

ORGANIZATIONAL CAPACITY OF EXECUTING AGENCIES IN THE DEVELOPING COUNTRIES

— CASE STUDIES ON BANGLADESH, THAILAND AND INDONESIA —

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SUMMARY

“Organizational capacity” of project executing agencies in recipient countries is of critical importance in realization of development objectives of any ODA projects. This paper tries to examine the organizational capacity of executing agencies in a comprehensive manner and present a framework for analyses. It is hoped that the study can contribute to a better understanding of organizational capacity and to an improvement in future ODA operation. First, the paper discusses what kind of criteria should be used to assess organizational capacity of executing agencies and with what factors organizational capacity can be explained. The organizational capacity is assumed to consist of: (1) expertise, (2) specificity in authority and responsibility, and (3) incentives. Incentives are strongly influenced by three factors: (a) mission sharing, (b) contestability, and (c) accountability. The analytical framework is applied to two case studies: a comparative study on rural electrification projects in Bangladesh and Thailand and a study on small-scale scattered-type project in Indonesia. Those empirical studies indicate that: (1) close correlation can be found between organizational capacity and performance in executing development projects, and (2) organizational capacity is not generic but can be improved.

INTRODUCTION

As Japan’s ODA loans are based on the principle of “self-help” efforts, organizational capacity of “project/program executing agencies in the recipient countries” (hereinafter called “executing agencies”) is of critical importance to the realization of development objectives of economic assistance. Therefore, development aid institutions must ad-

dress the issue of organizational capacity by utilizing their experience and knowledge, for the improvement of quality in ODA.

The organizational capacity of executing agencies is important for the smooth planning and monitoring of a development project, successful realization of development goals and sustainable development effects. Even after a project is completed, the organizational capacity of executing agencies significantly influences the intended impacts. As for social development projects that have rapidly increased in number in recent years, it is essential to understand the status of beneficiary participation and to organize them in an appropriate manner. Therefore, in assisting such projects, understanding and consideration for the organizational capacity of the executing agency will be required more than in assisting traditional infrastructure projects.

The Post-Evaluation Group of Research Institute of Development Assistance (RIDA), the Overseas Economic Cooperation Fund, Japan (OECF) reviewed total 342 post evaluation cases and summarized 636 lessons¹. The lessons are classified according to the three stages of the project cycle and three keywords, that is, proper macroeconomy and development policies”, “improvement of organizational capacity”, and “adoption of proper technology”. The result shows that more than half of the lessons learned from evaluation results concentrate on the improvement of “organizational capacity” (Table 1). Organizational capacity is not a new concept at all, however, there is no common agreement how and with what criteria organizational capacity should be measured. Therefore, information on organizational capacity tends to be ambiguous or subjective and remains as personal “tacit knowledge”, as there is no established framework through which information can be analyzed and shared.

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1 Ejima, Shinya, Katsuhiko Nakadate, “Lessons Learned from OECF Post Evaluation”, in *Journal of Development Assistance*, Vol.4, No.2, 1999.

Table 1: Lessons Obtained from Post Evaluation of Japan’s ODA Loans

Keyword \ Stage	Project Formation/ Appraisal	Procurement/ Implementation	O & M/Monitoring/ Project Results	Total
Proper Development Policies	86 (35%) (59%)	46 (30%) (31%)	15 (23%) (10%)	147 (32%) (100%)
Improvement of Organizational Capacity	105 (43%) (45%)	84 (55%) (37%)	41 (62%) (18%)	230 (49%) (100%)
Adoption of Proper Technology	54 (22%) (62%)	23 (15%) (26%)	10 (15%) (12%)	87 (19%) (100%)
Total	245(100%) (53%)	153 (100%) (33%)	66 (100%) (14%)	464(100%) (100%)
Others	82	60	30	172
Grand Total	327	213	96	636

Source: “Lessons Learned from OECF Post Evaluation”, in *Journal of Development Assistance*, Vol.4, No.2, 1999, P.23.

This paper aims to provide a framework to better understand organizational capacity. It is hoped that comprehensive analyses of “organizational capacity” of executing agencies will contribute to an improvement in future operation of ODA activities. First, the paper presents a theoretical framework to help understand the issues of organizational capacity of executing agencies. Then, it tries to clarify relations between the performance and organizational capacity of executing agencies, referring to some actual cases of Japan’s ODA loan projects.

1. ANALYTICAL FRAMEWORK OF THIS STUDY

Before explaining the definition of organizational capacity and its analytical framework, a brief explanation on differences between “institutions” and “organizations” is discussed here. The New Institutional Economics defines “institutions” as “rules of the game in a particular society” or “the humanly devised constraints that shape human interaction”. Institutions include formal and informal rules such as laws, regulations, customs, and norms². Analyses of institutions cover the management of the public sector as a whole, democracy, corruption, improvement of legal and judicial systems. In the meantime, “organizations” are defined as “groups of players bound by some common purpose to achieve objectives”. Organizations include political groups (political parties, municipal assemblies, etc.), economic groups (firms, labor unions, etc.), social groups

(churches, etc.), and educational groups (schools, universities, etc.). Analyses of organizations cover incentive structures of individual organizations and executing systems of particular projects. It is evident that both “institutions” and “organizations” significantly influence the impacts of development assistance projects, or even the development of a nation. This paper discusses mainly “organizations”. This does not mean that the paper denies the importance of “institutions”. Japan’s ODA loans, however, are executed mainly through development projects. Through the execution of respective projects and the capacity building of executing agencies accompanied with such project execution, ODA loans try to assist the development of developing countries. In consideration of such characteristics of Japan’s ODA loans, main focus of this paper is placed on the analyses of “organizational” capacity.

1.1. CRITERIA TO MEASURE ORGANIZATIONAL CAPACITY OF EXECUTING AGENCIES

What is an appropriate yardstick to measure the organizational capacity of executing agencies? Organizational capacity is inherently a vague concept and there is no universally accepted definition. Different analysts would use different criteria to evaluate the capacity of organizations. In this study, we try to interpret organizational capacity from the perspective of new institutional economics, with an emphasis on the concept of transaction costs.

First, it is assumed that costs for implementing a development project, or project costs, consist of “transfor-

2 North (1990), Ostrom (1993).

mation costs” and “transaction costs”³. Transformation costs are direct costs associated with construction. In other words, they simply mean the costs for “transforming” inputs, such as raw materials and labor into final outputs, such as buildings. These transformation costs are technically determined, meaning that with the same technical level, the costs would be the same no matter what organization executes the project.

On the other hand, transaction costs comprise of all the rest of the project costs. They include indirect management costs such as coordinating stakeholders, collecting necessary information and counteracting various types of opportunistic behavior. Other transaction costs include costs associated with checking qualification of contractors, supervising bidding, concluding contracts, monitoring project progress, authorizing the completion of a project, internal auditing, organizing local beneficiaries. As a matter of course, transaction costs increase or decrease according to the executing agency, that is, the way that the project is managed by the executing bodies. If an executing agency makes sufficient preparation, secures agreements from related parties, and prepares well for potential problems in advance, the project is unlikely to come to a standstill in the middle. Thus, although the costs for preparation may be relatively high, overall transaction costs will be relatively low. On the contrary, if an executing agency makes insufficient preparation or coordination in advance, or just leaves the project monitoring to the hands of a contractor, the project would be more likely to face successive difficulties in the course of implementation. Thus, although initial work involved may be small, the total transaction costs would be enormous.

Many of the troubles can be prevented and total transaction costs can be reduced if appropriate preparations are made for counteracting potential difficulties which might occur in the course of project execution. Therefore, we assume that organizational capacity of executing agencies is reflected by the ability of the agencies to reduce the amount of overall transaction costs through appropriate arrangements in advance.

1.2. FACTORS DETERMINING ORGANIZATIONAL CAPACITY

What factors affect the organizational capacity of executing agencies? It is easy to see that academic backgrounds

and qualifications of staff members are not the only determinants. Quite a few executing agencies have problems with their capacity to implement projects, although they employ many officers and staff members with a doctorate degree. Moreover, various studies have pointed out that technical cooperation by donors, including training programs, does not necessarily lead to an improvement in performance.

In this paper, we assume that the organizational capacity of executing agencies consists of three factors, namely, “expertise”, “specificity of authorities and responsibility”, and “incentives”. Expertise means capacity of the executing agency and its staff members in a narrow sense, including technical knowledge, experience and know-hows. “Specificity” denotes how clearly and transparently authority and responsibility are defined and practiced among related organizations and individuals. “Incentives” serve as both carrots and sticks and affect the willingness of stakeholders to execute a project.

(1) Expertise

Expertise means ability of the executing agency and its staff members in a narrow sense. The number of engineers with special qualifications, academic backgrounds of staff members, adequacy of training programs are some of the examples which show the level of expertise. Experiences of handling overseas assistance, including ODA loans, and implementing similar development projects are also an important indicator to evaluate the expertise. If a project has a number of sub-projects covering a wide area of a country, it is also necessary to check the adequacy of information infrastructure connecting the project management center and each sub-project site. If an executing agency has sufficient knowledge, experience, and know-hows and if the information infrastructure is well developed, transaction costs, such as coordinating related parties and monitoring, can be reduced.

(2) Specificity in Authority and Responsibility⁴

In order to implement development projects smoothly, it is necessary that all the administrative procedures are specified, transparent, and, if possible, simple. If the procedure is not sufficiently specified and the person in charge has a large scope of discretion, the implementation of the project would be easily influenced by external interven-

3 Ostrom, Elinor ed. (1998), *Institutional Incentives and Sustainable Development, Infrastructure Policies in Perspective*, Westview Press

4 Israel (1998) is a pioneering study to analyze development projects focusing upon “specificity”. It discusses that specificity of authorities and roles significantly affect incentives of individuals and organizations.

tion or susceptible to corruption. Especially, a project in which many governmental organizations participate is very much likely to come to a standstill, unless the divisions of roles among respective organizations are clearly defined. Thus, specificity and transparency of authority and responsibility among related participants are considered to be an important factor that affects executing agency's capability to implement projects. If such specificity has been sufficiently established, management of the project can be smoothly handled at various stages of implementation, such as a selection of contractors, troubleshooting, monitoring, and policing inappropriate activities, and as the result, transaction costs will be minimized.

(3) Incentives

Providing appropriate incentives to related individuals and organizations is perhaps the most important factor that determines the organizational capacity of the executing agency. Even though the staff members of the executing agency are highly qualified and responsibilities of related parties are well specified, the project would not be implemented successfully if the participants have very weak motivation to carry out the project. On the contrary, if the staff members were provided with strong incentives, they would be likely to voluntarily strive to improve their expertise and are willing to clarify authority and responsibility. Thus, it is essential to examine the incentive structure surrounding the project, in analyzing the organizational capacity.

Then, what kind of framework we could use to understand the incentive structure of an executing agency? In other words, under what circumstances do staff members of the agency have strong incentives to carry out the project? Here, we introduce three factors to explain the incentive structure, namely, (a) mission sharing, (b) contestability, and (c) accountability.

(a) Mission Sharing

One of the factors that largely influence the organizational capacity of executing agencies is sharing the mission of an organization, that is, staff members of the executing agency, as well as related parties outside the agency, understand and share the goals of the organization and the significance of the project. In many organizations known for good performance, each staff member fully understands the social importance of the project, has strong commitment to accomplishing the mission, and is proud of being a part of the organization. Empiri-

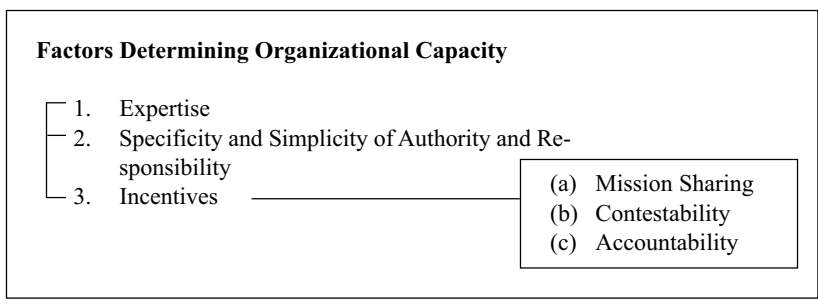
cal evidences seem to support that there exists interrelationship between the project performance and the degree of mission sharing. So, it is important to check how managers of the organization understand their mission and the significance of the project and in what ways they try to diffuse the mission to staff members and related parties.

(b) Contestability

Stakeholders of a project have strong incentives to implement a project efficiently and effectively, when they are faced with strong competition. Competitive pressure can come internally as well as externally. Internal contestability includes competition among different departments and staff members within an organization. Each department or staff member has strong incentives to perform better if their share of contribution to the project or operational results are properly evaluated and are directly linked with rewards (promotion, salary increase, etc.) or penalties. As for external contestability, outsourcing some operations to private firms, or privatizing some departments of the organization will introduce competitive pressure from outside. When people are faced with competition, they can no longer afford to continue inappropriate activities, and supervision and monitoring costs will be reduced. Even if inappropriate behaviors exist, competitive environment will make it much easier to identify and deal with the problem.

(c) Accountability

Staff members of the executing agency are likely to have stronger incentives to implement a project effectively, when the contents and outcomes of their operation are under scrutiny of other people, or when they are required to be accountable for their activities to stakeholders. On the contrary, under such circumstances that information about the project is not fully disclosed to stakeholders, they will not have strong motivation for punishing lazy staff members or those who are engaged in dishonest activities. Or worse, honest staff might be a loser. Accountability of executing agencies can be examined by checking the sufficiency of internal control systems such as internal auditing, project information disclosure, and channels through



which stakeholders can feedback information on the project.

The rest of this paper will apply the above-mentioned analytical framework of organizational capacity to actual case studies of executing agencies in developing countries. Some ODA projects will be reviewed in order to examine the relationship between organizational performance and organizational capacity of the executing agencies.

2. CASE STUDY OF RURAL ELECTRIFICATION PROJECTS: — ELECTRIFICATION AUTHORITIES IN BANGLADESH AND THAILAND —

This section looks at rural electrification projects in Bangladesh and Thailand and analyzes organizational capacity of each executing agency. Organizational capacity of these institutions is investigated from the perspectives of “expertise”, “specificity” and “incentives.”

The reason rural electrification projects in Bangladesh and Thailand are chosen as a case study, among many other development projects, is partly because of characteristics of rural electrification and partly because of diversity in execution method and performance among executing agencies in question. First, rural electrification is a relatively standardized operation, that is, to purchase electricity from power generators and distribute it to customers. It has rela-

tively little influence from factors such as differences in nation or region (compared with irrigation projects, for example) and therefore convenient for a comparative study in different countries. On the other hand, rural electrification projects are not easy to operate or manage because they usually cover wide areas and deal with numerous end-users. Accordingly, these kinds of projects tend to have high transaction costs, and thus, performance depends significantly on organizational capacity of the executing agency. For those reasons mentioned above they were considered to be an excellent example for this study.

Secondly, great differences can be observed in execution method and performance among executing agencies of rural electrification. Rural Electrification Board (REB) in Bangladesh is in charge of electrification in rural area through PBSs, user’s cooperatives. Its performance is good. On the other hand, Power Development Board (PDB) and Dhaka Electricity Supply Authority (DESA) in Bangladesh are managed in a traditional way, that is, power distribution authority is also responsible for supplying power to end users. Their performance is quite unsatisfactory. On the contrary, Provincial Electricity Authority (PEA) of Thailand also uses the traditional method and their performance is good. So, it is interesting to compare four power distribution authorities with different management methods and performance and to examine what explains for the differences in their performance. The hypothesis is that differences in organizational capacity accounts for differences

Table 2: Rural Electrification Authorities in Bangladesh and Thailand

Country		Bangladesh			Thailand
Name of Authority		REB/PBS	PDB	DESA	PEA
Fiscal year		1997	1997	1997	1997
Total Sales of Electricity	million kWh	1,238	9,447	3,908	47,179
Number of Customers	thousand households	1,712	1,157	634	10,140
Service Area	square km	123,840	n.a.	7,473	510,000
Number of Personnel		7,473	16,266	4,285	30,585
System Loss Ratio (distribution)	%	16.3	29.8	27.9	5.5
Tariff Collection Ratio	%	95.2	82.2	57.8	n.a.

Note: Number of staff of REB/PBS shows that of PBSs only.

Number of staff of PDB represents only distribution division (24,371 in total).

System loss ratios of PDB and DESA exclude sales to REB.

Source: “REB Annual Report 1996-97”, REB.

“Rural Electrification Programme in Bangladesh, 1978-1998 and Future Programme”, REB.

“Rural Electrification Board of Bangladesh and the Fifty Four PBSs, FY 1996-97”, REB.

“RDB. Commercial Operation Statistics, November 1998”

“DESA, Commercial Operation Statistics, September 1998”

“DESA, Key Statistics (Report of RIDA/SADEP study in FY 1998)”

“PEA Statistics Review 1997” (Report of RIDA/SADEP study in FY 1998)

“An Overview of Bangladesh Power Sector”, (1997) ADB Dhaka Office.

“Power Sector System Loss Statistics”, (1999) ADB Dhaka Office.

in performance of those organizations.

Table 2 outlines basic operational statistics and recent performance of four electrification authorities, REB/PBS, PDB, DESA in Bangladesh and PEA in Thailand. Performance, measured in terms of system loss and tariff collection ratios, clearly varies among those organizations. PEA's system loss ratio is 5.5%, which is as low as that of power supply corporations in advanced countries. The system loss ratio of REB/PBS is 16%. It is slightly higher than PEA's but much better than PEB's or DESA's which is around 30%. Similarly, as for tariff collection ratios, differences are clear to see among REB/PBS, PDB and DESA.

2.1. RURAL ELECTRIFICATION BOARD (REB) IN BANGLADESH

(1) Organizational Structure and Performance

(i) Organization and Operation

In Bangladesh, rural electrification projects are executed by Rural Electrification Board (REB). REB was established on October 31, 1977 and started its operation on January 1, 1978 (Ordinance No. L1). Until then, Power Development Board (PDB) was the only power supply authority. Main power suppliers in Bangladesh now are not only PDB and REB but also Dhaka Electricity Supply Authority (DESA) which was separated from PDB in 1991.

One of the main characteristics of REB's operation is to electrify rural areas not by itself but through Palli Bidyut Samity (PBS), an independent user's association. REB is an organization that supervises, manages and extends financial support to all PBSs in Bangladesh. From the beginning of a PBS creation, REB provides extensive advice and help on technical, financial management, human resource development and other related activities. As a new PBS establishes its operation, REB's role gradually reduces. 67 PBSs were approved by the government and 54 started power supply business as of October 1998.⁵ The entire distribution lines of REB/PBS are as long as 96,000 km, longer than those of PDB or DESA. REB has 165 substations. It has installed 1700,000 meter of electricity lines, and is estimated to supply power to 23 million residents in the rural area.

In Bangladesh, rural electrification project has been supported by USAID (U.S. Agency for International Development) from the onset. The U.S.A. has carried out elec-

trification in rural areas by introducing a cooperative method since 1930's, and accumulated much know-how on organizing beneficiaries and managing cooperatives. National Rural Electrification Cooperative Association (NRECA) is a central organization of rural electrification cooperatives in the U.S. Its consultation division has been entrusted by USAID to extend technical assistance to REB. Today Bangladesh's rural electrification projects receive assistance not only from USAID but also from as many as 15 donors including the JBIC, CIDA, World Bank (IDA) and Asian Development Bank (ADB). A total investment to rural electrification projects from overseas aid amounts to about \$900 million.⁶

Successful experiences of REB attract attention from other developing countries. One of the PBS's directors is to be dispatched to Senegal to support rural electrification projects there with the aid extended by Islamic Development Bank. REB is also asked for cooperation with rural electrification projects in a state in India and Nepal.⁷

(ii) Organizational Structure

REB's management consists of the chairman, three full-time directors and four part-time directors. All the full-time directors are former staff of REB, while part-time directors are from the government or other public organizations. Each full-time director is responsible for "engineering", "PBSs and training" or "finance". There are four divisions, namely "planning & operation", "projects", "accounts & finance" and "PBS development & management" divisions.

PBS is a cooperative organization and as such it is organized and managed with active participation of beneficiaries. The organization is headed by end users of electricity, called "members" of a cooperative. Under the members, there is a Board of Directors which consists of 12-15 directors who are elected from cooperative members. The board has a decisive power over all aspects of management of the PBS including investment plans and financial management. The directors are unpaid and their term of office is for three years. One third of the directors are reelected every three years.

Under the Board of Directors, there is a General Manager (GM) who is selected by the Board and approved by REB. It is GMs who actually manage day-to-day business of PBSs and are responsible for the operation of PBSs. If a GM acts dishonestly or achieves unsatisfactory results,

5 24 PBSs and 30 substations were damaged by the flood in summer 1998 (interview with REB's Chairman).

6 *Annual Report 1996-1997*, REB, p.11

7 Interview with the above mentioned REB's director.

REB or the Board of Directors can dismiss him. There were some cases in the past where a GM was actually dismissed. Monitoring function of the Board of Directors is secured through REB's strong control over the operation of each PBS. The term of office of GMs is for three years. They are reelected through direct votes of members. When a PBS covers a large area, the territory is divided into several zones each of which a Deputy GM is responsible for.

In addition, a Village Advisor is appointed by the PBS for each village. Advisors are honorary posts and unpaid. Their duties are to provide village people with information on operational status and policies of PBS and provide basic education such as how to use electricity, to report to RBS on Villages' needs for electricity, and to promote early construction of distribution lines. Meetings are held for all village advisors at the PBS twice a year. GMs can communicate with customers in every village via village advisors.

In each village, there are 2-3 Lady Advisors appointed by each PBS. Women with high-level education, such as teachers or lawyers, are often selected as Lady Advisors. Their term of office is for three years. They provide advice and consultation to customers on various issues, such as advancement of women's social status, education, or family problems.

(iii) Performance

REB's rural electrification projects show good performance. System loss ratio in FY1997 was 16.3%, much lower than that of PDB or DESA which was nearly 30%. PBS's average tariff collection ratio showed surprisingly high-level achievement of 95.2%⁸ (See Table 2). REB's performance is so excellent that part of the PDB's and DESA's territories have been gradually transferred to REB. In the future, DESA will limit its operation to urban areas within Dhaka, and PDB to urban areas outside Dhaka.

It is estimated that REB's system loss ratio increased recently as a consequence that REB has succeeded part of the operation from PDB and DESA. In the case of Dhaka PBS1, for example, system loss ratio was only 10.4% in September 1996, and soared up to 13.9% in September 1998.⁹ System losses are classified into two: technical loss caused by technical factors such as electricity leakage during transmission, and non-technical loss caused by human such as illegal wire-tapping or uncollected tariff charges. Those areas transferred from PDB or DESA suffers from technical losses, however, non-technical losses are considered to be more serious problems. Customers are re-

ported to get used to cheating on meters or bribing tariff collectors to evade payment.

(2) Evaluation of Organizational Capacity

As described before, rural electrification projects of REB/PBS show excellent performance. Their system loss ratio is about 16%, much lower than other electrification bodies in Bangladesh. Tariff collection ratio exhibits an extremely high level of 95%. What enables such an excellent performance? Analyzing organizational capacity of REB and PBSs demonstrates that good performance is achieved neither by chance nor by aid from foreign countries, but by their own efforts to improve the capacity. Table 3 shows the summary of evaluation for REB and PBSs.

(i) Expertise

REB has its own training facilities at their premises and provides extensive training programs. REB's training courses are divided into two: one is for REB's staff and the other is for PBSs' staff. Both courses are classified by specialty such as engineering, or accounting, and by staff title such as managers or clerical staff. Each course has detailed classes which consist of both lectures and field training. All REB's staff below directors receives training. Trainings for PBSs' staff are provided by REB as well as by each PBS.

PBSs have various educational and training courses not only for PBS staff but also for residents, including women's course for social participation. PBSs also provide training courses to residents who want to be an electrician. On-the-job training is an important component of the training for electricians and some PBSs install training electricity poles with a transformer and connector at their premises.

(ii) Specificity

Technical standards of REB and PBSs were established by NRECA who has given technical consulting to REB and PBSs since their foundation. Job specifications are also well-standardized and organized in manuals which are serial numbered, like No. 400 series for engineering, No. 500 series for finance and accounting, and No. 600 series for administration and personnel affairs. PBSs use matching standardization: No. 100 series for engineering, 200 series for finance and accounting and No. 300 series for administration and personnel affairs. REB prepares design standards which all PBSs should follow.

8 Annual Report 1996-97, REB, June 1997.

9 Dhaka PBS-1, At A Glance and interview with the GM of the PBS.

Table 3: Evaluation of Organizational Capacity of REB/PBS

Evaluation		
Expertise		
Training	A	REB has in-house training facilities to provide various training programs to its staff and management. Each PBS provides training/education programs to its staff and customers. PBS also trains local people to be electricians.
Specificity		
Technical standards/ Job Descriptions	A	Technical standards are established in detail with the support of NRECA. Construction and maintenance of facilities follow the standards. Operation manuals are prepared in series for each job classification. Customer (member) service procedures are clearly defined.
Incentives		
Mission sharing	A	PBS has a dedicated section to educate customers about their rights and duties. Systems, such as Village Advisors, are introduced to facilitate communication with local customers. REB also tries to have PBS directors understand the importance of projects and responsibility as a director, by providing management training courses.
Contestability	A	Performance Target Agreement (PTA) system is introduced to stimulate competition among PBSs. At the beginning of each year, each PBS sets targets for performance agreed with REB. At each year end, staff receives bonus or penalty according to its performance. Contracting out part of its operation to the private sector is introduced for meter reading.
Accountability	A	Achievement of each PBS manager is checked by the board of directors and by REB. PBS is structured so that internal checking system can work. Measures are taken to prevent corruption in tariff collection.

A: Satisfactory B: Partially satisfactory C: Unsatisfactory

PBSs are responsible for operation and maintenance. Every PBS has a small workshop where PBS staff checks equipment such as transformers, and handles simple repair jobs. PBSs' warehouses are well organized sorting item by item in order. As to customer services, well-developed customer services are provided. A detailed manual is also prepared to explain how to deal with complaints from customers.

(iii) Incentives

(a) Mission Sharing

Success of rural electrification operated through users cooperative largely depends on whether its beneficiaries can actively participate in the project. PBSs have special division of Member Education to cope with enlightening beneficiaries with rights and obligations as cooperative members. They also have Village Advisor service to communicate with local customers. REB is making efforts through training programs for PBSs' directors to share the significance of the project and the mission of directors.

(b) Contestability

REB/PBSs have tried to introduce market competition by actively contracting out part of their operation, such

as meter reading, to the private contractors. Also Performance Target Agreement (PTA) is introduced to assess performance of each PBS regularly and give bonus or penalty according to their performance. Each PBS sets a target for each index every year and submits the target to Permanent Committee for Performance Targets, and then the target are agreed between the PBS and the Committee. Every August, the Committee assesses PBS's performance in the previous fiscal year and decides the amount of bonus or penalty according to each PBS's performance. The PTA system is aimed to promote competition among PBS units and lead to an improvement of their operation.

(c) Accountability

REB/PBSs' operation system is carefully designed so as not to centralize authorities and to prevent corruption. In sum, organizational and operation structure are designed to secure accountability to stakeholders. First, General Managers (GM) who is responsible for the management of PBSs, is checked for its performance by the Board of Directors that consists of representatives of local customers. To prevent the Board from being merely a name, REB also maintains strong control over GMs.

Second, the structure of PBSs is organized so that internal check and balance can work. For example, stock

management is separate from COMD and placed under GSD. Consumer's complain service and interior wiring/inspection is not under COMD but under MSD. Billing/collection that tends to be susceptible to corruption belongs directly to FD. Tariff collection procedures are full of well-planned arrangements to prevent dishonesty. In PBS's system, different persons are responsible for meter reading, tariff calculation, bill delivery, and bookkeeping. In addition, a mechanism of mutual checking has been invented as bill deliverers sample check the meter when delivering bills. Tariff collection is done through bank transaction so that bill collectors don't receive cash from customers. Meter readers are employed by contract and their territories are changed every four months to prevent corruption.

As discussed above, REB/PBSs are equipped with measures to improve every component of organizational capacity: "Expertise", "Specificity" and "Incentive". Thus, good performance of REB/PBS can be attributed to the high-level of supportive organizational capacity of those institutions.

2.2. POWER DEVELOPMENT BOARD (PDB)/ DHAKA ELECTRICITY SUPPLY AUTHORITY (DESA) IN BANGLADESH

(1) Organizational Structure and Performance

(i) Organization and Operation

Power Development Board (PDB) was established in 1940 as the only electric power enterprise in Bangladesh (then East Pakistan). When created, it was a private company. In 1950's, it was reorganized as a governmental entity covering electric power and water supply businesses. In 1971 when East Pakistan became independent from Pakistan as Bangladesh, it was divided into water supply division and electric power supply division, and the latter is the present PDB. PDB is a vertically integrated electric power enterprise which consists of power generation, transmission, and distribution divisions. Major donors, such as ADB and the World Bank were seriously concerned about the bad performance of Dhaka area and insisted to have the distribution division as a separate company. Thus, Dhaka Electric Supply Authority (DESA) was established in 1990 and power distribution business in metropolitan Dhaka area was transferred to DESA on October 1, 1991. It is also under consideration to transfer power transmission business to Power Grid Company of Bangladesh (PGCB), a subsidiary of PDB.

(ii) Organizational Structure

PBS's organizational structure is roughly divided into six: generation, transmission, distribution, planning/research & development, finance, and administration. Each of generation, transmission, and distribution departments divides the territory into regions and has several sections in charge of each region at the headquarters. Distribution division is responsible for up to low-tension cables, while lead-in wires and meters are under the responsibility of Accounting Division. DESA's organizational structure is divided into three: engineering/sales, finance, and administration departments. The engineering/sales department is further divided into North, South and Central divisions. Each division is further divided into sections covering smaller areas, and each section has units in charge of operation/maintenance and in charge of sales.

(iii) Performance

System loss ratios of both PDB and DESA are extremely high (See Table 2). PDB's distribution system loss ratio was 29.8% and that of DESA was 27.9% in FY 1997(excluding the sales to REB). They are much higher than those of REB/PBS or PEA. System loss is classified into technical loss caused by facilities degradation and non-technical loss caused by illegal wire-taping or cheating on meters. In cases of PDB and DESA, non-technical portion is estimated to be quite large. Tariff collection ratios of PDB (including the sales to DESA) and DESA were 82.4% and 60.42% as of November 1998 respectively.

(2) Evaluation of Organizational Capacity

What accounts for the unsatisfactory performance of PDB or DESA? This section will try to identify strong and weak aspects of both institutions, from the perspective of organizational capacity of executing projects (See Table 4).

(i) Expertise

PDB has its own training facilities and training programs for the staff members. Unlike REB/PBS, PDB does not provide training to contractors. DESA has no training facilities and entrusts training of the staff to PDB and others. Due to budget shortages, chances for the DESA staff to participate in outside training courses are limited. In the past five years, only 200 employees were given training at outside organizations. On-the-job training (OJT) does not seem to be carried out in a systematically organized manner, either.

Table 4: Evaluation of Organizational Capacity of PDB/DESA

Evaluation		
Expertise		
Training	B	PDB has its own training facilities to give mainly technical training to its staff. No training is provided to contractors. DESA, having no training facilities of itself, entrusts outside organizations to train its staff. Due to budget shortage, chances to have training are limited.
Specificity		
Technical standards/ Job descriptions	B	Technical standards and job descriptions are provided, but not respected at operation sites. Few facilities are operated and maintained according to the standards. Inspection is not fully conducted because of staff's negligence or dishonest activities.
Incentives		
Mission sharing	C	Labor unions, backed by political parties, conflict with the management. Measures for improving operational efficiency and customer services are frustrated by opposition from the labor unions. Dishonest activities cannot be punished due to interference by labor union/political party.
Contestability	B	Merit system was introduced but has not been functioning because profits gained through dishonest activities are more than rewards for good performance (DESA). Meter reading and tariff collection are done by internal staff. In certain areas, efforts are made to entrust power distribution business to the private sector (PDB, DESA).
Accountability	B	As for large-scale projects, construction process is double-checked both by internal department and government organization (PDB). No measures are taken against dishonest activities for sales operation. This leads to widespread corruption and high system loss ratio.

A: Satisfactory B: Partially satisfactory C: Unsatisfactory

(ii) Specificity

Although specifications and technical standards on design, construction, maintenance are provided both at PDB and DESA, they are apparently not always respected at the operational sites. For example, PDB's regional offices have facility maintenance manuals which state equipment should be checked by using a check sheet. But, in fact, few facilities are operated and maintained according to the standards,¹⁰ especially few low-tension lines and lead-in wires are installed as instructed in the manuals.

(iii) Incentives

(a) Mission Sharing

At either PDB or DESA, people apparently don't have shared mission or goals. Rather both organizations suffer from serious conflict between management and labor unions. Measures for increasing efficiency and service quality proposed by the management are often frustrated by strong opposition from the labor unions. Current state of low performance is often pointed out to be caused by dishonest activities of the staff members. For example,

employees of PDB or DESA privately install lead-in wires for their own houses using materials of PDB or DESA without permission, and meter readers cheat on the data by taking a bribe from customers. If a manager tries to penalize such dishonesty, labor unions use collective bargaining power to threaten the management in order to protect the employee. As labor unions are closely connected with a specific political parties, they try to exert influence upon management through politicians. Under those circumstances, employees don't share any common value in improving performance.

(b) Contestability

At PDB/DESA, introducing merit personnel evaluation system that links employee's performance with rewards has been under consideration. At DESA, however, a proposal to give bonus or to impose penalty according to performance of each employee was met with strong opposition from the labor unions. It is pointed out that even though the proposal is actually implemented, it will not give enough incentives for better performance because money earned by cheating or bribery will be more than the rewards for

10 Based on the field survey in FY 1998.

good performance.¹¹

Both PDA and DESA have also started, on a trial basis, to contract out distribution service in certain areas to private companies and have seen some improvement in their operation. In Tangail district (north of Dhaka), PDB has entrusted a part of their services of the operation of- fice, such as meter reading and tariff collection, to a private company called Tangail Boidyutic Banijjo Sangstha. DESA also founded Dhaka Electricity Supply Company (DESCO) as a holding company and DESCO started its operation in September 1998. DESCO covers Mirpur area in Dhaka and has taken over DESA's business as it was. From the beginning of its operation, DESCO contracts out services such as meter reading, bill preparation, new lead-in wire installation, and power suspension.

(c) Accountability

For PDB's large-scale projects, construction processes are double-checked. Project teams submit monthly progress reports to the headquarters, and the government's Implementation Monitoring & Evaluation Division, every quarter, checks the progress of the project. On the other hand, as for tariff collection, no measures are taken to prevent dishonest activities either at PDB or DESA. Meter readers are permanent employees and they are, in principle, in charge of the same territory all the time. Sometimes meter readers also deliver or collect bills. Corruption and dishonesty, such as taking a bribe from customers by cheating on meters or illegally tapping on wires, appears to happen quite often. As described above, management can hardly take any measures against dishonest activities due to labor conflict.

As is described above, both PDB and DESA have serious problems regarding every component of organizational capacity. Especially the incentive structure is quite different from that of REB/PBS. Thus, both PDB and DESA need to create an appropriate incentive structure as well as to improve physical capacity, such as facilities and skills, in order to achieve better performance.

2.3. PROVINCIAL ELECTRICITY AUTHORITY (PEA) IN THAILAND

(1) Organizational Structure and Performance

(i) Organization and Operation

Provincial Electricity Authority (PEA) of Thailand is a government enterprise in charge of power distribution under the supervision of the Ministry of Interior. It was established in 1960. While Metropolitan Electricity Authority (MEA) covers the metropolitan area, PEA covers the rural area. PEA supplies power to an area of about 510,000km² that accounts for 99% of land areas in Thailand. It has 1,081 operation offices, about 30,000 employees and 10,000,000 households as customers.¹²

Power industry in Thailand works as follows. Electricity Generating Authority of Thailand (EGAT) is in charge of a so-called trunk system from generation to primary transmission system. Power distribution organizations such as PEA and MEA purchase electricity from EGAT and sell it to their customers in each territory. Since PEA has customers in the rural area who sometimes live away from the EGAT's main distribution lines, PEA also has small-scale power plants.

(ii) Organizational Structure

In PEA, there are eight Deputy Governors under the Governor; each is responsible for "technique/services", "planning/system development", "construction", "operations 1", "operations 2", "maintenance", "economics and finance", and "corporate services". Internal Audit Office, Office of the Project Coordination, Corporate Plan Office and Human Resource Development Office are independent and directly belong to the Governor. Two Operations Divisions are further divided into four by region as northern, northeastern, central and southern areas. Operations divisions are in charge of local operations only and design and construction is handled by the headquarters.

(iii) Performance

System loss ratio of PEA was 5.5% in FY 1997, which is excellent performance as an electric power enterprise in the developing country.¹³ Village electrification ratio in the rural area reached 98.7% in FY 1997. Thus, PEA's mission to supply electric power to the rural area in Thailand

11 According to DESA's manager of Planning/Investment Section.

12 PEA Statistical Review 1997.

13 Ibid.

Table 5: Evaluation of Organizational Capacity of PEA

Evaluation		
Expertise		
Training	A	Training is managed directly by the Deputy Governor. Its own training center with accommodation facilities will be completed in 2000. Training programs include engineering and management programs, each of which has about 40 courses. About 52% of the staff participates in the programs. Also it provides a scholarship for the staff to acquire a degree at university. It has an in-house vocational school which fosters 50 wire maintenance workers every year.
Specificity		
Technical standards/Job descriptions	A	PEA has 5-6 files of detailed design standards as well as a summary pamphlet. A certification system applied to construction contractors. Only contractors with good certification can have orders for large-scale projects. Standards for operation and maintenance are well-established.
Incentives		
Mission sharing	A	Management objectives are clearly set. Personnel compensation is good and relations between labor and management are harmonious.
Contestability	A	A merit rating system is introduced, in which each section, operation office or staff, sets a target at the beginning of each year, and receives bonus or penalty according to its performance.
Accountability	A	Internal audit office is independent and directly belongs to the Governor, conducting regular inspection. Post-evaluation of projects are carried out by outside organization since FY 1998. Opinions of large-scale customers can be heard directly at annual general meeting. Measures against dishonest activities are developed, using portable terminals for meter reading and tariff collection, and depositing system for bill collections.

A: Satisfactory B: Partially satisfactory C: Unsatisfactory

is successfully achieved.¹⁴ Household electrification ratio also showed a high result of 86.3% in FY 1995.¹⁵ Future tasks of PEA are to distribute power to newly developed rural villages and to improve reliability of existing facilities.

(2) Evaluation of Organizational Capacity

As is shown above, PEA's performance is excellent and PEA has a high capacity to execute projects. This section will evaluate PEA's organizational capacity, by analyzing the components of "Expertise", "Specificity" and "Incentives" (See Table 5).

(i) Expertise

PEA is very active to provide training to its staff members. Three Divisions (Human Resource Development Office, Training Division, Personnel Division and Electric Vocational School) are responsible for training and educa-

tion, and belong directly to the Deputy Governor. In 2000, PEA's own training center with accommodation facilities will be completed near Bangkok¹⁶. 43 engineering courses and 38 management courses are to be provided in FY 1999. 16,000 employees, or 52% of the entire staff, will participate in those courses. PEA also has a program to help the staff acquire a degree at universities. PEA also has an Electric Vocational School that provides three-year secondary education courses to foster line maintenance workers.

(ii) Specificity

Detailed standards for design, operation and maintenance are well established and respected at operational sites. Check sheets are prepared for maintenance workers at each facility. PEA also classifies contractors into four and issues certification, according to past awarded contracts and their construction quality. Only those who are certified as excellent can be awarded with large contracts.

¹⁴ PEA Statistical Review 1997.

¹⁵ Based on internal documents of JBIC.

¹⁶ Based on "PEA's Office of Human Resource Development", "Personnel Training and Development of PEA", documents of PEA's Training Section.

(iii) Incentives

(a) Mission Sharing

PEA has established clear operational objectives and tried to have those objectives shared among its directors and staff through training. The labor-management relationship at PEA is considered to be relatively cooperative. Wage level of general staff is almost the same as those in private companies and welfare programs are generally better than those of private companies. It is pointed out that such good remuneration program has contributed to good labor-management relations.¹⁷

(b) Contestability

PEA has introduced a merit-rating system that links performance to personnel evaluation. Each headquarters division and each office are required to set a target such as cost reduction, and if they attain the target, they will be awarded with increased budget, and if they cannot, they will be penalized with a decrease in budget. Each employee also sets a personal target. If they attain the target, they will be promoted and/or given increased wage. If they cannot, they will be demoted and/or provided with decreased wage.

(c) Accountability

Office of the Internal Audit at PEA serves as a separate and independent division and directly belongs to the Governor. It conducts regular inspection. Since FY 1998, post-evaluation of projects has been conducted by National Institute of Development & Administration, an outside research institute. A survey report is also submitted to National Energy Policy Office (NEPO). Opinions of large industrial customers are directly heard through a regional office by inviting them to the annual general meeting of the office.

In addition, arrangements are made to prevent dishonest activities in tariff collection. Meter readers are PEA staff and they input the data into a portable tele-transaction computer on the spot. Tariff collection is done not only by their staff but also by a private company or by the head of the village.

As discussed above, PEA is taking various measures to give its staff appropriate incentives, in terms of mission sharing, contestability, and accountability.

2.4. SUMMARY OF ORGANIZATIONAL CAPACITY AND PERFORMANCE

Table 6 shows the summary of evaluation of organizational

Table 6: Summary of Organizational Capacity and Performance

	REB/PBS	PDB/DESA	PEA
Organizational capacity			
Expertise			
Training	A	B	A
Specificity			
Technical standards/ Job specifications	A	B	A
Incentives			
Mission sharing	A	C	A
Contestability	A	B	A
Accountability	A	B	A

Performance

System loss ratio	16%	30%/28%	6%
Tariff collection ratio	95%	82%/58%	n.a.

A: Satisfactory B: Partially satisfactory C: Unsatisfactory

capacity of the electrification authorities in Bangladesh and Thailand and their performance.

Both REB/PBS and PEA have every component of organizational capacity evaluated as satisfactory. They have extensive training programs, clearly defined technical standards and job specifications which are actually practiced at local sites. They clearly set out organizational objectives and try to have the corporate values shared among their employees. They try to introduce market competition through linking performance with personnel evaluation and contracting out part of their operation. They have established a system to secure accountability to stakeholders. An appropriate incentive structure is created to execute projects efficiently, effectively and fairly. Above-mentioned efforts to improve organizational capacity have led to a successful execution of projects.

On the contrary, as for PDB and DESA, all the components of organizational capacity are evaluated as not satisfactory. Training is not provided sufficiently and their standards and specifications are not fully complied with at operational sites. Conflicts between labor and management have hampered the sense of mission sharing. Competition has been introduced only partially. Arrangements to secure accountability are not well established. In general, the organizations cannot smoothly carry out projects. Their unsatisfactory performance in system loss and tariff collection seems to be caused by not only technical factors but also by organizational factors.

¹⁷ Interview with a vice manager of Training Section, PEA.

From the fact that two power distribution organizations in Bangladesh show different performance, poor performance cannot be attributed to only political social or economic factors of the country. Similarly, good performance of REB/PBS cannot be explained by the cooperative method they adopted. Rather, their efforts to improve organizational capacity seem to be the key for the entire system to function efficiently. Good performance of PEA in Thailand suggests that traditional electrification method of PDB and DESA itself cannot account for the performance.

In conclusion, differences in performance can be explained better by differences in organizational capacity than by differences in culture or execution method. The major lesson learned from this comparative study of rural electrification agencies is that we should pay more attention to organizational capacity for the successful implementation of development projects.

3. CASE STUDY ON SMALL-SCALE, SCATTERED PROJECT: — RURAL AREAS INFRASTRUCTURE DEVELOPMENT PROJECT IN INDONESIA —

The Rural Areas Infrastructure Development Project (hereafter referred to as “Rural Infrastructure project” or as “the Project”) is designed to develop and improve basic infrastructures of access roads, water supply and sanitation facilities for backward villages in Indonesia. The Rural Infrastructure project has been carried out since the FY 1994 as one of the principal policies to reduce poverty in Indonesia.

A development project which consists of numerous small sub-projects tends to have more complex implementation frameworks and be difficult to monitor, compared with a conventional large-scale stand-alone infrastructure project. Conventional projects are typically represented by construction of dams, power plants or railways. Small-scale, scattered projects are implemented over widely distributed areas with a number of sub-project sites. It is often the case that one agency is responsible for an over-all project supervision at the center, while local executing agencies are responsible for day-to-day project implementation, such as construction and procurement. In case sub-

projects cover multiple-sectors, agencies involved will increase in number. It is virtually impossible for the central agency to directly monitor each of numerous sub-projects and check the progress and quality. Accordingly, it is necessary to incorporate a mechanism with which project monitoring is administrated locally and information gathered at the local sub-project sites is transmitted quickly and correctly to the central management.

Thus, the small-scale, scattered project requires an approach different from that used for conventional projects. To facilitate smooth vertical (central and local agencies) and horizontal (inter-ministerial) coordination as well as to incorporate monitoring and evaluating sub-projects into the executing process is a crucial key for the successful implementation of such a project. In other words, the small-scale, scattered project tends to have high transaction costs, such as coordination, information collection and monitoring costs, and thus demands high-level of organizational capacity for executing agency.

The Rural Infrastructure project is one of the good examples of successful management of small-scale, scattered projects. An impact evaluation, based on a sample survey, was completed for the sub-projects implemented in the FY 1995. The survey revealed that majorities of sampled sub-projects were considered satisfactory. In addition, interviews made for this Indonesian case study confirmed that various efforts were made to improve the implementation framework of the project.¹⁸ This case study tries to consider, by applying the analytical framework presented earlier, what kind of organizational arrangements are necessary to improve the management of a development project with multiple implementing agencies and a complex execution structure.

The execution framework of the Project explained here is based on the data collected from related JBIC documents and a field survey conducted in February 1999. It should be pointed out that in view of ongoing decentralization efforts in Indonesia, the executing structure or agencies in charge of this kind of scattered projects might undergo substantial changes in the future.

3.1. POVERTY IN INDONESIA

(1) Trends in Incidence of Poverty in Indonesia
Statistics on Indonesia’s poverty has been provided by the Statistics Indonesia (BPS: Badan Pusat Statistik¹⁹) since

18 Interviews on “Organizational Capacity of Executing Agencies of Developing Countries” by Research Institute of Development Assistance (February 1999).

19 Renamed from Biro Pusat Statistic (Central Bureau of Statistics) in 1997.

1976. The BPS has calculated an official poverty line and estimated the number of people living below this level based on the data provided by the National Socio-economic Survey (Susenas: Survei Sosial Ekonomi Nasional). Population under the poverty line was estimated as 70 million (60% of total population) in 1970, and dramatically declined to 22.49 million (11%) in 1996. However, the Asian currency crisis which started in 1997 inflicted a heavy blow on the efforts to reduce poverty in Indonesia. Post-crisis microeconomic data collection on poverty has just started, however, recent survey estimates poverty ratio to be most likely somewhere between 14% and 20%.²⁰ In any case, poverty and unemployment is undoubtedly the top policy priority for Indonesia. It is of urgent needs to target social safety nets to the poor population.

(2) Recent Poverty Alleviation Programs in Indonesia

The Indonesian Government placed reduction of poverty as one of the top priority policies in the 6th Five-year National Development Plan (Repelita VI, 1994-99) and launched a new policy initiative targeting the poor. Three main anti-poverty policies are 1) Presidential Grants for Backward (Poor) Villages (Impres Desa Tertinggal, hereafter referred to as "IDT" grants), 2) Provision of facilitators to assist village group activities and 3) Provision of village infrastructure development projects (P3DT: Pembangunan Prasarana Pendukung Desa Tertinggal).

(i) Backward Village Survey

The BPS conducted "village potency" (Potensi Desa) survey in 1993 as background data for the poverty alleviation policy and compiled the "backward village" statistics²¹. All the villages in Indonesia were classified into "backward" or "non-backward," based on the results of questionnaires regarding villages' economic affluence. The 1993 survey identified 20,633 villages as "backward villages," which accounted for about one-third of 65,554 villages across the country. The backward village statistics was revised in 1994 and a total of 24,414 villages were classified as backward. In 1995, the selection criteria were revised again to include all villages in four eastern provinces in

Indonesia (Maluku, East Nusa Tenggara, East Timor, and Irian Jaya) as well as five districts on isolated islands into the category of "backward villages." Accordingly, the total number of backward villages amounted to 28,376.

(ii) IDT Grants

Based on the "backward village" statistics mentioned above, the Indonesian Government launched the IDT Grant Project in 1994. IDT grants were aimed to supply project operating funds to the villages identified as "backward village". The IDT Grant Project gave villagers opportunities to organize small self-help groups (KMS) and to start small business with the fund provided by the Presidential Decree (Impres)²². Business eligible to the IDT grants was limited to productive activities (infrastructure construction was not eligible). The IDT funds were granted to 28,223 villages, and each village received 20 million Rp, for the three years between 1994 and 1997. The borrowers of the fund had to repay the money and the repaid funds could be used as a revolving fund, financing another productive project in the village. In addition, facilitators were dispatched in order to assist the self-help groups,

(iii) P3DT Program

Among Indonesia's poverty alleviation programs, P3DT Program covers the portion of infrastructure construction and repair. The P3DT Program can be classified into three categories according to the source of funding: JBIC loan, World Bank loan, and Indonesian government's own funding. Applicable infrastructures include intra-village access roads and bridges, jetties, water supply and sanitation facilities (combination of public toilets, washing and bathing facilities, which is called "MCK"). The P3DT Program is designed to²³:

- a) improve access to markets and decrease village isolation;
- b) improve the level of health of local people (by providing clean water supplies and sanitation facilities);
- c) create job opportunities in villages, especially during the dry season;

20 Cameron (1999), p.12.

21 At the beginning, these villages were called "poor villages" (Desa Miskin), but later renamed as "backward villages" (Desa Tertinggal).

22 Impres (Instruksi Presiden) represents funds allocated to local governments out of the central government's development budgets to carry out specific projects prescribed by the Presidential Decree. Impres can be classified into (1) Special Impres, allocated to a certain sector, such as "School Impres," "Health Impres," "Provincial or District Roads Impres," "IDT,"; and (2) Block Impres, granted to local governments (provinces, districts, villages) without specifying fund usage.

23 P3DT Coordination Team (1998), pp.7-9.

- d) enhance the management capacity of district governments and villages and reinforce community and village institutional capacity; and
- e) increase the capabilities of village people's skill in planning, constructing, implementing and maintaining local infrastructures.

While the "Rural Infrastructure Project" financed by the JBIC mainly covers the areas outside Java and Bali islands, the "Village Infrastructure Project" financed by the World Bank covered Java and part of Sumatra islands.²⁴ The World Bank and JBIC projects differ in how to select target villages and how to implement the projects as well²⁵. The Rural Infrastructure Project is the subject of this case study and examined in detail in the following section.

3.2. RURAL AREAS INFRASTRUCTURE DEVELOPMENT PROJECT IN INDONESIA

(1) Objectives of the Project

The objectives of the project are to contribute to reducing poverty through self-sustaining development of villages by constructing/improving village access infrastructure and water supply infrastructure in backward villages with high development potentials. The above-mentioned IDT grants provided operation funds for non-infrastructure projects undertaken in backward villages. Together with the Rural Infrastructure project, those programs are expected to yield synergy effects in reducing poverty in backward villages.

(2) Applicable Regions and Infrastructures

The Rural Infrastructure project covers all Indonesian regions except for Java and Bali islands. As basic infrastructures in Java and Bali were better developed than those on the outer islands, causes for impeding development in Java and Bali were thought to be other factors than a short-fall in infrastructure. Though backward villages badly need development of various kinds of infrastructure, the Project has focused on the improvement of most essential infrastructures, that is, access roads and small water-supply facilities.

(3) Criteria for Selecting Target Villages

In view of a fact that project is financed by overseas loans, the Project focuses on those backward villages that are most likely to achieve high invest efficiency and project sustainability. Consequently, backward villages with high development potentials were given priority to receive the assistance.

Selection criteria of eligible villages are chosen from among variables used in the "village potency" survey. "Backward villages" are rated into five groups: 1) productive, 2) potential, 3) moderately poor, 4) poor and 5) extremely poor. A cluster, which consists of three to five villages, is formed to have at least 60% of "productive" or "potential" villages.

(4) Project Execution Framework

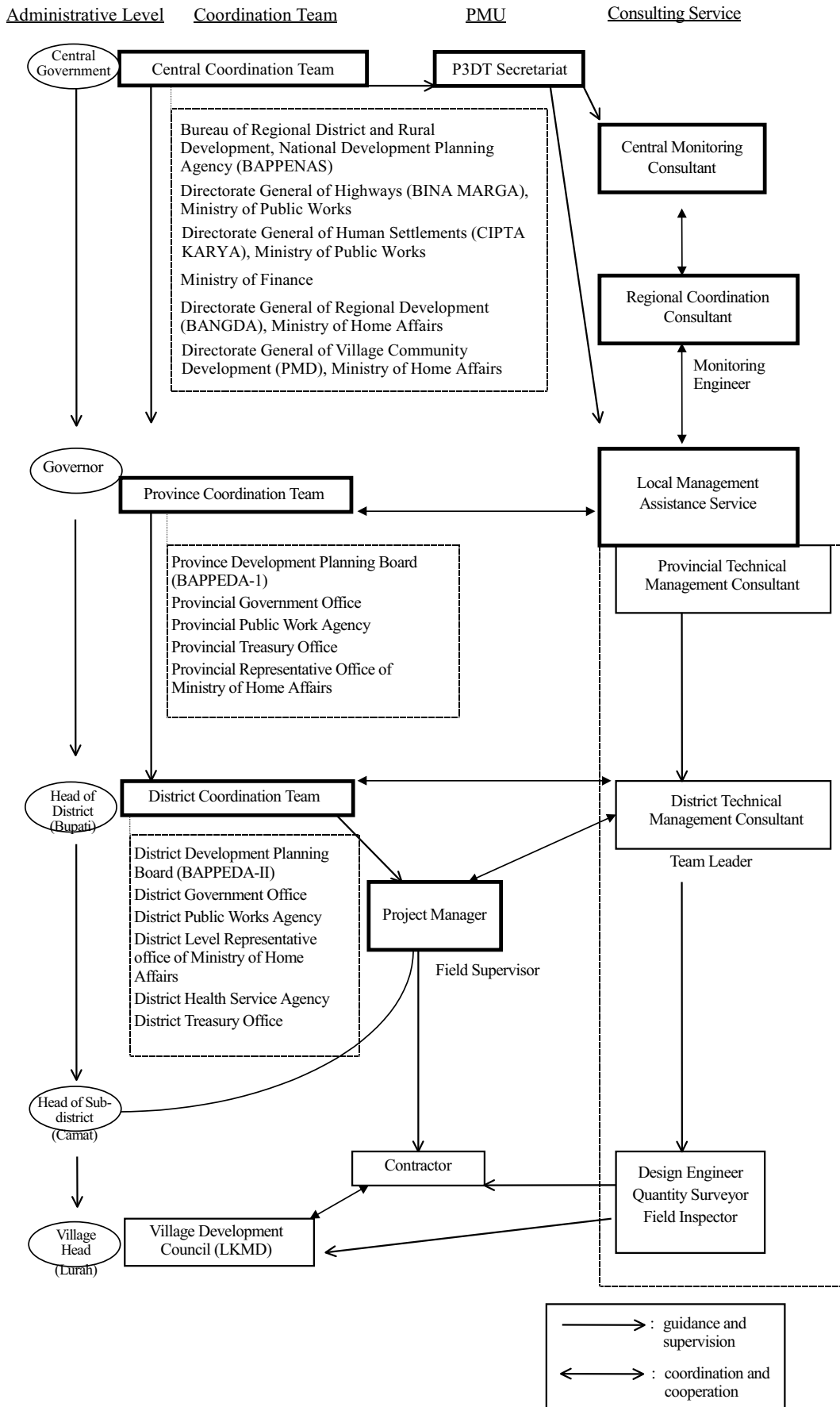
Related executing agencies are: the Bureau of Regional District and Rural Development, the National Development Planning Agency (BAPPENAS); Directorate General of Highways, Ministry of Public Works (BINA MARGA); Directorate General of Human Settlements, Ministry of Public Works (CIPTA KARYA); the Directorate General of Regional Development, Ministry of Home Affairs (BANGDA); Directorate General of Village Community Development, Ministry of Home Affairs (PMD); and district governments (KABUPATEN). Each of the organizations is assigned their responsibilities as follows:

- BAPPENAS: Responsible for overall coordination, creating operational guidelines, budget control, monitoring and sub-project selection. Project Management Unit (PMU) is created in BAPPENAS for project supervision.
- BINA MARGA: Responsible for technical support in development of access infrastructures.
- CIPTA KARYA: Responsible for technical support to water supply infrastructures.
- BANGDA: Responsible for providing guidance and supervision to local governments (districts and provinces) on non-technical affairs.
- PMD: Responsible for providing guidance and supervision to local governments (sub-districts and lower levels) on non-technical affairs.

24 The World Bank-financed Village Infrastructure Project has been replaced by Kecamatan Development Project, focusing on sub-district development by combination of small-scale infrastructures and micro-credits schemes since 1998.

25 The JBIC project adapts a system called "Cooperative Pattern" (Pola Kerjasama) with which infrastructure construction is contracted out to a local contractor who is to create a working agreement with the local community. The World Bank-financed Village Infrastructure Project focused on "extremely poor" villages and adapted "Pola Swakelola" (Self-Management Pattern) system. Projects were planned, implemented and maintained directly by citizens of local communities.

Figure 2: Framework for Implementing Rural Areas Infrastructure Development Project



- District Governments: Responsible for procurement of contractors, performing functions as main implementing agencies, collecting village information and transmitting it to the central government via the provincial government and the Ministry of Home Affairs.

In addition, coordination teams are organized at each administrative level in order to assure smooth inter-organizational collaboration (see Figure 2).

- Central Coordination Team: BAPPENAS is responsible for overall coordination. The Central Coordination Team has a secretariat (P3DT Secretariat), which serves as a project management unit, and is responsible for project supervision supported by a consultant team.
- Province Coordination Team: The role of the provincial government is to check sub-project proposals submitted by the district governments and to send them to the central level, and to approve sub-projects after an authorized letter of development budget is issued at the center.
- District Coordination Team: As a main implementing agency, the district government prepares project plans, signs procurement contracts, monitors sub-projects, supervises and evaluates project progress and quality, and reports to provincial and central governments. In the course of project implementation a project manager(s) is appointed from the District Public Works.
- Village Development Council (LKMD): Responsible for submitting sub-project application in a project planning stage, mobilizing villagers for sub-project construction under a contract with contractors and operation/maintenance of sub-projects.

(5) Consultant Services

To support project execution, consultant service is provided as: a) the Central Monitoring and Management Assistance Consultant (CMMC), b) the Regional Coordination Team and c) the Local Management Assistance Services (LMAS). The CMMC supports P3DT Secretariat (PMU) while maintaining coordination with the Regional Coordination Team and the LMAS. The Regional Coordination Team bridges CMMC and LMAS and sends a monitoring engineer to each province. The Local Management Assistance Service extends technical and management support to administrative organizations at provincial, district and village levels. Design engineers, quality surveyors and field inspectors are provided to assist local operations un-

der the supervision of the District Technical Management consultants.

3.3. EVALUATION OF RURAL AREAS INFRA-STRUCTURE DEVELOPMENT PROJECT

Table 7 summarizes the organizational capacity of related executing agencies, using the criteria “expertise,” “specificity,” and “incentives.” “Expertise” is evaluated in terms of sufficiency in “training personnel,” “consultant service” and the “database development” that support project execution. “Specificity,” is evaluated by three criteria: “simplicity of project structure,” “specificity in responsibility,” and “specificity in authority.” As for incentives, mission sharing is evaluated in terms of “efforts to infiltrate mission and value,” contestability in terms of “inter-unit competition” and accountability in terms of “monitoring by higher-level organizations” and “monitoring by beneficiaries.” Details of evaluation are presented as below.

(1) Expertise

(i) Training

In order to acquaint people in charge of and participating in the project with project execution, training courses are offered to organizations and individuals on each administrative level. Training courses are provided to descend from the center to villages, like a “tree diagram” via provinces, districts, sub-districts, and villages. First, at the central level, the central consultant team provides applicable province level officers with training courses chiefly designed to foster instructors for the provincial and lower-level organizations. Likewise, province level consultants trained at the center serve as instructors and provide training to district level officers. Up to the district level participants, trainees completing the full training course are certified as official instructors. Then, district level consultants serve as instructors and provide training to sub-district level officers. Training at sub-district level focuses on project orientation. Lastly, at the village level, provincial and district level instructors provide training on project socialization (introduction) to village-level participants. Thus, training is provided at each administrative level in order to assure that all the participants of the project understand the objectives of the project and details of job assignments.

(ii) Consultant Service

A multi-layered consulting service is provided to assist the project execution. Most of the project execution responsibilities fall on the shoulders of the central Project

Table 7: Analysis of Organizational Capacity in Rural Areas Infrastructure Development Project

Components of capability	Check Items	Evaluation		
Expertise	Training	A	Guidelines and training are provided to acquaint stakeholders with the details of the project, and with responsibilities and job descriptions of each organization.	
	Consultant service	A	Extensive consultant service is provided to support government agencies at each administrative level in executing the project.	
	Database development	A	Computer databases are developed for sub-project planning, monitoring project progress and double-checking fund flows.	
Specificity	Simplicity of project structure	A	Simplifying the project structure by limiting the number of project components.	
	Specificity in responsibility	A	Responsibilities of the central and local government agencies are well defined.	
	Specificity in authority	A	Powerful authority is vested to BAPPENAS as a central coordinating agency and to the district government as a local sub-project implementing agency.	
Incentives	Mission sharing	A	Efforts are made to share the mission and importance of the project through training and socialization programs.	
	Contestability	B	A pilot project is introduced to encourage villages competing with each other for the approval of a sub-project proposal.	
	Accountability	Monitoring by higher-level organizations	A	Sub-project progress and quality are checked by multiple organizations/personnel, such as consultants project manager(s), District Coordination Team, and Provincial Coordination Team.
		Monitoring by beneficiaries	A	Efforts are made to disclose project information (such as fund allocation) to local beneficiaries in order to enable them monitor sub-projects.
A: Satisfactory	B: Partially satisfactory	C: Unsatisfactory		

Management Unit and district governments (and project managers). Therefore, as mentioned before, central- and provincial-level consultant teams are provided to support the operation of PMU and district governments. In addition, consultant teams are also dispatched to the Provincial Coordination team to support collecting information and monitoring sub-projects. Consultant teams at each administrative level maintain close communication with each other, using sophisticated and standardized recording and reporting system.

Whether the project is sustainable or not after the completion of consultant service still remains to be seen. The consultant service, however, plays a significant role in supervising extensive and complex execution framework of this project.

(iii) Database Development

Geographical information system (GIS) has been developed to help determine sub-project designs and select eligible villages. In addition to geographical information

such as topographical maps, the database stores information collected from the backward village survey, the socio-economic survey, and the rapid social survey. The GIS system facilitates a quick access to geographical information; whether villages in one cluster are neighboring with each other, whether access roads under the Project are linked efficiently with other roads. Also, information relating to civil work contracts and fund disbursement are stored in the database. Contract and fund disbursement information collected from the local sites is double-checked with the central bank's actual fund disbursement data. This can detect any double-payments and monitor fund flows.

Major challenge for small-scale, scattered projects is how to effectively monitor numerous sub-projects and a large number of accompanying contracts. In this Project, the computer database facilitates efficient project planning and helps monitor sub-project progress and fund flows. At the beginning of the project the computer database system was not as large or comprehensive as it is now. Continuous upgrading and revision has been made to the system in

the course of project execution.

(2) Specificity

(i) Simplicity of Project

Backward villages obviously need various kinds of infrastructure beside access roads and water supply facilities. Targeting on key infrastructures, on the other hand, made it possible to limit the number of central government agencies involved and thus reduce the burden of coordination. At the time of the field survey of this study (February 1999), the P3DT Secretariat was planning the Phase 3 of Rural Areas Infrastructure Development Project. According to the officer in charge, the P3DT Secretariat was exploring the possibility of adding small-scale irrigation systems, post-harvest infrastructures (e.g. construction of marketplaces), small-scale power plants to sub-project components, since the Project was set on the right track.²⁶

(ii) Specificity in Responsibility

When multiple organizations at multiple levels of government are involved in project execution, inter-organizational coordination is crucial to successful project implementation. To manage complex inter-organizational coordination, it is essential to well define the roles and scope of responsibility of respective executing agencies. At the time of the project appraisal, an agreement was reached on defining the responsibilities of related executing agencies and the Loan Agreement specified BAPPENAS as a central coordinating agency.

The central consultant team also worked out guidelines setting forth details on the responsibilities and job descriptions of respective organizations. At the onset of the project, two guidelines, operational guidelines and technical guidelines, were prepared. New guidelines have been added in the course of project execution. Current major guidelines include: the general implementation guidelines, the technical guidelines, the community participation guidelines, the guidelines on village-level administration, the guidelines on reporting system, and the procurement guidelines. These guidelines are revised and updated each year. In order to promote public awareness of the relevant guidelines, training courses are offered using specific guidelines as textbooks at each administrative level.

(iii) Specificity in Authority

As for the authority concerning the project execution, BAPPENAS (and P3DT Secretariat) and district govern-

ments are endowed with strong power to manage the project. BAPPENAS is responsible for inter-ministerial coordination at the center, overall project planning, supervision and evaluation, while the district governments are responsible for local sub-project implementation. Coordination among central government agencies is often difficult since a sense of rivalry on inter-ministerial relations may work as a deterrent to close mutual collaboration. In the case of BAPPENAS, inter-ministerial coordination is relatively easy because of its statutory status as a minister responsible for coordinating development policies and projects. District governments play a major role in the phases of planning and implementing projects. They are vested with a power to coordinate proposals submitted by villages, organize clusters, determine sub-project components, procure contractors, to carry out civil engineering works on a contract basis. On the other hand the roles of the provincial governments are quite limited.

(3) Incentives

(i) Mission Sharing

This project involves participants from both public and private sectors. It is crucially important for the people with different backgrounds to share common understandings of the mission and content of the project and the responsibilities of each organization/individual. Thus, project trainings are offered and public and private stakeholders participate in the training together. Joint training is expected to promote mutual cooperation and coordination among the participants of the Project.

(ii) Contestability

Pilot projects are underway to introduce a principle of competition into the process of selecting villages and sub-projects. Under the current system, candidate villages are determined by the central project management first, and then the district governments formulate clusters based on the candidate list. Contrarily, the pilot project first selects 30 sub-districts (without specifying villages). Villages in the selected sub-districts work out project proposals and submit them to the sub-district office. Then, the proposal evaluation committee, organized at the sub-district level, decides on which proposal should be chosen. The proposal evaluation is made based on eight criteria, such as whether the proposal conforms with the regional development policies, whether many local residents participate in the project, whether local resources can be utilized, whether sub-project

26. According to the BAPPENAS P3DT officer in charge.

is sustainable. Inter-village proposal contest is expected to improve project quality and transparency in selecting sub-projects²⁷

(iii) Accountability

Efforts are made to secure accountability by developing an appropriate reporting and monitoring system and by having the project subject to inspection of multiple stakeholders. Here, inspection is categorized into two: monitoring by higher-level organizations and monitoring by beneficiaries.

Surveillance by higher-level organizations is based on a monitoring and reporting system implemented through a chain of command of administrative hierarchy. Results of monitoring sub-projects are first submitted to the district level and then the compiled reports are submitted to the province. Project managers also check interim progress and the quality of sub-projects through field supervisors. Monthly reports compiled at each province are submitted to the Regional Coordination Consultant, after an approval of the Province Coordination Team. Reports compiled at each region are then submitted to the P3DT Secretariat at the center and the Central Monitoring Consultant. Report forms are standardized and provided by the project management unit. In addition to the monitoring by consultants, the District and Province Coordination teams organize sub-project site inspection independently. These monitoring arrangements and inspection by multiple-parties are provided in order to enhance transparency in progress, quality and fund-flows of sub-projects.

Monitoring by beneficiaries is designed to enhance transparency by disclosing project information to beneficiaries, such as fund allocation. One of the characteristics of the small-scale infrastructure project is that beneficiaries can directly observe the end results of the project (road, water supply and sanitation facilities). Besides, local residents themselves propose what kind of infrastructures they need, take on part of the construction works and are responsible for operation and maintenance of the project. In this way, beneficiaries have opportunities to observe the process and results of the project. Participation and information disclosure is expected to give an opportunity to beneficiaries to check if sub-projects are actually carried out as they are supposed to be.

This section has analyzed the Rural Areas Infrastructure Development Project from the perspective of organi-

zational capacity. As shown in Table 7, it can be concluded that the Project passes as satisfactory in terms of most of the components of organizational capacity. Responsibility and authority of stakeholders and major agencies involved is well defined. Guidelines specifying the objectives and content of the Project and the roles of related organizations are prepared and training is offered to the stakeholders at each administrative level. In order to assist planning, monitoring and evaluation of widely scattered sub-projects, consultant service and computer database are provided. Furthermore, a mechanism that promotes accountability is developed: multiple inspections by higher-level organization and surveillance by beneficiary through disclosing project information.

It is needless to say that different countries or sectors have different circumstances and constraints. So, the project execution framework of this Project cannot simply be applied to other small-scale scattered projects. Perhaps an important lesson learned from the Rural Infrastructure project is the significance of preparing projects well, that is, to carefully assess a project execution framework and organizational capacity of related participants. As discussed above, bottlenecks of this complex project were closely examined and potential impediments were analyzed. Then, counter-measures were devised in order to improve organizational capacity, such as specifying responsibility, providing guidelines and training and devising a monitoring mechanism. Besides, in the course of project execution, various improvements were made to the execution system, including revising guidelines, introducing inter-unit competitions. Efforts to improve organizational capacity at the preparatory and implementing stages of the project are the key to explain relatively good performance of the Project.

4. CONCLUSION AND FURTHER STUDIES

Organizational capacity of executing agencies has been well recognized as a significant factor that influences the performance and effectiveness of development projects. Many donor agencies understand the importance of organizational capacity, and have been trying to improve the organizational capacity of executing agencies through various measures such as providing technical assistance. However, there is no common agreement how and with what criteria organizational capacity should be measured. Therefore, infor-

27. Ibid.

mation on organizational capacity tends to be ambiguous or subjective and remains as personal “tacit knowledge”, as there is no established framework through which information can be analyzed and shared. This paper tried to explain organizational capacity of the executing agencies by using an analytical framework of new institutional economics and transaction costs. It is hoped that the paper can provide an opportunity for practitioners and researchers of development to work on the concept of organizational capacity, which has not often been a subject of analysis in the field of development projects.

The first section presents a framework for analyzing organizational capacity. Project execution costs are assumed to consist of transformation costs and transaction costs. Organizational capacity of executing agencies is defined as “the ability to keep the transaction costs as low as possible by devising various counter-measures in advance”. Organizational capacity can be explained by three factors: (1) expertise, (2) specificity and (3) incentives. When all of these components are sufficiently developed, that is, an organization is provided with high expertise, clearly defined authority and responsibility, and appropriate incentive structure to execute a project, the executing agency is considered to have high level of organizational capacity. Thus, it can achieve superior performance in project execution.

Among those three components, incentives are the most important factor that affects the organizational capacity. Even when staff members of an executing agency have excellent expertise and their responsibilities are clearly defined, the project will most likely not be implemented effectively, if they have little incentives to do so. Incentives themselves are assumed to be influenced by the following three elements: (a) mission sharing, (b) contestability, and (c) accountability. Namely, incentives to execute a project will be high: when related members of the agencies understand and share the mission of an organization as well as the significance of the project; when they are faced with internal or external competitions; when the contents and outcomes of the project are subject to the scrutiny of multiple people; and when they are required to be accountable to the stakeholders of the project.

The second and third sections apply this analytical framework to some empirical cases. The first case study compares power distribution authorities in Bangladesh and Thailand. Bangladesh’s Rural Electrification Board (REB) is executing rural electrification projects through PBSs, user’s cooperatives, and the project performance is good in terms of system loss and tariff collection ratios. On the other hand, the Bangladesh Power Development Board

(PDB) and the Dhaka Electric Supply Authority (DESA), although they are in the same country, are performing poorly. PDB/DESA employ a conventional operation structure in which one power distribution enterprise is also in charge of service/sales to end users. Moreover, the PEA in Thailand is showing excellent performance, while it employs the same conventional operation mode.

Attempts are made to explain the difference in performance of respective executing agencies by examining the differences in their organizational capacity. The results indicate that REB, PBS and PEA have all the components of organizational capacity evaluated as satisfactory, while PDB and DESA have all of them evaluated as unsatisfactory or partially satisfactory.

The second case study examines a widely scattered development project. Projects with numerous small-scale sub-projects distributed in a vast area are usually more difficult to monitor than conventional large-scale infrastructure projects. Project management is difficult not just because there are a lot of sub-projects to supervise but also because coordination and communication is necessary among central agencies, local sub-project implementation units and administrative organizations that vertically connect the central and local institutions. In addition, when sub-projects involve multiple sectors, horizontal coordination between sectors is required at each administrative level. Thus, small-scale scattered-type projects tend to have higher transaction costs, such as coordination, information gathering and monitoring, and require a higher level of organizational capacity.

The case study, Rural Areas Infrastructure Development Project in Indonesia, covers two sectors, access roads and water supply, and sub-project sites are numerous and distributed at the village level. Multiple executing agencies are involved at various levels of administration. The result of applying the fore-presented analytical framework shows that almost all the components of organizational capacity are evaluated as sufficient.

Those case studies show that performance of the project highly correlates with adequacy in each component of organizational capacity. While more case studies are necessary, the analytical framework of this report can be a robust tool to examine the relationship between performance and organizational capacity of executing agencies. Another important lesson learned from these case studies is the fact that organizational capacity can be improved. As is observed in the case studies, REB and PBS in Bangladesh, PEA in Thailand, and agencies for the Rural Infrastructure Project in Indonesia are all making conscious efforts to improve their organizational capacity. Although

development stages and cultural backgrounds of a country certainly affect the organizational capacity, organizational capacity is not unchangeable or given. Efforts to strengthen each component of organizational capacity before and during the project implementation can change and improve the capacity and performance.

The ultimate objectives of development are to eradicate poverty and to achieve higher levels of social welfare. These goals can be attained by several methods. A macro-approach that tries to enhance institutions governing the entire society or nation is, needless to say, effective to resolve development difficulties. Also important is a micro-approach that tries to enhance organizational capacity through executing development projects. A micro-approach can not only improve organizations related to the projects but also have spillover effects reaching people in the society beyond the projects.

Issues left for further investigation are to conduct more comparative case studies on organizational capacity. Institutions and organizations are relatively new areas of study in development, and theories and analytical frameworks still need to be further explored by academics and practitioners. The analytical framework for organizational capacity presented in this paper is a hypothesis, and need a further refinement and revision through continuous examinations of case studies and accumulation of lessons from empirical cases.

Lastly, organizational capacity also has some implications for Japan's ODA operations. While conventional large-scale infrastructure projects continue to be the majority, social development projects and small-scale scattered-type projects are increasing. Transaction costs for these new types of projects are higher in general and higher organizational capacity is required for the agencies in charge of the projects. In addition, donors are required to secure transparency, accountability, and participation of stakeholders, in order to enhance efficiency and effectiveness of ODA. With these new challenges in mind, more efforts should be made on preparation, monitoring, assessment and feedback of the project during the entire phases of the project cycle. This means that more attention must be paid to the issues of organizational capacity. Hopefully the framework for analyzing organizational capacity presented in this paper will help understand the organizational capacity and contribute to a better implementation of future ODA projects.

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