



Validation Report

Reference Number: PCV: KGZ 2009-40
Project Number: 30311
Loan Number: 1853 (SF)
November 2009

Kyrgyz Republic: Third Road Rehabilitation Project

Independent Evaluation Department

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
EA	–	executing agency
EIRR	–	economic internal rate of return
IED	–	Independent Evaluation Department
km	–	kilometer
MOTC	–	Ministry of Transport and Communications
OCR	–	ordinary capital resources
PCR	–	project completion report
PIU	–	project implementation unit
PPER	–	project performance evaluation report
PSC	–	project steering committee
PVR	–	project completion report validation report
RRP	–	report and recommendation of the President
SDR	–	special drawing rights
TA	–	technical assistance
VOC	–	vehicle operating cost

NOTE

In this report, "\$" refers to US dollars.

Key Words

kyrgyz, kyrgyz republic, rural roads, transportation, feeder roads, lessons, asian development bank, independent evaluation department, performance evaluation

Director	H. Hettige, Independent Evaluation Division 2, Independent Evaluation Department (IED)
Team leader	N. Singru, Senior Evaluation Specialist, Independent Evaluation Division 2, IED
Team members	R. Lumain, Senior Evaluation Officer, Independent Evaluation Division 2, IED C. Roldan, Assistant Operations Evaluation Analyst, Independent Evaluation Division 2, IED

In preparing any evaluation report, or by making any designation of or reference to a particular territory or geographic area in this document, the Independent Evaluation Department does not intend to make any judgments as to the legal or other status of any territory or area.

PROJECT COMPLETION REPORT VALIDATION

A. Basic Project Data		PCR Validation Date:	November 2009	
Project Number:	30311		Approved	Actual
Loan Number:	1853(SF)			
Project Name:	Third Road Rehabilitation	Total Project Costs (\$ million):	50.0	57.1
Country:	Kyrgyz Republic	Loan/Grant (\$ million) (SDR equivalent):	40.0	45.9
			31.8	30.9
Sector(s):	Road Transport	Total Cofinancing (\$ million):	0.0	0.0
ADB Financing (\$ million):	ADF: 40.0	Borrower (\$ million):	10.0	11.2
	OCR: 0.0	Beneficiaries (\$ million):	0.0	0.0
Cofinanciers:	None	Others (\$ million):	0.0	0.0
Approval Date:	31 October 2001	Effectiveness Date:	29 Jul 2002	12 Sep 2002
Signing Date:	29 April 2002	Closing Date:	30 Apr 2005	30 Jul 2007
Project Officers:	Name: J. Miller T. Fujino E. Oyunchimeg V. Tian	Location: ADB Headquarters ADB Headquarters ADB Headquarters Kyrgyz Resident Mission	From 2002 2003 2005 2005	To 2003 2004 2005 2008
Validator:	T. F. Jones III, Consultant	Director:	H. Hettige, IED2	
Quality Control Reviewers:	N. Singru, Senior Evaluation Specialist, IED2 R. Lumin, Senior Evaluation Officer, IED2			

B. Project Description (summarized from the report and recommendation of the President)

- (i) **Rationale.** The Kyrgyz Republic has two main centers of population, trade, and industrial activity: Bishkek, the capital, in the north of the country, and Osh, in the southwest. The Bishkek–Osh road provides the only internal surface connection between these two national centers. The road passes through four of the country's seven regions and serves over 2 million people, almost half the country's population. The Bishkek–Osh road is vital for integrating the Kyrgyz Republic economy, providing markets for agricultural produce from Osh and Jalal–Abad provinces, and strengthening social and cultural links among the Kyrgyz Republic's population groups. In addition to being the most important domestic transport corridor, the road is also important from a regional perspective: it comprises part of the transnational route linking Tajikistan and the agriculturally productive Fergana valley in Uzbekistan to Almaty in Kazakhstan and the Russian Federation. In addition, the northernmost section of the Bishkek–Osh road forms part of the Almaty–Bishkek–Tashkent road, which is also an important regional transport corridor.¹

The Asian Development Bank (ADB) has been involved in the Kyrgyz Republic road sector since 1996. The Project was the third phase of a rehabilitation program for the Bishkek–Osh road, which has a total length of about 650 kilometers (km).² The two completed projects (phases 1 and 2)³ rehabilitated the central, mountainous sections of the road (from km 81 to km 426), which are in the most advanced state of deterioration and have the worst safety conditions. This Project (phase 3) intended to rehabilitate a 120 km section from Jalal–Abad province to Osh.

¹ The Bishkek–Osh road represents about one third of the total core international road corridor network in the Kyrgyz Republic, and links it to Kazakhstan in the north, Uzbekistan and Tajikistan in the south, and the People's Republic of China in the southeast.

² The cumulative length of the three phases of Bishkek–Osh road rehabilitation is 463 km or 70% of its total length. The remaining 30% of the road is maintained in acceptable condition.

³ ADB. 1996. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Kyrgyz Republic for the Road Rehabilitation Project*. Manila (Loan 1444-KGZ[SF], for \$50 million, approved on 13 June); and ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Kyrgyz Republic for the Second Road Rehabilitation Project*. Manila (Loan 1630-KGZ[SF], for \$50 million, approved on 10 September).

- (ii) **Impacts.** The Kyrgyz Republic is one of the poorest of the Central Asian republics. About 52% of the population has been estimated to be living in poverty (unable to afford a minimum consumption basket), and about 18% are estimated to be living in extreme poverty (unable to obtain a minimum diet).⁴ About 73% of people in the project area are estimated to be poor, and about 28% are estimated to be extremely poor. The Project was expected to help reduce poverty by lowering transport costs for road users and by improving market access for farmers in Jalal-Abad, who no longer have access to their traditional markets in Uzbekistan. In addition, improving the secondary roads was to improve access to markets, employment opportunities, and more comprehensive health facilities for a large number of people. The Project was also expected to generate employment for local poor people during the rehabilitation works.
- (iii) **Objectives or expected outcomes.** The Project aimed to reduce poverty and promote sustainable economic growth by reducing the cost of road transport and improving access to markets in the Bishkek–Osh corridor. It intended to rehabilitate the most deteriorated of the remaining sections of the road linking Bishkek and Osh, and improve market access for agricultural producers in Jalal-Abad province. The Project was also designed to support reforms in the road sector to improve road maintenance and provide a sustainable source and adequate level of financing for road maintenance.
- (iv) **Components/Outputs.** The Project comprised (a) rehabilitation of about 120 km of the 650 km two-lane national highway from Bishkek to Osh, in particular, km 427–498 in Jalal-Abad province (72 km) and the Uzgen–Osh section in Osh province (48 km), including safety features; (b) improvement of about 125 km of secondary roads in Jalal-Abad (Tash Kumyr–Kara Djigadz and Bazar Korgon–Arslanbob–Kyzyl Ungkur) connecting with the Bishkek–Osh road; (c) consulting services for construction supervision, monitoring and evaluation, and implementation of reforms in road maintenance practices; and (d) procurement of light, hand-operated equipment and truck-mounted cranes for routine maintenance of the selected roads and the Bishkek–Osh road.

In addition, accompanying advisory technical assistance (TA) aimed to assist in the development of a system for maintaining secondary roads through the collaboration of the local maintenance units and local communities, and recommend measures to improve the competitiveness of markets for transport services.

The project completion report (PCR) discussion on outputs met standards in respect to the original project scope.⁵ The Project met its stated objectives of (a) rehabilitating the remaining 120 km of the Bishkek–Osh highway, thus raising the standard of the entire 672 km highway link (463 km improved with ADB assistance); (b) improving 125 km of secondary (feeder) roads; (c) developing a system for secondary road maintenance; and (d) procuring and installing equipment for routine road maintenance. For item (d), after a reevaluation of the appropriateness of light, hand-operated road maintenance equipment, the scope of equipment procurement was changed to focus on heavier equipment such as graders, front loaders, crushers, and chip sealers.

On the other hand, the PCR did not provide a systematic description of the bridge works under the Project. First, it did not provide sufficiently specific details of the additional bridge (immediately adjacent to the Tash–Kumyr–Karajigach road) financed by the Project (i.e., bridge material and length, cost, etc.). Second, para. 8 of the PCR mentioned that about half of the bridges in the two secondary road sections were fully reconstructed. It does not explain whether bridge reconstruction was done as part of the Project, i.e., original project scope or additional works. Third, the PCR needs to give specifics on actual achievements in terms of bridge type and length, costs, etc. Finally, the bridge outputs mentioned above are not appropriately recognized as part of project achievements in the project framework (PCR, Appendix 2).

⁴ ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Kyrgyz Republic for the Third Road Rehabilitation Project*. Manila (Loan 1853-KGZ[SF], for \$40 million, approved on 31 October).

⁵ ADB. 2008. *Project Completion Report on the Third Road Rehabilitation Project in the Kyrgyz Republic*. Manila.

C. Evaluation of Design and Implementation (project completion report assessment and validation)

- (i) **Relevance of design and formulation.** The Project was a logical continuation of ADB assistance for the road sector in the country. It was the third and final phase of the rehabilitation of the Bishkek–Osh road, which followed from the Road Rehabilitation Project and Second Road Rehabilitation Project (footnote 3). Lastly, project formulation was consistent with the Government’s strategy of improving transport as one of the critical ways to reduce poverty and with ADB’s country strategy and program for the Kyrgyz Republic.

This project completion report validation report (PVR) finds the PCR assessment satisfactory in capturing the above points on relevance. There remains room for improvement in the PCR to cover the following:

- (a) The rationale for the change in project design to focus on procurement of heavy equipment, which was found to be a more cost-effective solution than the lightweight and hand-operated equipment envisaged at appraisal.
- (b) The appropriateness of including the two link roads in the project scope and how they helped improve the effectiveness of the national road in benefiting the poor. In relation to this, it is noted that one of the two secondary roads is not directly linked to the section of the national road financed by the ADB loan.
- (c) Justification made and due diligence done on the additional bridge work classified under the secondary or rural roads component. It is not clear whether the additional bridge (which was damaged by flooding during the project period) comprised emergency works.
- (ii) **Outputs and costs as envisioned during appraisal as compared to actual costs and achievement of outputs; reasons for any deviation.** Except for the additional bridge reconstruction in the secondary road component, there was no change in the project scope as planned at appraisal and as completed (Table 1).

Table 1: Civil Works Construction Cost per Kilometer

Civil Works Component	Appraisal			Actual			Ratio (B)/(A)
	Amount (\$ million)	Road Length (km)	Cost per Km (\$) (A)	Amount (\$ million)	Road Length (km)	Cost per km (\$) (B)	
Bishkek–Osh Road Rehabilitation	32.8	120	273,333	36.6	120	305,000	1.116
Secondary Roads	6.4	125	51,200	14.0	125	112,000	2.188

km = kilometer.

Source: Asian Development Bank. 2008. *Project Completion Report: Third Road Rehabilitation Project*. Manila.

The actual civil works construction cost per km exceeded the appraisal estimate of \$273,333 by 11.6% at \$305,000. The PCR argues that the final cost remains within the rehabilitation cost of \$350,000 per km, which is still considered efficient given the topographical and climatic features of the Project. The secondary or rural roads component showed a much higher cost overrun. The actual construction cost per km of \$112,000 exceeded the appraisal estimate of \$51,200 by 118.8%. The PCR attributed this to the additional bridge construction cited in Section B (iv) and C (i) above.

- (iii) **Project cost, disbursements, borrower contribution, and conformance to schedule (as relevant to project performance).**
- (a) **Project cost.** Actual project costs exceeded appraisal estimates for all base cost items. A comparison of costs estimated at appraisal and completion are presented in Table 2. While the PCR provides a candid discussion of costs, its para. 12 on how ADB addressed the cost overrun is confusing. First, it attributed the cost overruns to the dollar exchange rate depreciation against the special drawing rights (SDR) and the higher-than-expected base item costs. This appears to be factually incorrect as the Project benefited from unexpected loan savings caused by currency fluctuations. Second, the PCR reported that the “cost

increases were fully accommodated by contingencies, leaving an unused balance of \$1.3 million.” Although the contingencies provided an important relief for the project financing, they did not form the only source of funding the cost overruns. Loan savings created by the depreciation of the dollar against the ADB’s SDR rate also acted as an important source.⁶ The contingencies provided partial relief. There were other sources of financing as stated below.

Table 2: Project Costs, Appraisal and Actual (\$ million)

Item	Appraisal Estimate			Actual		
	FX	LC	Total	FX	LC	Total
A. Base Cost						
1. Civil Works						
a. Bishkek–Osh Road Rehabilitation	22.1	10.7	32.8	24.5	12.1	36.6
b. Rural Road Improvement	1.3	5.1	6.4	3.0	11.1	14.0
2. Maintenance Equipment	1.3	0.0	1.3	2.3	0.0	2.3
3. Consulting Services	1.3	1.1	2.4	3.3	0.3	3.6
Subtotal (A)	26.0	16.9	42.9	33.1	23.5	56.5
B. Contingencies						
1. Physical Contingency	2.6	1.7	4.3	0.0	0.0	0.0
2. Price Contingency	1.2	0.8	2.0	0.0	0.0	0.0
Subtotal (B)	3.8	2.5	6.3	0.0	0.0	0.0
C. Interest during Construction						
Total	0.8	0.0	0.8	0.6	0.0	0.6
Total	30.6	19.4	50.0	33.7	23.5	57.1

FX = foreign exchange, LC = local currency.

Source: Asian Development Bank. 2008. *Project Completion Report: Third Road Rehabilitation Project*. Manila.

The Project incurred a major cost overrun of 31.7% or \$13.6 million for base cost items. This was due to (a) the higher-than-expected cost of the main civil works contracts (\$3.8 million), (b) additional construction under the secondary or rural road component (\$7.6 million), (c) higher-than-expected costs for the equipment component (\$1.0 million), and (d) additional consulting inputs as a result of the extended construction period (\$1.2 million). The overrun was financed through the contingency budget (\$6.3 million), generated savings in the ADB loan caused by fluctuations in the dollar against the ADB’s SDR rate (\$5.9 million) and interest during construction (\$0.2 million), and an increase in the Government’s share of financing (\$1.2 million).

- (b) **Disbursements.** Disbursements were delayed because of implementation delays and deviated from the appraisal estimate accordingly. Disbursement procedures were also adjusted from the direct payment method to the use of imprest account for some aspects of the Project.
- (c) **Borrower contribution.** During the initial stages of the Project, the Borrower delayed the payment of counterpart funds to the contractors. From 2004 onward, this was rectified and delays in implementation were avoided.
- (d) **Project schedule.** The Project was fraught with delays at various stages. The appraisal schedule was quite optimistic, allowing minimal times for each of the major pre-construction activities. Loan effectiveness, prequalification, and bidding took about 22 months compared with an optimistic appraisal schedule of 7 months. Effectiveness was delayed mainly by the ADB requirement that a road fund special account be set up in the treasury. Prequalification and the bidding process proved to be difficult. Prequalification was done without assistance from the supervision consultants. The evaluation of multiple combinations of civil works contract packages (there were six contract packages that could be combined for bidding purposes) was a protracted process. Bidder credentials had to be substantiated, clarified, and verified because of receipt of low bids (up to 30%–35% lower than the engineer’s estimate).

⁶ During implementation, the Project benefited from the depreciation of the US dollar rate against exchange rate versus the ADB’s SDR rate, which generated unexpected savings of \$5.9 million.

Ultimately, one of the civil works contracts had to be terminated because of poor contractor performance, and new arrangements made to complete the civil works. In addition, the supervision consultant was sanctioned in 2006 and new supervision arrangements had to be made. Finally, the civil works were completed in July 2007 compared with the appraisal schedule of October 2004. Rural road works were also completed in July 2007, as were consulting services. Equipment bidding, supply, and installation were completed in November 2005.

- (iv) **Implementation arrangements, conditions and covenants, and related technical assistance.** The Ministry of Transport and Communications (MOTC) was the Executing Agency (EA) for the Project. Oversight was provided by a project steering committee (PSC) chaired by the minister of MOTC. The PSC was not very effective as its members were often changed and it was dissolved in 2005 as a result of political instability. A new committee was established in 2005, but the PCR is silent on its effectiveness. A project implementation unit (PIU) was set up and comprised local consultants with experience from previous projects. The PIU was responsible for day-to-day supervision of implementation and was assisted by the international and national consultants. Initially, the PIU was financed through the international consultant's contract, which expired on 1 September 2006. After this, the PIU was hired through direct contracts with MOTC and financed through the imprest account.

Among other reasons, loan effectiveness was delayed by the requirement that the Borrower should establish a special account within the Treasury for revenues specified in the Road Fund Act. (PCR, para. 19, page 5) Although such an account was established, it was not effectively mainstreamed (PCR, Appendix 2).

Most covenants were complied with, but a few concerning road maintenance were not complied with. In addition to the normal requirement that adequate funds be made available for the maintenance of project roads, the covenants dictated the exact amounts needed by year to be approved and allocated by the Government for the road network. This was generally not complied with, and it appears that this was an unusual level of micromanagement on the part of ADB. While the allocation for the Bishkek–Osh road was not complied with during implementation, it was complied with in 2007 when the road works for all phases were complete. Similarly, the covenant dictating the level of funding for all other MOTC-administered roads was not complied with until 2007. Parenthetically, the PCR notes these much higher levels of funding are still not adequate. Part of this covenant also required the Borrower to include the details of actual road maintenance expenditures in every quarterly progress report. This was not complied with and, in any case, would have been a difficult task and virtually impossible to confirm.

Related advisory TA was approved in conjunction with the Project.⁷ Delays in selection of the consultant caused its scope to be adjusted since it paralleled assistance being provided by the European Commission, which addressed the issue of transport competitiveness and regulation. The revised scope focused on developing a system of secondary road maintenance with community participation. A covenant related to this has not been complied with. Although a pilot maintenance program for secondary roads was established by the consultant, it has yet to be fully implemented as required by the covenant. A TA completion report was prepared, and the TA was rated “successful.”⁸ Although the TA produced a good study, recommendations, and a pilot project for secondary road maintenance, it has not been successful in realizing full implementation of its recommendations.

- (v) **Performance of the Borrower and Executing Agency.**
 (a) **Borrower performance.** The PCR rated the Borrower's performance “satisfactory.” The Borrower had initial difficulties in fulfilling requirements for loan effectiveness as well as

⁷ ADB. 2001. *Technical Assistance to the Kyrgyz Republic for Institutional Support in the Transport Sector*. Manila (TA 3757-KGZ, for \$650,000, approved on 31 October).

⁸ ADB. 2006. *Technical Assistance Completion Report on Institutional Support in the Transport Sector in the Kyrgyz Republic*. Manila.

issues concerning availability of counterpart funds. The latter problem was addressed after construction activities were well under way. Covenants on road maintenance funding proved difficult initially but have approached compliance in recent years. These issues need to be recognized in light of the fiscal constraints as well as institutional limitations. This validator rates the Borrower's performance "satisfactory."

- (b) **Executing agency performance.** The Project's objectives were achieved, albeit late (Section C[iii]). The PIU reportedly performed well—particularly in the area of financial management, which required planning of disbursements, timely execution, and close control on price escalation under the civil works contracts. Once the initial delays were overcome, the Project progressed smoothly, considering poor performance on the part of the contractors for contract packages 1 and 3. The PVR agrees with the "satisfactory" performance rating of MOTC.
- (vi) **Performance of ADB.** ADB's performance was rated "satisfactory" by the PCR. ADB undertook an inception mission followed by nine review missions. The midterm review was not undertaken as all major issues were successfully addressed by the regular review missions. Although four different project officers were involved at various stages, the composition of the missions generally provided for continuity when implementation responsibility was given to the Kyrgyz Resident Mission. The PCR and review mission back-to-office reports provide good examples of how ADB's constant input helped project progress. MOTC expressed some concern over ADB's long response time, particularly in the early stages of the Project. This was a fairly common complaint during this period (starting in 2002) when ADB was instituting a major internal reorganization. Overall, the PVR rates the performance of ADB "satisfactory," particularly given the many uncertainties immediately following reorganization.

D. Evaluation of Performance (project completion report assessment and validation)

- (i) **Relevance.** The Project was highly relevant in terms of formulation and design at the time of appraisal (Section C[i]). At completion, it remains highly relevant as it is still in line with government objectives for the transport sector and ADB's strategy to support the Government's transition to a market-driven economy through improving all aspects of transport efficiency and development of other economic sectors. The Project was consistent with ADB's poverty reduction strategy, and it is likely that the Bishkek–Osh road will contribute to the ongoing efforts for reducing poverty in the area.⁹ It is also likely that the link roads similarly contributed to poverty reduction. However, the absence of adequate poverty monitoring in the project impact area makes these value additions difficult to measure. In respect to the link roads, past Independent Evaluation Department (IED) evaluations indicate that local road improvements like these are necessary but not sufficient conditions for poverty reduction.¹⁰ Other economic and social interventions are also essential. More importantly, the Project is seen to be highly relevant because it contributes to the establishment of an all-weather road connecting the northern part of the country with the southern part. Two design changes were reported by the PCR and both seem appropriate. First, the change to heavy equipment procurement was appropriate and reportedly cost-effective. Second, the additional bridge was adjacent to a secondary road and can be confirmed as being relevant to the Project. Based on available information, the PVR reconfirms the PCR rating of "highly relevant."
- (ii) **Effectiveness in achieving outcome.** The Project was generally effective in meeting its expected outcome of improved access to markets, employment opportunities, and social services, but only partly effective in terms of improving the institutional capacity of MOTC for road sector management (Table 3). The PCR stated that a key project target of reducing transport cost was only partly

⁹ ADB. 1999. *Fighting Poverty in the Asia–Pacific: the Poverty Reduction Strategy of the Asian Development Bank*. Manila; and ADB. 2004. *Enhancing the Fight Against Poverty in the Asia–Pacific: The Poverty Reduction Strategy of the Asian Development Bank*. Manila.

¹⁰ Hettige. H. 2006. *When Do Rural Roads Benefit the Poor and How? An In-Depth Analysis Based on Case Studies*. Manila. ADB.

accomplished. Based on available information, the PVR finds that the Project only partly achieved its expected outcome of improved efficiency in the transport sector. The PVR also noted that the PCR does not specifically assess the secondary road. It has been reviewed as part of the Bishkek–Osh road works on the presumption that most village traffic goes to the main road. Overall, this validator rates the Project “less effective.” This rating will be reviewed by the ongoing project performance evaluation report (PPER) (Section J).

Table 3: Achievement of Intended Outcomes

Outcome	Achievement of Outcomes		Assessment	
	Bishkek–Osh Road	Secondary Road	PCR Assessment	PVR Assessment
1. Reduced transport costs	VOC. VOC increased with inflation. Except for cars and medium and articulated trucks, reestimated incremental VOC savings were higher at project completion compared to appraisal estimates (Table 4).	No data available	Partly achieved	Partly achieved
	Travel costs. Passenger fees increased. Freight costs steady.	No data available		
	Road Safety. PCR reported an increased number and severity of accidents since the road improvements (PCR, para. 41).	No data available		
2. Improved access to markets, employment opportunities, and social services	Traffic. Traffic level is lower than appraisal estimates (Table 5). The RRP expected traffic volumes to increase by 6%–7% annually and to generate traffic at about 10%. Neither eventuated, with traffic actually growing at a rate of about 4%, and there is no evidence of generated traffic or regional traffic.	No data available	Achieved.	Partly achieved. PCR indicates lower-than-expected traffic growth on Bishkek–Osh road attributed to lower than forecast country growth rate, traffic delays from the road works, and to delays/difficulty of crossing the Uzbek–Kyrgyz Republic border near Osh.
	Travel time. Vehicle speed reportedly increased by 12%. The PCR states that travel times have been reduced by 25%–30% for cars and trucks. The Project achieved reduced delivery time for agricultural produce to markets within and beyond the project area.	No data available	Achieved	Achieved
	Access to markets. Agriculture and livestock sales increased in 2004 but then stagnated. ^a	No data available	Partly achieved	Partly achieved
	Increased used of motor vehicles. Number of households using motorized transport reportedly doubled.	No data available	Achieved	Achieved
	Access to health services. The ratio of household respondents who thought travel time to health facilities increased from 5% in 2004	No data available	Achieved	Achieved

Outcome	Achievement of Outcomes		Assessment	
	Bishkek–Osh Road	Secondary Road	PCR Assessment	PVR Assessment
	to 54% in 2006. The ratio of household respondents who thought road conditions impeded access to health facilities declined from 73% in 2004 to 12% in 2006.			
	Employment and labor mobility. The Project generated considerable local employment. The percentage of households with members commuting to a workplace and those looking for work in places requiring commuting grew from 39% in 2004 to 59% in 2006.	No data available	Partly achieved	Achieved
3. Strengthened institutional capacity for road sector management	Increased competitiveness in transport sector. No activities were undertaken to liberalize the market for transport services, as these were already considered highly competitive. Improved financial organization structure of MOTC. While maintenance funding was increased, the TA recommendation to activate a road fund was not implemented. Moreover, this recommendation contradicted ADB's sector analysis at appraisal as in the RRP: "Establishing dedicated accounts outside the Government's consolidated budget will not be prudent in light of the Government's current fiscal difficulties. In view of this, a separate dedicated road fund account is considered premature..."		Partly achieved	Partly achieved

ADB = Asian Development Bank, MOTC = Ministry of Transport and Communications, PCR = project completion report, PVR = project completion report validation report, RRP = report and recommendation of the President, TA = technical assistance, VOC = vehicle operating cost.

^a The agriculture and livestock sales have stagnated owing to macroeconomic reasons. Although it would be difficult to attribute this stagnation to a "failure" of the Project, it would be more difficult to state that this outcome has been achieved. Source: Asian Development Bank. 2008. *Project Completion Report: Third Road Rehabilitation Project*. Manila, Appendix 2 (project framework).

(iii) **Efficiency in achieving outcome and outputs.** The Project is rated "efficient," which is consistent with the economic reevaluation of the three phases by the PCR. Combining phases 1, 2, and 3 yields an overall economic internal rate of return (EIRR) estimated at 12.2%. For this Project or phase 3 of the Bishkek–Osh road improvement, the traffic and vehicle operating costs were measured reflecting 2008 prices, which resulted in an EIRR of 22.4%. This was higher than the appraisal estimate of 19.3%.¹¹ The PCR attributed this improved project performance mainly to higher vehicle operating cost (VOC) savings benefits.

On the other hand, information from the PCR indicates forecasted VOC benefits to be on the high side. First, like the PCR, the PVR analysis concludes sustainability to be at risk as explained in Section D(iv) below. The PCR does not explain why the economic analysis does not provide for periodic maintenance costs. The assumed annual maintenance cost of \$350,000 (in constant 2008 prices) or an average of \$1,600 per km per year (for both national and secondary roads) relates to

¹¹ It appears that the project cost for the main road and the rural roads was used in the economic evaluation but the VOC savings for the main road were used for all roads. This would give a very high EIRR as the VOC savings on the rural/feeder roads are built to a lower standard and the savings would likely be less. Therefore, the EIRR for all the roads is probably lower than indicated.

routine maintenance only (PCR, Appendix 11, para. 9 and footnote 5 relating to the economic analysis). The accelerated deterioration of road conditions from this limited maintenance means smaller VOC benefits. Traffic growth will not be sustainable. However, it may be argued that the significance of the Bishkek–Osh road as an arterial road in the country may yet allow it to secure appropriate budget allocation. In view of this, the PCR could have carried out a sensitivity analysis for the EIRR calculation in two scenarios—a base case with a less than optimal maintenance allocation and an optimistic case with adequate maintenance funding.

Table 4: Comparison of Key Economic Reevaluation Assumptions

Item	Car	Pick-Up	Light/Medium/Heavy Bus			Light Truck	Med. Truck	Heavy Truck	Art. Truck
A. Loan Approval									
Km 427–498 (2005)	644	201	85			30	80	414	103
2010	926	288	123			30	111	579	145
2015	1,290	400	170			40	150	785	197
2020	1,788	554	233			54	203	1,062	266
Uzgen–Osh (2005)	3,968	649	380			76	188	447	195
2010	5,692	931	544			76	263	626	272
2015	7,917	1,294	756			103	357	848	368
2020	10,964	1,793	1,046			139	482	1,146	498
Incremental Unit VOC (\$ per 1,000 km)	20	20	65			40	40	110	100
Item	Car	Pick-Up	Light Bus	Med. Bus	Heavy Bus	Light Truck	Med. Truck	Heavy Truck	Art. Truck
B. Project Completion									
Km 427–498 (2005)	964	—	90	21	54	43	43	154	271
2010	1,242	—	116	28	70	54	54	196	345
2015	1,703	—	160	38	97	72	72	262	462
2020	2,334	—	219	52	133	96	96	352	618
Uzgen–Osh (2005)	3,524	—	376	153	102	107	203	514	107
2010	4,538	—	485	197	131	136	260	656	136
2015	6,217	—	666	272	180	182	350	878	182
2020	8,517	—	912	373	246	244	469	1,176	244
Incremental Unit VOC (\$ per 1,000 km)	40	—	40	50	100	30	50	100	170

— = not available, Art. = articulated, km = kilometer, Med. = medium, VOC = vehicle operating cost.

Source: Asian Development Bank. 2008. *Project Completion Report: Third Road Rehabilitation Project*. Manila.

Second, the PCR fails to fully explain why VOC benefits were able to grow significantly (Tables 4 and 5). This validator also notes that the PCR does not provide an assessment on road roughness. The differences in traffic composition do not readily translate to higher VOC savings. In the case of the cars, pickups, and articulated trucks, the lower traffic at completion is offset by higher than expected unit VOC savings. On the other hand, in the case of medium and heavy trucks, there has been minimal change in incremental unit VOC savings. But the traffic results of these vehicle types do not deviate significantly from those predicted at appraisal. In summary, the PCR does not clearly explain the reason for the significant increase in the aggregate VOC savings. The higher VOC savings assumed by the PCR could decline in the future with the decrease in fuel prices.

Table 5: Comparison of VOC Savings Benefit Stream

Year	Loan Appraisal		Year	PCR	
	VOC Savings (2001 prices; \$ million)	Total Traffic (AADT)		VOC Savings (2008 prices; \$ million)	Total Traffic (AADT)
2005	3.02	1,557–5,903	2005	0.00	1,640–5,086
2010	7.38	2,202–8,404	2010	8.60	2,105–6,539
2015	10.27	3,032–11,643	2015	14.11	2,866–8,927
2020	14.89	4,160–16,068	2020	23.18	3,900–12,181
2024	18.37	5,345–20,747	2025	39.81	5,304–16,627

AADT = annual average daily traffic, PCR = project completion report, VOC = vehicle operating cost.

Source: Asian Development Bank. 2008. *Project Completion Report: Third Road Rehabilitation Project*. Manila.

Third, the Project was expected to have a very significant effect on socioeconomic development in the project area and, therefore, on traffic. In projects of this type where a system of roads is in place and the problem is that their condition is poor, the road improvements lead to more efficient transport in terms of travel times and reduced VOCs. Economic growth is usually only marginally constrained by the poor condition of the roads (PCR, Appendix 10).

Overall, although the Project (phase 3 of the Bishkek–Osh road) has a high EIRR of 22.4%, it needs to be tempered by implementation issues as well as the performance of the overall Project, i.e., the three phases combined. In view of this, the Project is rated “efficient,” confirming the PCR’s rating.

- (iv) **Preliminary assessment of sustainability.** The PCR states that project benefits are likely to be sustained. Sustainability depends on the likelihood of the road being maintained appropriately. The PCR notes that the road maintenance funding allocation has increased fourfold since 2001. The PCR also notes that preservation of road assets is a high government priority, with the adoption of its road sector strategy for 2007–2010 developed under an ADB-funded TA in 2006¹² (PCR, para. 23). Past evaluations have expressed concerns over the sustainability of the Kyrgyz Republic road sector as well as specific projects.¹³ These evaluations have been based on the information and data provided at that time. Recent information gathered by the PPER mission to the Kyrgyz Republic indicates that the Government’s allocation to the Road Directorate responsible for the Bishkek–Osh Road is likely to be sufficient to cover the maintenance requirements. The overall focus of MOTC on road maintenance, combined with the increase in allocations for maintenance, indicates an improvement in the likelihood of sustainability. In view of this, the PCR’s rating of “likely to be sustainable” is validated, pending confirmation by the PPER.
- (v) **Impact (both intended and unintended).** An initial environmental examination was prepared following ADB’s various requirements and guidelines. Since the civil works were along existing rights-of-way and appropriate care was taken by the contractors regarding the use and disposal of materials, and monitoring by the Ministry of Environment and ADB missions, no adverse environmental impacts were identified.

A social impact assessment indicated that no resettlement would be needed, and there would be no negative impact on vulnerable groups. Nevertheless, an unintended and unexpected impact was encountered. In 2005, MOTC received complaints from villagers along a stretch of the road that vibrations caused by heavy equipment had damaged some houses. A complete survey was undertaken and damages evaluated. Villagers were compensated by the Government.

In 2006, MOTC received another complaint from three homeowners whose houses were located close to an elevated portion of the highway. Following an investigation by a special government commission in July 2007, it was recommended that the houses be moved to a nearby but safe site and that adequate compensation be paid. Compensation had not been completed at the time the PCR was prepared.

The PCR notes that, while the performance indicators set for the Project were generally sufficient to monitor its intended development impact, the monitoring of impact and outcome was constrained by a lack of baseline data in the absence of specific socioeconomic surveys. Some socioeconomic impacts are provided in the project framework (PCR, Appendix 2). In essence, the performance indicators and/or targets were usually achieved. Market orientation did not change significantly. Provincial per capita income increased by 11% to 30% but unemployment increased. The number of poor households decreased. Use of freight services increased almost fivefold and access to social services improved. Finally, several construction materials were procured locally. This contributed to the economic activities in the areas adjacent to the project road.

¹² ADB. 2005. *Technical Assistance to the Kyrgyz Republic to Support the Development and Implementation of National Poverty Reduction Strategy II*. Manila (TA 4705, for \$400,000, approved on 29 November 2005).

¹³ ADB. 2009. *Project Performance Evaluation Report: Kazakhstan and the Kyrgyz Republic: Almaty–Bishkek Regional Road Rehabilitation Project*. Manila.

E. Overall Assessment, Lessons, and Recommendations (validation of project completion report assessment)

- (i) **Overall assessment.** Considering that the Project has been rated highly relevant, less effective, efficient, and sustainability as likely, overall the Project is rated “successful.”
- (ii) **Lessons.** The PCR cites a number of relevant lessons. They are useful for most projects and are summarized below:
 - (a) A significant proportion of the delay in project completion was due to the insufficient financial and technical capacity of two contractors. Although prequalification took a considerable amount of time and clarifications were sought from contractors, the process failed. This suggests that ADB needs to review prequalification and bid evaluation reports more rigorously.¹⁴ The PVR also suggests that the size of contract packages be reviewed to attract larger and more stable international contractors.
 - (b) The Bishkek–Osh road project was split into three phases and required 10 years to complete. Since the project phases overlapped, considerable government personnel and resources were required, but the Government lacked appropriately trained and experienced personnel. Benefits accruing to the Kyrgyz Republic economy could have been greater if the Project had been implemented more expeditiously. This implies that if projects (loans) had been combined, fewer government resources would have been required and better international contractors attracted.
 - (c) The associated TA introduced the concept and demonstrated the viability of community-based maintenance of secondary roads. This needs to be followed up in future projects as a low cost and effective means of routine maintenance on secondary roads.
 - (d) A common problem experienced in ADB projects is the lack of a well thought-out format for project progress reporting, and this was a shortcoming on this Project.
 - (e) Designs should be carefully reviewed to ensure that affected households and possible land acquisition needs are identified early in the project cycle.

The PVR could add that when a road system exists, albeit in poor condition, it does serve the transport needs of affected communities—even if inefficiently. Unrealistic socioeconomic development is often identified as a project impact. Such a change requires much more than an improved road or network and depends very much on government economic development policy. To ensure improved sustainability, ADB needs to work closely with the Government to develop a road maintenance regime that is based on needs and to improve cost recovery at the sector level.

Past IED studies confirm that infrastructure is a necessary, though not sufficient, condition for poverty reduction. The indirect impact on poverty reduction should be discussed as part of ADB’s infrastructure assistance, particularly in areas with incidence of poverty, without complicating the project design, i.e., ADB needs to carry out baseline surveys to assess the economic state at project appraisal stage and then monitor the changes during project implementation as well as after project completion.

Recommendations. It is clear from this and similar projects funded by ADB that the division of responsibility between the resident mission at some stage and headquarters leads to an inadequate level of staffing and an inadequate skills mix at either level. ADB headquarters has considerable resources, but these are often spread across a number of countries and sectors. Many executing agencies for other projects in other countries have complained about the long periods required for the numerous required ADB approvals. Resident missions often have a limited staff and skills mix but are closer to the action and are capable of responding more quickly to problems and procedural matters. As mentioned by the PCR, this issue could be resolved encouraging ADB headquarters staff to participate in review missions even though a loan is being administered by the resident mission.

The PCR also suggests that (a) the loan covenants relating to further commercialization of road maintenance or outsourcing remain valid and need to be maintained in future projects,

¹⁴ MOTC was assisted in the prequalification process by a consultant not directly involved with the Project. This implies having the procurement support to be provided by the responsible supervision consultant.

(b) maintenance of secondary roads with community participation should be pursued or abandoned following discussion with the Government, (c) MOTC requires further TA to help it develop needed skills and confidence instead of relying on international consultants, (d) a long-term transport sector strategy needs to be developed—ADB might consider such assistance, (e) performance targets in the design and monitoring framework must be easily measurable and quantifiable and be based on existing reporting sources with less reliance on special surveys, and (f) road safety is a growing issue and needs to be addressed further.

F. Monitoring and Evaluation Design, Implementation, and Utilization (project completion report assessment and validation)

The monitoring and evaluation activities had room for improvement in terms of appropriate socioeconomic surveys. The statistics available described larger areas and could not be effectively attributed to the road improvement.

G. Other (e.g., safeguards, including governance and anticorruption; fiduciary aspects; government assessment of the Project, as applicable) (project completion report assessment and validation)

Environmental and social safeguards were followed by the Government, contractors, and consultants. The Government responded positively to special situations such as land acquisition and resettlement as they arose. Based on the information available from the PCR, corruption is not seen as a significant issue.

H. Ratings	PCR	IED Review	Reason for Disagreement/Comments
Relevance:	Highly Relevant	Highly Relevant	
Effectiveness in Achieving Outcome:	Effective	Less Effective	PCR data indicates mixed results, i.e., generally effective in meeting its expected outcomes on access to markets, employment, and social services, but was partly effective in others (Section D[iii]).
Efficiency in Achieving Outcome and Outputs:	Efficient	Efficient	
Preliminary Assessment of Sustainability:	Likely	Likely	Bishkek–Osh road is a key international road corridor and likely to benefit from acceptable road maintenance regime. Initial findings of a recent IED evaluation mission confirm this with Government allocation to the Road Directorate responsible for the Bishkek–Osh Road to cover maintenance (Section D[iv]).
Borrower and EA:	Satisfactory	Satisfactory	
Performance of ADB:	Satisfactory	Satisfactory	
Impact:	Not rated	Moderate	Section D(v) provides details of the intended and unintended impacts.
Overall Assessment:	Successful	Successful	
Quality of PCR:		Partly Satisfactory	The PCR has several areas of improvement as identified in Section I.

I. Comments on PCR Quality.

Although the PCR contains a candid assessment of the Project, it has room for improvement in terms of providing adequate details of the Project's achievements and development impacts. For example, the PCR does not provide (i) information on due diligence done and the technical status of the additional bridge work, (ii) an assessment of the impact of this design change on the secondary road component, (iii) an assessment of the achievements and development impacts of the secondary road component, (iv) information on road roughness for both the main project and secondary roads, and (v) adequate socioeconomic analysis considering the poverty impacts and the inclusion of the feeder roads. To strengthen its transparency, the PCR analysis could have also separately rated its three major components: (i) the

Bishkek–Osh road; (ii) the secondary road; and, if appropriate, (iii) the emergency works (i.e., bridge works). A number of minor typographical errors are also noted. On the subject of maintenance, the PCR would have been more informative if a brief discussion on how maintenance of national roads is carried out and what have been the recent improvements in the maintenance efficiency.

J. Recommendation for Independent Evaluation Department Follow-Up

An ongoing project performance evaluation report is reevaluating the effectiveness of the three phases of the Bishkek–Osh Road Rehabilitation Project. Fieldwork is being undertaken during September–October 2009. A number of subjects need to be followed up during this postevaluation on this assistance. For example, what have been the incremental benefits of the road improvement after completion.

K. Data Sources for Validation

Data sources for preparation of the PVR included the PCR, report and recommendation of the President, minutes of the Management Review Meeting and Staff Review Committee Meeting, summary of Board discussions by the ADB's Board of Directors, back-to-office reports, project performance reports, and TA completion reports.

REGIONAL DEPARTMENT'S RESPONSE TO THE PROJECT COMPLETION REPORT VALIDATION REPORT

On 30 October 2009, Director, IED2, Independent Evaluation Department (IED), received the following comments from the Kyrgyz Resident Mission, Central and West Asia Department.

We have reviewed IED's earlier draft Project Completion Report Validation Report (PVR) circulated to us on 21 September 2009 and its final draft that was sent to us for review on 20 October 2009. We agree with the PVR's overall assessment of the Project as successful.