ICB and the good performance of its force account operations, which view had been reinforced by the comments made by the Bank in its PPAR/PCRs for the previous projects. The delays caused by the failure of the Government's negotiations with ADB and by the political events of 1987 are unfortunate, but despite these the project only exceeded by 6 months the date originally set for the closing of the loan. During implementation, despite the acute shortage of qualified local staff, the PMU operated well and kept good control on the project.

9.02 The main lessons learned by the Borrower were:

- (a) the PMU was a very important innovation that greatly facilitated the management of this relatively large project, and there is considerable support for making the PMU a standard feature of future large projects;
- (b) the vital necessity for a well-planned project cost monitoring system such as the one developed during this project and the necessity for introducing it as a standard operational procedure in PWD;
- (c) the carrying out of road construction works by contract can be cost effective if well planned, properly packaged and carefully controlled and supervised;
- (d) PWD needs to develop its strategic planning capability;
- (e) procurement procedures need to be streamlined and future documents should be more carefully designed to achieve the aims of the PWD for procuring reliable equipment and achieving a degree of standardisation; and
- (f) before future projects, the current manpower needs should be carefully evaluated to determine whether a component providing further structured training should be incorporated.

## 10. Project Relationship

10.01 Relations between the Bank and the Government were good during the project, but because of the relatively long periods between missions, and the changing of the people comprising the missions, it proved difficult to develop a close working relationship with the project staff.

## **11. Consulting Services, Contractors and Suppliers**

### **11.01 Foreign consultants were employed to:**

- (a) carry out the detailed design work, and, subsequently, supervision of construction of the works;**
- (b) staff the PMU, which managed the force account works; and**
- (c) carry out the Road Maintenance Strengthening component.**

All carried out their responsibilities satisfactorily, and, in the case of the consultants not involved in the ICB contract, with great flexibility, because of the additional responsibilities thrust upon them by the departure of most of the local staff of PWD.

11.02 The ICB contract was carried out by a foreign contractor, whose performance improved from poor at the start to acceptable at the end of what was technically a fairly difficult contract. A very low bid price, language difficulties, inexperience in a tropical climate, lack of resources, deficiencies in material preparation and poor planning, all compounded the contractor's initial problems. Exceptionally wet weather during 1990 made it difficult for the contractor to catch up lost time and the contract finished 3 months late overall. It can be presumed that the contractor made a substantial financial loss, but nevertheless completed the work to a high standard, hence preserving his good standing for future prequalification.

11.03 The remainder of the works were carried out by the PWD's RCUs. As a result of the supervision given to this part of the works by the PMU, the RCUs performed well, even if they did not achieve the rates of progress that had been forecast at appraisal. The resulting works were completed to a good standard.

11.04 Equipment was procured from a large number of suppliers. Most of them performed satisfactorily, and the only one that is singled out by PWD for criticism is the asphalt plant manufacturer, who was reluctant to do what he should have done willingly to correct the faulty electronics, which delayed the effective use of these plants for many months.

## **12. Project Documentation and Data**

12.01 The SAR was written by ADB and applied to a somewhat larger project, but it nevertheless provided a useful framework for all parties during project implementation. The project as undertaken was based on the Bank's President's Memorandum.

12.02 The Loan Agreement was well prepared and served its purpose adequately. All covenants were appropriate.

12.03 Information for the PCR was provided by the PWD, together with project documentation and Bank files.



**REPUBLIC OF FIJI**  
**ROAD UPGRADING PROJECT - LOAN 2871-FIJ**  
**PROJECT COMPLETION REPORT**

**PART II. PROJECT REVIEW FROM BORROWER'S PERSPECTIVE**<sup>1</sup>

**The Bank's Performance**

The appraisal report for the project was prepared by Officers of the Asian Development Bank and the Report subsequently used by IBRD with brief covering memo that made minor changes to the report. It would have been useful if this memo had also included amendments to Table 1: Summary of Project Costs with respect to contingencies and interest charges resulting from withdrawal of Ba and Sigatoka Bridges from the project scope.

The delay in executing the loan agreement, that was expected in late March/early April 1987, to 8 January 1988, delayed particularly the purchase of project plant and equipment and engagement of consultants for design and supervision of ICB works. The military coups of 14 May 1987 and 25 September 1987 were the reasons for this delay, but it was difficult during this period to obtain from the Bank the conditions that would need to be met for the execution of the loan agreement to proceed. It is acknowledged, however, that these were most unusual, and special conditions are likely to apply in each case.

Supervision missions visited the project as follows:

- |    |                               |                       |
|----|-------------------------------|-----------------------|
| 1. | 1 August to 8 August 1988     | - Mr. Federico Castro |
| 2. | 15 May to 23 May 1989         | - Mr. Federico Castro |
| 3. | 4 December to 9 December 1989 | - Mr. George Trnka    |
| 4. | 30 April to 10 May 1991       | - Mr. George Trnka    |

It is difficult to comment on the usefulness of these missions from the Borrowers viewpoint accepting that their major purpose was more Bank related. The comparison is offered that Asian Development Bank supervision missions have taken a much greater interest in the conduct of project works and in the solution of implementation problems for the largely concurrent Maintenance Sector Project.

The Bank's response in relation to the proposed additional works submitted for approval on 29 August 1989 was disappointing. The design and construction of the additional works including roads and bridges was to be completed by December 1990 but the Bank's partial approval was not received until 29 January 1990 (no additional information was requested). Preconstruction activities for the additional works had to proceed in the absence of any Bank decision. For projects that are to be delivered with tight schedules (i.e.. 120 km of roadworks in 3 years), it is suggested that Task Managers need to be sufficiently well informed to be able to make timely decisions.

The use made by the Bank of progress reports is interesting. Not one query was received as a result of submitted progress reports nor was there any concern expressed regarding the non-submission of progress reports after 30 September 1990.

The Bank requirement that the lowest conforming tender be accepted is understandable, but has real disadvantages in relation to standardization of plant fleets. Standardization offers indisputable advantages in small countries like Fiji and this matter should be addressed during the appraisal phase of a project.

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<sup>1</sup> The original report provided by the Government has been retyped, as parts of it were barely legible.

### **Borrowers Performance**

The borrowers performance with respect to delivery of the project objectives was very good. Although, construction of the ICB works were not substantially completed by the end of 1990, this was largely out of control of the Borrower and dictated by the Contractor.

To assist in delivery of the project the following consultancies were arranged:

1. **Institutional Strengthening**

This consultancy included the establishment of the Project Management Unit. At the end of 1987, with the departure of expatriate road construction engineers from Central and Western Divisions, a further 2 senior road construction engineers were recruited. All expatriate staff provided for institutional strengthening were recruited from the Overseas Projects Corporation of Victoria (Australia).

2. **Design and Construction of ICB**

Consultants Roughton and Partners from the United Kingdom were selected to provide services for design and supervision of the 18.2 km ICB Kings Road Project.

The original technical assistance study provided 20.5 man-years for expatriate consultants. However some 31.75 man-years were used largely because of:

- (a) the extension of the date for practical completion of the ICB works by approximately 1 year resulted in an additional 4 man years.
- (b) the provision of 2 senior road construction engineers for approximately 2.75 years resulted in an additional 5.5 man-years.
- (c) the provision of a bridge design engineer for 1 man-year.

With the departure of a large number of local engineers from PWD after the 1987 coups, it was not physically possible to provide counterpart staff for expatriate staff. This was discussed in detail with all of the Bank's supervision missions.

As a result of this, all expatriates who were originally provided for institutional strengthening were required to undertake additional and amended duties. The Estimating Engineer was required to take on the duties of Road Design Engineer as most of the design work that was expected to be completed on arrival of the consultants was not complete at that point in time. Road Maintenance Engineers provided for the Road Maintenance Study took on line duties that effectively made them second in charge in each division as well as their maintenance study duties. The Project Management Unit also assumed control of the ADB funded Road Maintenance Sector Project as well as the Ba/Sigatoka Bridge Project. The provision of consultants to provide institutional strengthening and design and supervision of ICB Works during the project was absolutely critical to successful delivery of the project and to many other activities that were on-going in PWD at the time.

Establishment of the Project Management Unit was important and it provided a sharp focus for responsibility and accountability for the project and defined ownership of technical and financial control. Their provision in similar future projects is recommended.

The establishment of unit rate systems and standard specifications for road and bridge works was also important for proper project control. The comparison between the standard of project works undertaken in 1987 compared to those undertaken after 1 January 1988 when these items were in place, highlights the benefits.

The internal government processes associated with the acquisition of plant equipment and vehicles, appointment of staff and provision of audit reports needs some strengthening for future projects of this type. Similarly the reconciliation of cost statements with central EDP ledgers needs to be improved for the provision of accurate and timely cost information and for draw down of loan funds.

The broad terms of reference for the Project Management Unit (referred to as FASU in the appraisal report) included assistance in establishing a self-funding plant fleet. The need for this was supported but with involvement in the management of the Maintenance Sector Project, this objective was not achieved. It should be included for pursuit in any further similar project if it has not been achieved by that time.

The Road Maintenance Engineers and subsequent ADB funded Road Maintenance Sector Project has seen real improvement in the condition of the major network although much remains to be done and further financial assistance would result in economically justifiable benefits.

The Road Maintenance Study saw some changes to the PWD maintenance organization but the lack of professional engineers did not allow appointment of several of the key positions. Even so, there is general acceptance of the importance of asset preservation and the organization in place at the end of the project will provide a strong base to further strengthen maintenance requirements.

The proposed comparative study between construction by force account versus construction by contract was not undertaken because the estimating engineer was transferred to other duties and the rates submitted by the lowest tender for the ICB works were considered to be unrealistically low. Even so it is contended that an effort must be made to develop the local road construction industry and this should be addressed in future projects.

Although execution of the works was undertaken by PWD within the Ministry of Infrastructure and Public Utilities, communication with the Bank on financial aspects was the responsibility of the Ministry of Finance. At times this created inefficiencies and meant that draw-down applications were prepared by PWD but forwarded to the Ministry of Finance for despatch to the Bank. Similarly, information provided by the Bank was forwarded to the Ministry of Finance and took some time for its receipt by the Project Management Unit in PWD. For future projects serious consideration should be given to the establishment of a task force, or similar, under the executing Ministry for proper co-ordination of other Ministries and all liaison with the Bank be undertaken through the executing Ministry.

The major training benefit provided by the project will be for field supervisory personnel. The absence of professional engineers meant that the training efforts of expatriates were concentrated on developing local supervisors and it is contended that there is a pool of experienced and capable supervisors who with proper management could build similar roads to a high standard.

#### **Relationship Between the Bank and the Borrowers**

There is little comment that can be made in this regard as the relationship was effective in successful completion of the project. It would be useful at the time of executing the loan for the Bank to provide a list of liaison officers and communications addresses for different aspects of the project execution. Responsibility of Bank officers and their delegated authority was often unclear.

#### **General**

A project completion report that discusses all aspects of the project but in limited detail is attached.

**REPUBLIC OF FIJI**  
**ROAD UPGRADING PROJECT - LOAN 2871-FIJ**  
**PROJECT COMPLETION REPORT**  
**PART III - SUMMARY OF STATISTICAL DATA**

**1. Related World Bank Loans and/or IDA Credits**

<b>Loan/Credit Title</b>	<b>Purpose</b>	<b>Year of Approval</b>	<b>Status</b>	<b>Comments</b>
Loan 771-FIJ First Highway Project	Upgrading and rehabilitation of roads and bridges and provision of equipment	1971	Completed	Closed 31 Mar 78 PPAR No. 4025 dated 30 Jun 82
Loan 1921-FIJ Cyclone Reconstruction Project	Reconstruction of cyclone-damaged infrastructure	1980	Completed	Closed 30 Jun 84 PCR No. 5739 dated 28 Jun 85
Loan 3491-FIJ Second Road Upgrading Project	Upgrading roads, road safety, traffic management, vehicle regulation, provision of equipment, technical assistance and consultant services	1992	In progress	Approved by the Board 18 Jun 92 Loan signature awaited

Source: Bank Staff

**2. Project Timetable**

Item	Date		
	Planned	Revised	Actual
First Mention in Files	--	--	19 Jul 84
Government's Application	--	--	N/A
Identification Mission	--	--	Jul 84
Project Brief	28 Feb 85	--	Apr 86
Preparation Mission I	Dec 84	--	Nov 84
Preparation Mission II	--	--	Feb 85
Preappraisal Mission I	May 85	--	Oct 85
Preappraisal Mission II	--	--	Jan 86
Appraisal Mission	Sep 85	Apr 86	May 86
Loan Negotiations I	10 Feb 86	--	20 Oct 86
Reappraisal	--	--	Feb 87
Loan Negotiations II	--	--	17 Mar 87
Board Approval	18 May 86	Oct 86	03 Sep 87
Loan Signature	Jun 86	--	07 Jan 88
Loan Effectiveness	Jan 87	--	02 Feb 88
Loan Closing Date	30 Jun 91	31 Dec 91	31 Dec 91
Project Completion	31 Dec 91	30 Jun 92	30 Jun 92
Loan Account Closing Date	--	--	16 Jan 92

Source: Bank Staff

3. Loan Disbursements

A. Cumulative Estimated and Actual Disbursements  
(US\$ millions)

IBRD FY	1988	1989	1990	1991	1992
Estimated	10.0	16.0	20.0	23.4	
Actual	0.5	9.2	15.1	21.6	23.4
Actual as % of Estimate	5	58	76	92	100

The final disbursement was made on 16 Jan 92.

Source: Bank Staff

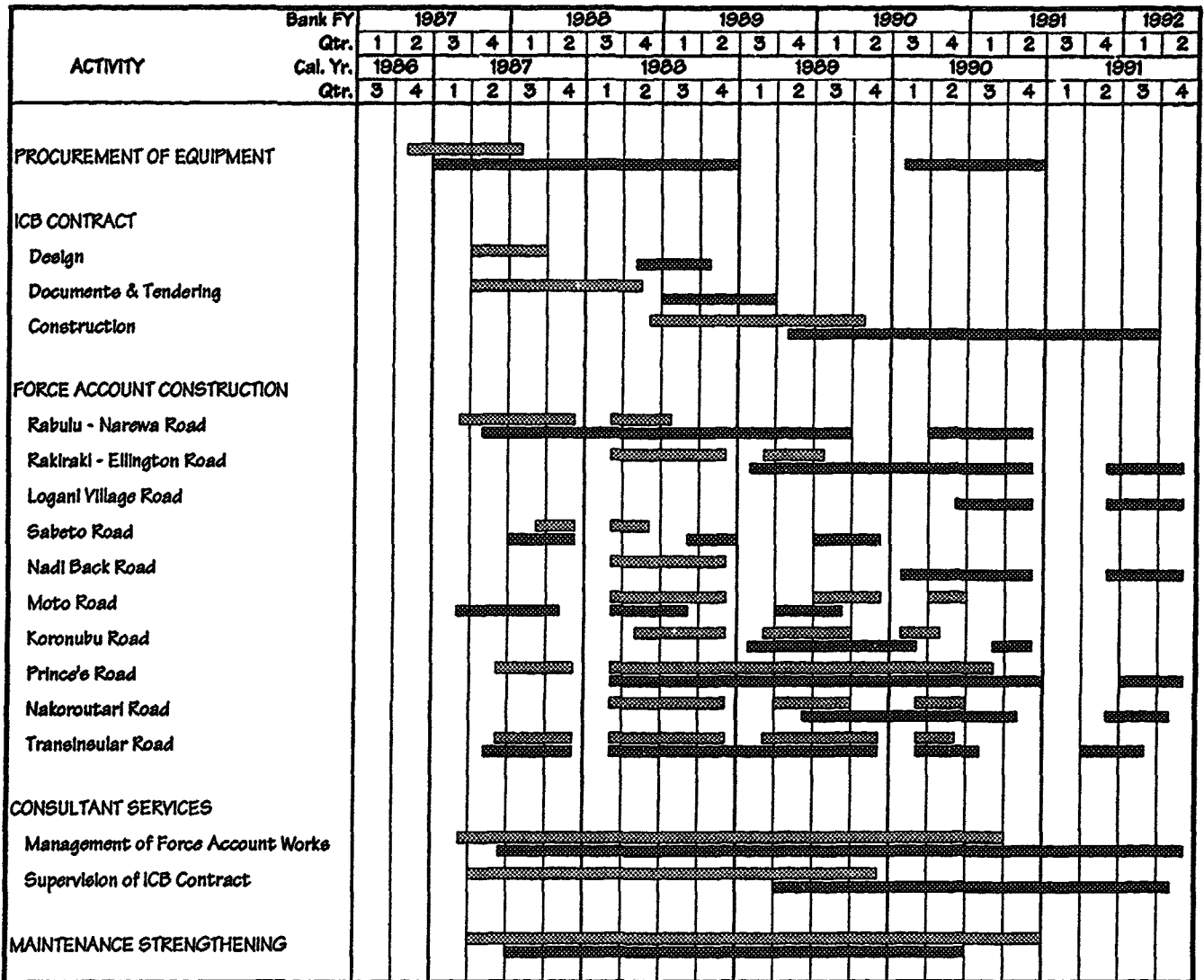
B. Disbursements by Category  
(US\$ millions)



Category	Amount Allocated	
	Appraisal	Actual
(1) Civil Works		
(a) Under Contract	4.0	2.3
(b) By Force Account	7.2	8.8
(2) Equipment, Vehicles and Spare Parts	7.0	8.7
(3) Consultants' Services	1.7	3.6
(4) Unallocated	3.5	0.0
<b>Total</b>	<b>23.4</b>	<b>23.4</b>

Source: Bank Staff

4. **Project Implementation**

Comparison Between Proposed and Actual Implementation



 Proposed Implementation  
 Actual Implementation

Source: PWD and Bank Staff

5. **Project Costs and Financing**

A. **Project Costs**  
(US\$ millions)

Component	Appraisal Estimate			Actual		
	Local	Foreign	Total	Local	Foreign	Total
Road Upgrading	10.9	10.1	21.0	12.9	11.3	24.2
Equipment	0.0	7.5	7.5	0.0	9.1	9.1
Consultancy Services	0.6	1.8	2.4	0.6	3.0	3.6
Right-of-Way	0.0	0.0	0.0	0.3	0.0	0.3
<b>Total Base Costs</b>	<b>11.5</b>	<b>19.4</b>	<b>30.9</b>	<b>13.8</b>	<b>23.4</b>	<b>37.2</b>
Physical Contingencies	1.7	1.8	3.5	0.0	0.0	0.0
Price Contingencies	1.4	2.2	3.6	0.0	0.0	0.0
<b>Total Project Costs</b>	<b>14.6</b>	<b>23.4</b>	<b>38.0</b>	<b>13.8</b>	<b>23.4</b>	<b>37.2</b>

Source: Bank Staff

B. **Project Financing**  
(US\$ million)

Source	Planned		Final	
	US\$ M	%	US\$ M	%
IBRD	23.4	62	23.4	63
Government	14.6	38	13.8	37
<b>Total</b>	<b>38.0</b>	<b>100</b>	<b>37.2</b>	<b>100</b>

Source: Bank Staff



## 6. Project Results

### A. Economic Impact

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Overall appraisal estimate of ERR for roadworks = 22%

Overall post-project evaluation of ERR for roadworks = 24%

The Appraisal Report estimated the ERR to be 22% for all the roads to be upgraded under the Project, based on a 2% annual growth in traffic and achieving a roughness of 3500 mm/km. Traffic counts taken between 1985 and 1992 show that traffic on these roads has increased at rates that varied between 2.4% and 14.5%, with an average of 5.8%. Although some of the higher rates had been sustained over 7 years, they were considered to be too high to apply to the 20 year life of the roads, and lower rates were assumed in the post-project evaluation. On the other hand, the ERR was adversely affected by an increase in economic construction costs, expressed in 1985 terms, which rose from an appraisal estimate of F\$209,200 per km to an actual F\$236,000 per km, i.e. 12.8%. The post-project ERR for the roadworks component was calculated to be 24% overall, with a range of 13% to 46% for individual road sections. The following factors, which would have increased net benefits and improved the ERR were not taken into consideration for lack of detailed information on all the roads:

- (a) roughness measurements taken on a few of the roads show that work has been to a high standard of finish and readings are of the order of 2000 mm/km, a considerable improvement on the roughness of 3500 mm/km assumed at appraisal; this would have the effect of lowering vehicle operating costs; and
- (b) the good workmanship has resulted in pavement strengths that are higher than forecast, which would have the effect of lowering maintenance costs over the life of the roads.

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### B. Studies

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Studies	Purpose as Defined at Appraisal	Status	Impact of Study
Cost Comparison of Road Works by Contract and by Force Account	To provide a basis for the on-going discussions on the relative costs of carrying out highway improvement works using the PWD's own resources or by contract, either through ICB or LCB	Not completed, because of commitment of consultant's personnel on supervision and management duties because of loss of local staff after military coups of 1987	None, but outcome of project has served to reinforce the view that some works should be executed through contract in future projects

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Source: Bank Staff

**7. Status of Covenants**

<b>Section</b>	<b>Covenant</b>	<b>Status</b>
4.01(a)	The Borrower shall maintain records and accounts in accordance with sound accounting practices	Complied with
4.01(b) & (c)	The Borrower shall have these records and accounts, and those pertaining to SOEs, audited in accordance with appropriate auditing principles consistently applied and submit to the Bank	Partly complied with; auditing carried out but with delays
Sched. 5.2	The Borrower shall place consultant road maintenance engineers in PWD and its divisions and provide counterparts	Partly complied with; consultants placed but not all counterparts available
Sched. 5.3	The Borrower shall, by 31 December 1990, complete a study to compare cost effectiveness of road construction by force account and by contract	Only partly complied with; a brief report was provided

Source: Bank Staff

8. Use of IDA Resources

A. Staff Inputs

Stage of Project Cycle	Number of Staff-Weeks	Remarks
Through Appraisal	15.3	Estimate - MIS divides up lending operation in different way
Appraisal through Board Approval	5.8	Estimate - MIS divides up lending operation in different way
Board Approval through Effectiveness	10.2	Estimate - MIS divides up lending operation in different way
Supervision	25.9	Includes preparation of PCR
<b>Total</b>	<b>57.2</b>	

Source: Bank Staff

B. Missions

Stage of Project Cycle	Month/Year	No. of Persons	Days in Field	Specialisation Represented[1]	Performance Rating Status[2]	Types of Problems
<b>Through Appraisal -</b>						
Identification	07/84	1	7	EGR	--	--
Preparation I	11/84	1	7	EGR	--	--
Preparation II	02/85	1	4	EGR	--	--
Preappraisal I	10/85	1	8	ECN	--	--
Preappraisal II	01/86	1	14	EGR	--	--
Appraisal	05/86	1	5	EGR	--	--
<b>Appraisal through Board Approval -</b>				No missions		
<b>Board Approval through Effectiveness -</b>				No missions		
<b>Supervision -</b>						
Supervision I	08/88	1	10	EGR	1	--
Supervision II	05/89	1	10	EGR	1	--
Supervision III	12/89	1	7	EGR	1	--
Supervision IV	04/91	1	14	EGR	1	--
Supervision (PCR)	02/92	2	10	EGRx2	1	--

Notes: [1] EGR = Engineer, ECN = Economist  
 [2] 1 = Problem-free or Minor Problems

Source: Bank Staff