Funding Construction Industry Development

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ABSTRACT

Systematic management of the development of the construction industry is a recognised essential activity in most countries, as studies have shown that the industry almost everywhere performs below the expectations of clients, and society as a whole, and fails to reach its potential in playing its key role in the economy and in national development. Efforts are being made to improve the performance of the construction industry in many countries. Despite the similarity of the task, the approach has differed. The results have also not been the same. A critical issue is how the development activity is funded.

This paper discusses the financing of initiatives to develop the construction industry in the poorer countries. It reviews the merits of industry development. It then considers the approach taken in various countries to finance the development of their construction industries and draws lessons from them. It assesses possible financing mechanisms under various contexts.

1. INTRODUCTION

1.1 Importance of Industry Development

The construction industry is a key sector of the economy (Hillebrandt, 2000). It is estimated that investments in housing alone account for 2 to 8 percent of GNP; 10 to 30 percent of gross capital formation; 20 to 50 percent of accumulated wealth; and 10 to 40 per cent of household expenditure (Badiane, 2001). The industry has many linkages to other sectors such as manufacturing and services, and stimulates activities in them. Firms in all sectors also require some construction. Thus, construction affects other sectors, and vice-versa.

Construction contributes to socio-economic development by providing the buildings which are used in the production of all goods and services. The physical infrastructure is the nation's economic backbone enabling goods and services to be distributed within and outside the country. The quality of the design and construction of these facilities has an impact on the efficiency with which the business activities can be undertaken. Thus, the industry can influence the competitiveness of enterprises and the nation's ability to attract foreign investment. This is important in this era of globalisation as nations compete to attract foreign domestic investment. The nation's stock of constructed items is a large proportion of its savings. Studies show that Gross Domestic Fixed Capital Formation in construction is 45-60 percent of total capital formation (Ofori, 1990; Badiane, 2001). Thus, it is essential to ensure that these items are of high quality and durability, and can resist obsolescence for as long as possible. Construction activity is relatively labour-intensive. Thus, it can generate employment. Moreover, constructed items are location specific, and they must be built where they are required. Thus, construction activity has the potential to generate incomes even in isolated communities, and hence, alleviate poverty.

For a construction industry to play its due role in the economy and in socio-economic development, it should have the capacity and capability to meet the demand put to it, and to perform well. Thus, efforts should be made to ensure the continuous development of the industry. The construction industry, in most countries, is large, complex, diverse, fragmented and geographically spread out. Many

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factors influence its performance, well-being and prospects at many levels. Many previous attempts to improve the industry have failed to succeed. Studies show that the construction industries of developing countries face many problems because (Ofori, 1993, 1994): (a) the economic weaknesses of these countries means that there are few work opportunities, and inadequate resources for efforts to improve the industry; (b) many of the governments do not recognise the importance of the construction industries and hence do not formulate and implement programmes for upgrading them; and (c) the underdevelopment of the construction industries means that they are unable to deal with their weaknesses, or to make a strong case for help.

1.2 Management of Construction Industry

The above discussion shows that it is important to improve the performance of the construction industry, and this can only be achieved through a conscious effort. It is suggested that *construction industry development* "refers to the pursuit of the improvement of the industry as an objective in itself … the approach is direct and continuous … [it] would incorporate appropriate strategies, and integrated plans and programmes under specific implementing agencies" (Ofori, 1993: 48-49). Task Group 29 (TG29) of the International Council for Research and Innovation in Building and Construction (CIB), at its meeting in Arusha, Tanzania in 1998, formulated the following definition:

> Construction industry development is a deliberate and managed process to improve the capacity and effectiveness of the construction industry to meet the national economic demand for building and civil engineering products, and to support sustained national economic and social development objectives.
>
> Construction industry development promotes:
> - Increased value for money to industry clients as well as environmental responsibility in the delivery process
> - The viability and competitiveness of domestic construction enterprises
> - Optimisation of the role of all participants and stakeholders through process, technological, institutional enhancement and through appropriate human resource development.

Construction industry development is administered in different ways in various countries. Some countries, such as China and Vietnam, have ministries of construction. Malaysia, Singapore, South Africa, Sri Lanka and Tanzania have statutory agencies for industry development. In a few cases, the organisation is industry inspired. In the vast number of countries, there is no systematic effort to develop the industry. This study focuses on the financing of the industry development process.

1.3 Financial Provisions for Industry Development Agencies

The statutes which provide for the establishment of construction industry development agencies in various countries cover their funding. This consideration includes the sources of funds and the administration of these funds. Two examples are now considered.

1.3.1 Singapore

The Building and Construction Authority (BCA) Act of Singapore provides for the BCA to prepare and adopt annual estimates of income and expenditure for the Minister's approval. The Act states that (Government of Singapore, 1999):

> For the purpose of enabling the Authority to carry out its functions under this Act, the Minister may, from time to time, make grants-in-aid to the Authority of such sums of money, as the Minister may determine, out of moneys to be provided by Parliament (sec. 18).

The Authority may also raise loans from the government or, with the consent of the Minister, other sources (sec. 19). The Authority is subjected to the same financial management regulations as other public-sector agencies.

> The moneys of the Authority shall be applied only in payment or discharge of the expenses, obligations and liabilities of the Authority and in making any payments that the Authority is authorised or required to make (sec. 20(2)).

1.3.2 South Africa

In South Africa, the Construction Industry Development Board (CIDB) Act provided details of the financial provisions (Republic of South Africa, 2000). The Act states, in sec. 24(1):

> The funds of the Board consist of –
> (a) money appropriated by Parliament, for the achievement of the objects of the Board;
> (b) income derived by virtue of the exercise and performance of its powers, functions and duties;
> (c) donations or contributions received by the Board from any source with the approval of the Minister;
> (d) any other income, including interest earned on any investment made...

The Act provides for the CIDB (with the approval of the Minister, in consultation with the Minister of Finance) to raise money by way of a loan or a grant (sec. 25). It outlines how the Board should manage its funds, highlighting the budgeting, monitoring and accounting processes (sec. 24(2-7)). It was envisaged that the Board would have an annual budget of approximately R11.5 million (US$1 = 6R).

The Act envisaged that much of the funds of the Board could be derived from the registration of contractors, and registration of projects. Within the first three years of its establishment, the CIDB must establish a register of contractors which indicates the size and distribution of contractors; the volume, nature and performance of contractors and target groups; and enables access by the private sector. This register must be applied by "every organ of state" (sec. 16(4)):

> A contractor may not undertake, carry out or complete any construction works or portion thereof for public sector contracts, awarded in terms of competitive tender or quotation, unless he or she is registered with the Board and holds a valid registration certificate issued by the Board.

The registration of each contractor would be valid for a period of three years. The Act provides that:

> The Minister may, on the recommendation of the Board, prescribe a fee to be paid annually to the Board by all contractors registered with the Board…(sec. 16(8)).

The CIDB must also establish a register of projects to gather information on the nature, value and distribution of projects (sec. 22(1)). This information would provide the basis for a best practice project assessment scheme to which all projects above a prescribed tender value would be subjected. Before the registers come into being, the government will fund the CIDB; a memorandum incorporated in the CIDB Bill stated:

> It is foreseen that the CIDB will rely initially on Government funding. Once the register for contractors and the register for projects are established the envisaged cost will be partially funded from the operation of these services to industry stakeholders (p. 17).

2. OBJECTIVES AND METHOD OF THE STUDY

The objectives of the study are to:

1. study various approaches to the funding of construction industry development programmes

2. assess the merits, weaknesses and success factors of the various funding mechanisms

3. propose an approach for determining a suitable sustainable funding mechanism for the construction industry of a developing country.

The study is based on a review of the relevant literature and a short questionnaire survey of the administrators of selected industry development agencies. The experiences of various countries obtained from these sources were analysed and compared, and possible approaches for a typical developing country identified.

3. FUNDING MECHANISMS: THE LITERATURE

A literature search showed three main approaches for funding industry development. The first is where the government provides all the funds; the second approach involves the industry financing all developmental activities; and the third involves both the government and industry.

3.1 Government Funding

The National Construction Council (NCC) in Tanzania is an example of a government-funded construction industry development agency. It was established through Act of Parliament No. 20 of 1979 and became operational in 1981. Its functions, under the Act, include to: promote the development of the construction industry; plan and co-ordinate the activities of persons engaged in the industry; provide advisory services and technical assistance necessary for the proper development of the industry; provide and promote training facilities; advise the government on all matters relating to the development of the industry; promote the documentation and dissemination of information; monitor the implementation of standards and regulations; monitor construction costs and make suggestions for their control; give advice on the economical use of materials and encourage the maximum use of local materials; carry out, co-ordinate, and promote the carrying out of research; advise on the adaptation of technology in the industry; and establish and monitor guidelines for tendering procedures so as to ensure fairness, speed and economy. In 1985 the government required NCC to establish a technical audit function for providing independent reviews on the performance of projects at various stages of implementation.

According to the NCC Act, the major sources of income of the Council are government subvention, donations, grants, and loans. The Council has mainly received funding from: government subvention; multilateral and bilateral funding agencies; internally generated funds (IGF), donations from local institutions; and fees for its services. Up to 1995, government funds voted by Parliament constituted the major source of funding for the Council. This dependency on government financing was detrimental. For example between 1981 and 1991, the NCC received an average of 45% of the recurrent budget it had requested. Since 1995/96, the NCC has been receiving only basic salaries for permanent staff.

In 1985 the Council started charging for some of its services. Initially, the charges were set below market rates to enable the majority of local actors to benefit from its advisory services. However, since 1995, it has been charging market rates for most of its services (advisory services, consultancy services, settlement of disputes, technical audit services, and training activities). This has resulted in a substantial increase in IGF from 22% in the financial year 1991/92 to a peak of 82% in 1999/00. The trend of financing of the recurrent budget from government subvention and IGF between July 1991 and June 2000 is shown in Table 1. The NCC planned to be self sufficient in the recurrent budget by the financial year 1999/2000. However, the poor state of the national economy led to a significant reduction in the volume of construction activities, resulting in reduced demand for the services of the NCC. In 1999/00, the target was to generate about 88% of the recurrent budget but only 82% was generated based on the actual income received or 56% of the planned total income. The year 2000/01 saw a further reduction.

3.2 Levy-Based Funding System for Industry Development in Malaysia

The project-based approach to funding industry development is adopted in some countries including Malaysia. The Construction Industry Development Board (CIDB) of Malaysia, established in 1994, has the following objectives (http://www.cidb.gov.my): to promote and stimulate construction research and development (R&D); to provide consultancy and advisory services on construction; to promote construction quality assurance; to encourage standardisation and improvement of techniques and materials; to initiate and maintain industry information systems; to provide and promote training and certification for workers and supervisors; and to accredit and register contractors.

Table 1 Trend of Government Subvention and Internally Generated Funds of the NCC

Year	Planned Income (Tshs. Million)*			Actual Income (Tshs. Million)			% of Actual IGF Over Actual Total	% Actual Income Over Planned
	Govt. Funds	IGF	Total	Govt. Funds	IGF	Total		
1991/92	33	23	60	25	7	32	22	53
1992/93	42	49	91	31	11	42	26	46
1993/94	45	66	111	44	35	79	44	71
1994/95	44	99	143	49	45	94	48	66
1995/96	61	128	189	80	155	235	66	124
1996/97	150	153	343	84	275	359	77	105
1997/98	113	831	944	100	363	463	78	49
1998/99	105	976	1,081	100	376	476	79	44
1999/00	0	1,123	1,123	110	518	628	82	56
2000/01	119	993	1,112	119	343	462	74	42

*US$1 = Tsh 1,000

Source: NCC Audited Accounts, Annual Reports and Corporate Plan

The activities of the CIDB are funded from a fund created from mandatory contributions under the Construction Industry (Collection of Levy) Regulations 1996. All contractors of works above RM 500,000 are required to pay a levy of 0.25% of the contract sum, to be added to the contract sum and ultimately paid by the clients. The fund is administered by the CIDB. Failure to comply with this provision is an offence under the law and may result in a fine not exceeding RM 50,000, or in action such as cancellation, suspension or revocation of the contractor's permit or license.

3.3 Funding by Government and Industry

3.3.1 Singapore

The Construction Industry and Development Board (CIDB) in Singapore was formed in 1984 to spearhead the expansion and development of the construction industry. In 1999, it was merged with the Building Control Division of the then Public Works Department to form the Building and Construction Authority (BCA). The CIDB/BCA finances its activities from government grants and internally generated funds. The grants appear to be based on the level given the previous year. Table 2 shows the operating income, expenditure and grants for the then CIDB in 1989/90 to 1998/99. The data show that the CIDB made surpluses over its operating expenditure each year between 1996/97 and 1999, but received government grants even during these years – the surpluses and grants for the year were transferred into the CIDB's reserves which could be retained during the life of each government.

Table 3 presents sources of the income of the CIDB between 1989/90 and 1998/99. It indicates that the earnings are mainly from course and trade test fees, the total of which rose progressively from S$2,645,286 (US$1 = 1.69) to S$30,735,340; and quality assessment and certification fees which also increased from S$1,074,745 in 1993/94 to S$6,072,510 in 1998/99. The certification fees were from the then CIDB's certification of firms to the ISO 9001 and 9002 quality management systems and the auditing of these systems. Since July 1997, it has been mandatory for large contractors (those in the top three categories of an 8-band registration scheme) and consultancy companies dealing with projects worth S$30 million and above to be ISO 9000 certified. The then CIDB's involvement in quality assessment stemmed from the requirement that all public buildings and those built on land purchased from the state should be assessed using the Construction Quality Assessment Scheme (CONQUAS). The scheme is also used by private-sector clients to benchmark their buildings, among other things, for marketing purposes.

Table 2 Operating Income, Expenditure and Government Grants for the CIDB in Singapore, 1989/90 to 1998/99

	1989/90	*1990/91*	*1991/92*	*1992/93*	*1993/94*	*1994/95*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
Operating Expenditure	7,530,487	9,717,882	10,413,320	11,382,208	13,932,313	15,138,998	17,002,305	18,718,509	23,186,628	29,232,167
Operating Income	4,256,824	6,035,097	6,054,845	6,083,174	6,727,460	9,269,590	14,661,263	19,241,544	24,022,338	40,715,642
Deficit/Surplus Before Government Grants	(3,516,318)	(3,741,111)	(4,260,260)	(5,226,068)	(7,049,276)	(5,619,782)	(1,992,907)	947,090	1,529,785	11,943,354
Government Grants	271,676	3,782,037	4,501,106	5,396,189	7,134,177	5,552,357	2,402,898	2,342,388	3,223,805	3,127,983

Sources: Construction Industry Development Board (1992) *Annual Report 1991*. Singapore; Construction Industry Development Board (1994) *Annual Report 1993*. Singapore; Construction Industry Development Board (1996) *Annual Report 1995*. Singapore; Construction Industry Development Board (1998) *Annual Report 1997*. Singapore; and Construction Industry Development Board (2000) *Annual Report 1999*. Singapore.

Table 3 Sources of Operating Income for the CIDB in Singapore, 1989/90 to 1998/99 (S$)

	1989/90	*1990/91*	*1991/92*	*1992/93*	*1993/94*	*1994/95*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
Registration Fees	449,970	684,450	795,750	672,380	336,390	258,618	784,143	1,054,823	1,183,394	1,309,810
Course and Trade Test Fees	2,645,286	4,031,570	4,047,683	3,813,978	3,726,037	4,940,890	7,356,305	10,626,319	14,714,965	30,735,340
Seminar and Conference Fees	535,141	474,389	301,381	258,020	343,834	161,780	286,977	352,042	492,526	64,638
Advertisement Fees	464,148	526,840	394,395	444,110	587,799	727,400	812,123	852,461	964,550	1,111,750
Agency fees for work permit processing	–	–	–	–	–	–	639,171	697,674	769,158	–
Quality assessment, certification and training fees	–	–	–	–	1,074,745	1,864,916	3,353,724	4,484,575	4,918,163	6,072,510
Management fees for Pasir Ris landing site	–	–	–	–	290,426	545,602	608,657	723,753	673,150	736,315
Other Income	162,279	317,848	515,636	894,686	368,229	770,384	820,163	449,897	306,432	685,328
Total Operating Income	**4,256,824**	**6,035,097**	**6,054,845**	**6,083,174**	**6,727,460**	**9,269,590**	**14,661,263**	**19,241,544**	**24,022,338**	**40,715,642**

Sources: Construction Industry Development Board (1992) *Annual Report 1991*. Singapore; Construction Industry Development Board (1994) *Annual Report 1993*. Singapore; Construction Industry Development Board (1996) *Annual Report 1995*. Singapore; Construction Industry Development Board (1998) *Annual Report 1997*. Singapore; and Construction Industry Development Board (2000) *Annual Report 1999*. Singapore.

The then BCA offers multi-skilled training courses for construction tradespersons and technicians. It also tests and certifies skilled tradespersons – it is mandatory for all construction workers to receive basic skills training and pass a test. The government levy paid by contractors in respect of foreign workers, on whom the construction industry relies, as a two-tier system, which is currently S$470 per month for unskilled workers and S$30 million for skilled workers. Thus, firms have an incentive to train their workers. In 1999-2000, the BCA's income from course and trade test fees rose to S$38,256,425, whereas the fees from quality assessment and certification fell to S$3,744,319. The BCA made a net operating surplus of S$16,061,669 in that year.

3.3.2 Industry-Funded Institutions

In some developing countries, the construction industries have established, manage and fund organisations dedicated to the continuous development of the industries. Examples can be found in a number of countries in Southern Africa such as Botswana and Malawi. Many of these agencies organisations, such as that in Malawi, are donor funded (in Malawi, the World Bank provides the funds). Most of the others, such as that in Botswana, lack the funds to implement effective programmes.

4. INTERNATIONAL SURVEY ON FUNDING OF INDUSTRY DEVELOPMENT

A short survey was undertaken to obtain data for this study. The target respondents were Chief Executive Officers of industry development agencies. The respondents were requested (via e-mail) to provide information on the following:

* the sources of funds for the agency, and their proportions
* any legal backing for such a provision?
* the procedure for collecting the contributions
* responsibility for administering the fund.

4.1 India

The objectives of the quasi-government Construction Industry Development Council (CIDC) (2002) of India, founded by government and industry, are to:

- promote, upgrade, strengthen and develop the industry so as to engender quality, speed, economy and efficiency in construction, and for the industry to be competent and competitive at home and abroad, and to be responsive to economic, technical, environmental and social changes and policies;
- provide impetus and support to raise quality, providing uniform criteria for evaluating capabilities, enhance environmental consciousness, and secure wide appreciation of the industry's problems; and
- to initiate a process of self reform towards simplification, rationalisation, liberalisation, and greater transparency and equity.

The CIDC is funded through a corpus of funds created, and annual subscription paid by its members. The corpus is invested in long-term securities, and the yield used by the CIDC which spends about INR 7 million per year on its secretariat. The legal provision for the funding mechanism of the CIDC is inherent in the constitution of the Council. The funds are managed by the CIDC's Board of Governors.

4.2 South Africa

In its initial years, the CIDB in South Africa is only funded by the government. In its first year, the budget provided through the Ministry of Public Works was R11 million but only R5 million was spent because the key officers were appointed late. The budget for 2002-03 is R15 million and for 2003-04, R21

million. The CIDB Act specifies funding by Government - but not how much. The amount is based on business plan projections and the Minister's approval of an annual business plan.

The Act also makes provision for the CIDB to charge a fee for the registration of projects which will be a percentage (to be determined by the Minister) of the contract sum. This amount must fund the CIDB's function to promote client best practice and will enable income from the private sector. This cements the concept of the CIDB as a public-private partnership. It is intended that the Register of Projects will begin to generate some income during 2004.

4.3 Sri Lanka

The Institute for Construction Training and Development (ICTAD) of Sri Lanka was formed in 1986. Its objectives are: to improve the capacity of training institutions and facilitate the qualitative improvement of training programmes to meet the needs of semi-skilled and managerial personnel; and to improve the quality and efficiency of the construction industry by encouraging innovative approaches in technology and industrial development activities and in achieving economy in construction works. Until 1996, ICTAD received funds from the World Bank, in particular, to start its various training and development programmes. Since then, ICTAD has funded its activities with two main forms of funds: Consolidated Funds (received from the government treasury); and internally generated revenue (Table 4).

Table 4 Breakdown of Funding Sources for ICTAD, 1997-2001 (in SLR million)

Source of Funding	*1997*	*1998*	*1999*	*2000*	*2001*
Consolidated Funds	19.95	29.00	31.30	42.60	31.87
Revenue Generated	59.88	41.28	38.76	34.75	33.83
Total	79.83	70.28	70.06	77.35	65.70

Source: ICTAD Note: US$1 = SLR 96.35

ICTAD was declared a corporation in 1992 under the Industrial Corporation Act, 1957. However, under the Construction Act which is being drafted, ICTAD will become an authority on construction industry development issues; it will be able to generate funds to ICTAD.

Consolidated funds are received on the basis of requests made annually to the government, and supported by the annual implementation plan (AIP). ICTAD generates revenue through activities carried out by its divisions such as training, registration of contractors, sale of publications, hire of facilities, and provision of advisory services. The responsibility for administering the funds lies with the ICTAD Management comprising a Chairman and Board of Management appointed by the Minister for Housing and Plantation Infrastructure who is in charge of construction.

5. POSSIBLE SOURCES OF A FUND

The case studies presented above show that it is recognised in many countries that construction industries must be systematically managed for their performance to improve. The funding arrangements are compared in Table 5. in this section, possible sources in a developing country are discussed.

5.1 Industry Development Levy

A possible source of the sustainable fund for developing the construction industry is a levy which can be derived in a number of ways. Msita (1999) reviewed arguments for and against the continued

existence of the NCC in view of the economic reforms and the reduction of the direct involvement of the government in the construction industry. He argued for the institution of a levy:

> It is true that the infancy nature of the industry requires Government's support for the services of NCC. At the same time direct beneficiaries of the services should be required to equally contribute for such services … in the form of a levy. … the levy should be used to support the services of NCC and its activities geared towards the development of the construction industry (p. 13).

Table 5 Merits and Demerits of Funding Arrangements for Industry Development

Main source	*Countries*	*Merits*	*Demerits*
Government grants	South Africa	Industry is recognised as a national asset and managed accordingly.	Government has full control of agency, leading to possible failure to adopt market-responsive initiatives; and dependency of industry.
Project-based levies	Malaysia	1. Good flow of funds where industry is vibrant. 2. Clients, who benefit from more effective industry, bear expense of its improvement.	1. Volume of funds may fall when levels of construction demand decline. 2. "Difficulty" in having public agency funded by all clients. 3. Expectations of clients can be high as they fund agency's activities. 4. Effective collection mechanism necessary. 5. Checks necessary to ensure there is no under-declaration of project values and others.
Internally generated funds	Singapore	Gives agency possible independence and self reliance.	1. Agency should not compete with industry organisations it is supposed to promote and nurture. 2, Opportunities for raising funds in particular country and industry may be limited.
Members' annual fees	India, Botswana	Flow of funds assured if membership base is large and members able to pay.	1. Organisations are mostly private and have little authority, limiting their effectiveness. 2. Would organisation's activities only benefit members?

5.1.1 Construction Materials

A tax on construction materials paid by all purchasers would be a possible source of contributions to the construction industry development fund. The surcharge may be payable on all materials or on a few key ones such as cement and roofing sheets. The surcharge would be levied at the point of purchase, and would cover all construction projects. It will be necessary to find effective collection systems to avoid non-payment. The practical constraints include the large number of collection points which would be involved; the possibility of leakages and delays; and the administrative costs.

5.1.2 Contract Sum of Projects

A levy on the value of construction projects, paid by clients, as used in Malaysia and proposed for South Africa, has some merits, including the fact that the base would be wide and large. Thus, a small percentage of the rate (say 0.3%) will lead to a large sum being collected. Second, clients, who ultimately benefit from the improved performance of the construction industry, would pay for the effort to achieve it. Third, since the government, some donor agencies and a few major private developers are responsible for the bulk of investments in construction in many developing countries, the collection of a large part of the levy would be relatively easy.

The demerits are that it would be difficult to collect the contributions from the smaller private-sector clients, or the numerous small and medium-sized contractors who might default, or delay in transferring the deductions to the agency in charge. The burden of such a fund would be borne by the government, donor agencies and a few private clients. Finally, some of the smaller clients may not pay; and others might under-declare the contract values of their projects.

5.2 Contributions by Companies

In several countries, such as South Korea, the fund for developing the construction industry is built up from direct contributions by its components (consultants and contractors). The possible bases for such contributions are: corporate turnover; a fixed charge for all firms; differential charges based on company size; or corporate payroll. The annual contributions would have to be collected by the registration agencies. There could be differential charges for local and foreign firms (in Tanzania, registration fees for foreign and local consultants and contractors differ). This source of the fund would represent the industry itself financing its needs and development.

5.3 Central Funding by Government

The government could provide sustainable funding for the development of the construction industry. However, this would be against the trend of privatisation and policy liberalisation in most countries. No model of sole direct government funding of construction industry development was found in the study. Even in South Africa, where the government provides all the funds, this is temporary.

In most developing countries, the government is unlikely to be the sole, or main source of funding for industry development. Moreover, with increasing privatisation, governments' importance as main direct beneficiaries of improvements in the performance of the construction industry would diminish. Moreover, budgetary problems in most countries make it unlikely that governments will take up this responsibility. Finally, reliance on a single source of funding is not sustainable in the long term.

6. DISCUSSION

In the project-based approach, clients, the beneficiaries from improvements in the performance of the industry, pay for efforts leading to such improvements. As the base is large, the proportion can be low, thus reducing its impact on each client. There are some problems with the approach. First, a decline in the volume of demand for construction can reduce the amount raised. Second, a system for monitoring and collecting payments is required. Third, there should be an auditing mechanism. Finally, as a floor limit of project value for the levy is set, clients may divide projects into smaller packages. The current situation of the BCA in Singapore illustrates the drawbacks of funding mechanisms based on the volume of activity. Its revenues have fallen because of a recession in construction since 1998. There are fewer projects to assess for quality; and construction firms are not sponsoring workers for training.

In Tanzania, efforts devoted by the NCC to the pursuit of self-sufficiency in the recurrent budget had the effect of diverting its attention and activities from the tasks of developing the industry. Inadequate attention is paid to functions which do not generate income such as research, monitoring of standards and construction costs; and adoption of technology. Another danger is that the institution may compete with the industry, for example, for consultancy services.

Policy and organisational changes can have an impact on funding sources. In Tanzania, a major recent development is the formation of boards to register construction professionals and companies, and to monitor the conduct of practitioners and firms. These organisations have responsibility for some of the developmental tasks of the NCC (Mwamila and Mkamba, 2001) – the most active in this respect is the Contractors Registration Board which is very well resourced because of its substantial fee revenue from registration of contractors. Moreover, most of the consultancy work of the NCC are obtained on a sole-source basis, but the Public Procurement Act No. 3 of 2001 restricts such procurements by public bodies.

Financial support from international donor and lending agencies has helped the NCC substantially since 1988, by way of: grants through government projects; technical assistance support; engagement to provide services; and training of NCC staff. Such support is also sustaining the National Construction Industry Council in Malawi.

7. CONCLUSION

It is important to manage the development of the construction industry of all developing countries. Funding this activity is essential. In determining the funding mechanism to adopt in any country, it will be necessary to determine the following: basis of the fund; estimating the volume of fund; determining who is obliged and eligible to pay; point(s) of payment; penalties and fines for non-payment; and necessary legal instrument(s). The implications of each of these should be determined in the widest possible sense. The source(s) of the fund should fit the context of the country and the nature of the industry.

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