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**Background Paper on
The Bank's Assistance to Energy and Transport:
Summary and Conclusions**

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Acronyms

AAA	Analytical and Advisory Services
GOC	Government of China
IDA	International Development Agency
IFC	International Finance Corporation

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PREFACE

This paper is based on two papers by Anthony Churchill and Cordula Thum: *The Bank's Assistance to China's Energy Sector* and *The Bank's Assistance to China's Transport Sector*.

Introduction

1. Infrastructure loans and credits (transport and energy) represent almost half the Bank's portfolio in China. The projects although large for the Bank and small relative to total Chinese investments in these sectors, have provided substantial value added to China through the combination of the discipline of the project process and as a means of introducing new technologies. Almost all of these projects have been successful in terms of their physical accomplishments. Infrastructure was built on time and within reasonable cost parameters. Rates of return have been close to original estimates. New technologies have been successfully introduced and social and environmental issues have received greater attention. By any standards, this has been a remarkable achievement.

2. Less successful, especially in transport, have been the attempts to use project lending to produce policy and institutional changes. This is a judgment that probably reflects the Bank's own impatience and frustrations with trying to increase the pace of reform in China. The Chinese, on the other hand, with their concerns for order and stability have not always taken on full ownership of the even minimal reforms contained in the Bank's projects. They have understood and absorbed many of the lessons inherent in the Bank's project cycle but have had difficulty in moving from success in a particular project to the need for changes in the economic and institutional framework. This reflects, in part, the fact that different people build projects than make investment decisions and, in part, the sheer size of the country that inhibits the dissemination of ideas.

3. Change, however, is taking place and it is not always easy to see the connection between these changes and Bank activities. Many of the steps the Bank has introduced to improve the efficiency of the project process have laid the foundations for more general reforms in the economic and administrative framework. The financial management systems required by the Bank has revealed weaknesses and lack of accountability in the existing framework. The introduction of modern management tools and technology has opened up the possibility of change in most of the infrastructure sector. In the railways for example, new information and cost accounting systems have made possible the consideration of separating infrastructure costs from operating costs and thus eventual changes in ownership and administration.

Unresolved Issues

4. There are two issues that are not unique to the infrastructure sectors but that do have a major impact on present lending and future strategic concerns. Resolution of these issues will open up the strategic options infrastructure sectors.

5. The first is the strong Chinese 'preference' for what can be described as a "tubs standing on their own bottoms" philosophy of borrowing from the Bank. Basically it means enterprises or institutions should not borrow from the Bank unless they have the direct means of repaying the Bank. This may make sense for private commercial transactions but can result in significant distortions in the case of the provision of public goods. It is an issue of greater relevance for the transport sector where there is a higher

public goods element than in the energy sector where benefits are more directly related to consumption. In highways, for example, it has produced the toll road with its tax distortions that constrain the distribution of a free public good. It also limits one of the main functions of government – to redistribute resources. It is a constraint on the Bank’s ability to assist the government in its developmental role in stimulating economic growth, for example, in financing roads in the poorer regions with limited capacity to repay.

6. The second issue is China’s insistence on limiting borrowing from the Bank to direct foreign exchange expenditures. This may have made some sense in the early days when foreign exchange scarcities were extreme. It does not make sense in the present situation of large foreign exchange reserves and a growing market based economy. It makes it difficult for the Bank to lend significant amounts in important development areas with low foreign exchange requirements. Distributions systems in electric power are examples where the Bank could make an important contribution but may be limited by this unnecessary constraint. It also leads to a lot of game playing in defining foreign exchange content.

The Strategic Challenge

7. The ineligibility for IDA and a lower share of Bank funds for China over the past few years together with the greater availability of domestic funds at lower interest rates, has forced a reexamination of the strategies behind Bank lending. In the infrastructure sectors the issue is how to maintain the pace of reform with a smaller lending program. Given the large infrastructure lending programs of the past two decades, one strategic option is to assume that this lending has been sufficient to achieve as satisfactory a level of knowledge transfer within the limits of the project process. The ‘graduation’ of the port sector is a case in point. From now on the smaller lending program should focus less on expanding capacity and more on a limited number of areas of concern in which the Bank can produce significant value added to China’s development processes. In energy this could lead, for example, to a focus on renewables, in transport, on feeder roads. In order to maintain a continuing role in the overall dialogue on reforms in the infrastructure sectors, more resources would be devoted to the policy dialogue. Given the right advice and knowledge, the Chinese should be capable of undertaking the appropriate actions without Bank lending support.

8. This is a high risk strategy. Unfortunately, giving the right advice and providing the appropriate knowledge does not always work. Firstly, countries do not always recognize the ‘right’ advice and, secondly, governments are not always able to implement this advice because of competing and often contradictory political and economic claims on resources. The GOC is well aware, for example, of the need to introduce a fuel tax but cannot do so without getting a consensus on how to share the resources between the center and the provinces.

9. A further risk is internal to the Bank. There is usually a close correlation between the size of the budget allocated to non-lending services (AAA) and the size of the lending program. It is difficult to expand non-lending services in the face of a declining lending

program. In the case of China, even with a large infrastructure lending program, the amounts of resources devoted to sector work, for example, has been relatively limited.

10. It is also difficult for countries to judge the efficacy of the advice and technical assistance services they receive. Much of it is supply driven; countries are offered advice and technical assistance by institutions that have their own agendas on what is good for China or their own consulting industry. The fact that these services are often ‘free’ further degrades their value. Free goods are not always treated seriously. The failure of many TA programs around the world is the result of supply driven programs that have been treated as free goods by their supposed beneficiaries.

11. The Bank’s comparative advantage in the advisory business is that it is not free; Bank support is tied to a lending program. It is in the Bank’s interest, if it wants to be repaid, to insure that the borrower is in a position to generate the necessary resources. On the country’s part, given that the money has to be repaid, there is a reluctance to commit to activities that, in their view, is not in their best interests. In any case, most development problems are less about what to do than how to do them. The ‘how to’ is the great strength of the Bank’s project lending.

Alternatives and New Directions

12. Can the Bank use the more limited funds available for project lending to maintain and support a central role in the policy dialogue? Will it be possible to avoid premature graduation of many parts of the infrastructure sectors? A positive answer to these questions requires careful consideration of the alternatives. The Bank’s dialogue with China over the infrastructure sectors is at a critical juncture and it would be in the interests of both China and the Bank to consider less risky alternative strategies that build on the strengths of project lending. This review of the Bank’s infrastructure program suggests a number of areas where continued project lending, at the highest levels possible, could result in significant value added on the part of the Bank.

New Directions: Energy

13. Major progress has been made in improving generating capacity and the development of wholesale generating markets. Continued progress, however, will be endangered by failure to address the retail or distribution side of the business. Ultimately it is the retail consumer that generates the cash and efficient pricing in the wholesale market is not possible without responsive retail markets. In China the distribution systems are riddled with inefficiencies. The Bank could make a major contribution to the sector by assisting China in addressing the problems of the distribution enterprises particularly the smaller municipal owned ones. It will not be easy but it is an area where carefully designed projects could contribute significantly to the development of more efficient, equitable, and less polluting distributions systems. The potential benefits are very large.

14. Coal is the major primary fuel in China. Its production, transport and use dominate the infrastructure investment decisions. The Bank has played a limited role in

the coal sector and given the stakes involved it would be worthwhile to try and find a way of supporting improvements to this sector either through mining, power, or railway transport projects. A good place to start would be to update and expand the sector work done in 1995 that developed a tool for examining the trade-offs between power and transport in making decisions about coal. This will not be an easy task; there are major institutional issues to be addressed and the Bank will need to think through its strategy and come up with an approach that engages the GOC interest.

15. For years, every report on energy in China talks about the importance of developing and utilizing gas. The Bank has had some success in improving the management of this sector through its technical assistance programs. Yet progress is slow. Massive investments are required to develop the primary infrastructure and the general assumption is that these investments should be undertaken with the help of the large international enterprises. Given the risks associated with the lack of a regulatory infrastructure and explicit public support, it is not surprising that there have been no takers. Would not a large Bank and possibly IFC presence be an important means of jump-starting this sub-sector? The wider availability of gas could result in a meaningful alternative to coal in the power sector. In the rest of the world, gas-fired generation has resulted in smaller, less polluting plants and less dependence on huge power grids with their costly network expenses.

New Directions: Transport

Highways

16. The development of the highway system remains a piece of unfinished business. Significant progress has been made in dealing with contracting and construction supervision problems but there is still much to be done. Attempts to introduce private financing of roads have addressed some of the shorter term financial problems but in the long run because highways are an almost pure public good, continued public investment will be required. The major problem with expanding the highway network in China is the lack of adequate financing mechanisms rather than the constraint of physical resources. China has no fuel tax – a major source of highway financing the world over.

17. One strategy for the Bank would be to support the needed highway investments by becoming a partner in a road fund or funds that would draw on a fuel tax for most of its revenues. This would allow the Bank to wholesale its practices in highway construction and, more importantly, place the Bank in a position where it could influence the overall resource allocation decision on what is to be built as well as where and when. The Bank's experience in highway design and network construction would be spread over a large program and contribute substantial value added to transportation in China.

18. Two important pieces of information or sector work are required to further the policy dialogue on highways; one involves the collection, on a regular basis, of freight and passenger rates, the other a study on road user charges that would highlight the costs and benefits to use of the highways. In China, the costs of transportation are so high relative to what could be expected from a modern highway system that the one

unambiguous measure of success will be the lowering of freight and passenger rates. Measuring these changes will be a powerful tool for judging success.

19. Given the on-going discussions of possible fuel tax surcharges, it will be important to address the more fundamental issue of the impact on economic growth and distribution of resources of existing charges and taxes on road users. Without this base line, it will be difficult to make credible recommendations on the structure and administration of fuel taxes. The size of the country and the differences between urban and rural areas suggests there is considerable scope for variation in both local and national taxes on fuels.

20. A third potentially important piece of sector work relates to traffic safety. China has one of the worst safety records in the world. Modifying driver behavior is the key to improving this record and as experience elsewhere indicates, it will require a holistic approach that goes well beyond highway design and enforcement measures and involves everything from vehicle design to insurance requirements. A comprehensive study, drawing on global experience, would be of great assistance to the Chinese in identifying where institutional and other changes are required and how the Bank might help.

Urban Transport

21. As China goes through the process of urban transformation, the cities will grow very rapidly and without forward-looking policies it will be a chaotic and inequitable process. The large cities, the present area of Bank involvement, will inevitably get the resources they need to manage the process – how well is another question. What is often overlooked is that in this urban transformation process is that the small and medium size cities will grow even faster. Their lack of human resources and experience to manage the process can be looked on as a disaster or an opportunity to intervene before they become disasters. The Bank has considerable experience in developing programs to support a more efficient and equitable growth process in these cities. In China, the challenge will be to identify projects that would put in place the intermediary or wholesale institutions that would be able to reach the large numbers of smaller towns and cities.

Logistic Services

22. The flow of information in the transport networks is as important as the actual physical movement of goods and services. With the assistance of the Bank, China is now exploring ways of improving the efficiency of the physical networks by improving the flow of information and the efficiency of inter-modal transfers. This is an important and new emphasis where there is a strategic role to be played by both government and the private sector. Great care needs to be taken, however, that the dynamic efficiencies of a competitive private sector are not submerged in the interests of establishing ‘orderly’ processes.

Railways

23. The Bank's project lending in railways has added to capacity and produced an increasing willingness to engage in the reform dialogue. This is going well and China is well aware of best international practices and what needs to be done in China. The pace of change is slow. The Chinese preference for order and stability contrasts with the Bank's desire to move at a faster pace. The present strategy of modest project lending combined with an intensive dialogue over reform appears to be the right strategy but could be supported by greater sector work on the part of the Bank. Without a continually deepening knowledge base, the Bank runs the risk of being marginalized in the reform process.

24. There are two obvious areas for expanding this sector work. One of them has already been mentioned in the context of the energy sector – the interrelationship between railway investments, power plant location, coal mining, and transmission lines. The second involves the development of pricing models based on the growing data base coming out of the cost accounting studies. At some point the railways will have to move beyond the present national tariff and develop a multitude of tariff structures that reflect costs, including congestion costs. The success in changing the public role from operator to regulator in the present monopoly situation will depend on the ability to develop a consensus on how to charge for services.

Conclusions

25. China's growth will generate enormous demands for expanding public infrastructure. Well over half of total public investments will continue to be in these sectors. The Bank has played an important and successful role in assisting China in improving the efficiency and equity of these investments. The job is far from finished – it has just become more complicated.

26. The Bank's major objective of poverty reduction must be treated with care in the Chinese context. Direct lending for poverty reduction is not necessarily the most expedient or effective way in every sector of addressing poverty issues. This is particularly true of infrastructure where investment is essential for growth and benefits widely distributed across all income classes. The Bank, for example, may contribute more to poverty reduction in the road sector by lending for highways than for feeder roads. It may make more sense for the Bank to confine feeder road lending to integrated rural poverty projects than as components of highway projects. In the case of electric power, improved distribution systems will have a major impact on lower income groups but if they become the exclusive target of this lending, the benefits will never reach them as they will be preempted by commercial and business interests as well as higher income groups.

27. The move from simple capacity expansion to greater emphasis on how to manage the process in a market economy is a major challenge for both China and the Bank.

28. There is general agreement that policy changes and institutional reforms must now be the major focus of Bank assistance in the infrastructure sectors. The issue is how to do it. In a new era of reduced lending programs, increasing policy and advisory services is obviously important. Success requires increasing these services while at the same time maintaining the Bank's traditional strengths in project lending. Some of the new directions suggested above should help identify those areas where the Bank's advice and project work can come together to support the new emphasis. The task will be made easier if the issues surrounding institutional repayment and foreign exchange requirements can be satisfactorily resolved.

29. The greater emphasis on policy and institutional matters will require the Bank to update and maintain its knowledge base. Finding ways to increase the present low level of sector work is a priority.