
SMALL SCALE CONTRACTOR DEVELOPMENT

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Objectives of the paper

Abstract

This paper presents the organisational framework of the road construction industry in countries that have an established private contracting sector and reviews the problems and performance of the sector in developing countries.

It reviews various obstacles encountered by small private contractors to develop and expand their business and highlights the need for a framework to govern private contracting in developing countries.

The paper will also highlight the differences between the institutional frameworks of countries with or without a private sector and compare the level of institutional support, which is available to overcome these problems.

The paper examines the role that different organisations can undertake to offer support to the industry, such as;

- Learned Societies
- Trade Associations
- Government Bodies
- Training and research organisations
- International Organisations

Key issues

- Institutional reforms and development are needed in order to achieve a successful and workable market for the privatisation of road construction and maintenance or other aspects of the construction industry.

Key topic areas

- Frameworks for private contracting
- Problems faced by small scale contractors
- Institutional development
- Examples of how frameworks for privatisation have been successfully implemented.

1. INTRODUCTION

Over the last fifty years many countries in Africa and Asia have gained independence. The governments of these newly independent countries saw an effective road network as a high priority for the development and expansion of their country's economy. They invested heavily in road construction with support from international funding agencies and bi and multilateral aid donors to produce a good quality road network. Unfortunately these governments did not allocate sufficient financial resources of their own to continue the investment in the maintenance of their networks and international funding agencies are not willing to assist in long term maintenance funding arrangements. This resulted in the new road networks deteriorating, sometimes into a series of muddy tracks, which are often barely passable even in the dry season.

These countries have traditionally relied upon state owned organisations to maintain their road network and carry out minor construction works. In many cases these organisations have proved to be inefficient due to different factors, which include the loss of high calibre staff to better paid jobs, funding shortages, political pressures and bureaucratic mismanagement. Recently interest grew in stimulating private sector involvement, on the grounds that these small private enterprises would be able to overcome the inefficiency problems of the large state owned organisations, thus improving the level of maintenance undertaken with the limited financial resources available.

Although substantial progress is made in setting the appropriate private sector strategy, it is becoming increasingly difficult to implement as problems associated with contracting procedures and the industry support framework are becoming more apparent to both contracting organisations and road agencies.

The objective of this paper is to promote discussion to assist the expansion of the private sector in the construction industry. It will provide case study and background information to determine if lessons can be drawn on experience of developing a private contracting sector in Africa and the established private sector in countries like the UK. It will highlight the problems facing the development of private contracting capacity in Africa, the institutional framework required for contractors to operate and describe specific initiatives that have been promoted to address these issues.

Finally, the paper will present four case studies of organisations, which provide the support framework in order to achieve "an institution framework for privatisation".

2. THE NEED FOR A FRAMEWORK TO GOVERN PRIVATE CONTRACTING

There are 5 different types of contracting organisation, which are capable of undertaking construction work (World Bank 1984 and Relf 1987)

1. Small builders and 'jobbers' - these are small generally one-man businesses who undertake building projects or work for other larger companies.

2. Communal and Self help groups
3. State owned organisations
4. Private contracting companies
5. Foreign contractors

Traditionally in low income and emerging countries, the majority of civil engineering work, has been undertaken by large international contractors or state owned organisations. The indigenous private sector is usually dominated by a few large contractors who are able to compete against, or work in joint ventures with the international contractors. This handful of large contractors works along side a plethora of small construction businesses. This situation has been referred to as the “missing middle” of the construction sector (Young, 1993) where small businesses appear unable to develop and expand their market share to become medium sized contractors and eventually, hopefully, become a large contractor able to undertake large infrastructure projects. These small contractors are therefore restricted, due to their size and resources, to undertaking small building work and occasional minor civil engineering work. Many of these businesses are often small enough to be ‘invisible’ to national construction statistics.

For road maintenance and construction to be efficiently carried out in a competitive market there is a need for contracting firms of all sizes to undertake various sized projects from minor maintenance work to large scale major road construction projects. In order to achieve the full benefits of using the private sector there must firstly, be a contracted workload of adequate size. Secondly there must also be sufficient numbers of construction companies to create a demand for work and hence realistic competition with the associated competitive prices.

Although no market can function without demand, merely creating a demand is not enough. It is also necessary to develop institutional capacity within the country to cope with executing work through a private contracting industry.

Under the force account system run by the state owned organisations there was no need for a contract as the client, designer and contractor were the same organisation. However, when projects are undertaken by the private sector there is the need for a formal agreement between the purchaser (the government) and the provider (the contractor). In many countries, which have relied on state owned organisations there are no suitable national contract procedures and documents, which can be adopted by the government agencies. For high value projects undertaken by large national contractors it is often possible to utilise international contract documents such as FIDIC, however, this contract documentation is invariably unsuitable or very complex for smaller construction and maintenance contracts undertaken by new and emerging contractors.

3. THE PROBLEMS FACING SMALL SCALE CONTRACTORS

For small contractors, like all small businesses, the main problem is lack of access to and difficulty in obtaining credit. Compared to other small businesses, small construction companies have a high financial turnover and hence a larger need for short term working capital. This is due to the amount of materials required, relatively large numbers of staff wages and equipment purchase or hire costs. They also need long term capital to cover the costs of expanding the business and financing the purchase and depreciation of equipment.

The state owned construction enterprises received financial support from other government departments and therefore were not affected by late payments as finances are obtained from a central account. However, private contractors are dependant on regular payments to retain staff, pay wages, obtain material supplies and maintain a good relationship with their creditors.

While access to finance and poor contract documentation are the main problems experienced by small contractors who are attempting to develop their business in the road maintenance and construction sector there are a multitude of other problems which impede the expansion of their business. Small and large contractors frequently complain of poor work continuity. They may have a gap of many months between contracts. This is often attributed to the nature of the road authority, which is accustomed to undertaking work when financial resources are available from the Ministry of Finance. As there is often no system of securing a guaranteed regular budget from the Ministry it is not possible to offer contracts on a consistent basis. Contracts are therefore let when money is available.

When contracts are available and the contractor is able to obtain sufficient finance to bid and undertake work he is then faced with many additional problems. These problems include:

1. Difficulty in recruiting suitably trained labour and supervisors
2. Poor availability and/or high costs of construction materials
3. High capital cost of equipment and high loan interest rates
4. Lack of construction equipment for hire and difficulty in obtaining equipment spares
5. Poor on site supervision and availability of road authority staff to address queries

4. THE INSTITUTIONAL FRAMEWORK IN DEVELOPING COUNTRIES

In developed countries the majority of contract administration work is undertaken by consulting engineering firms. These firms are able to undertake design work where it is required, prepare contract documents, tender and select contractors and supervise their work and authorise monthly payments. They are in effect acting as agents to, and

undertaking a large part of the work which would have to be carried out by the road authority staff. Although the work they are able to undertake will reduce the capacity requirements in the road authority it does not eliminate the need for an understanding of contract procedures.

While the tripartite arrangement between client, contractor and consulting engineer forms the core of the institutional framework within developed countries there are also many other support organisation which are essential to enable the industry to function and develop new techniques and materials and improve productivity. Figure 1 highlights the complexity of the relationships between the stakeholders in the construction industry of client, consultant and contractor, their institutional requirements and the support framework that exists to meet these demands. The lines only indicate relationships, which may exist to meet the demands of the construction industry and do not include linkages which may exist for other reasons.

Within each sector of the support framework there may be one discrete organisation or number of organisations providing various but similar support to the industry. The different organisations within the framework each perform their supporting roles in different ways. At one end of the scale some provide a general service to the industry and at the other end others are primarily concerned with assisting their own membership.

- **Trade organisations:** Consisting of material suppliers and manufacturers and work to promote to promote their products and services to contractors and consultants.
- **Contractors / Consultants Associations:** Organisations that assist in development of contract procedure and national standards.
- **Learned Societies:** They provide knowledge and dissemination to the whole industry, examine and certify engineers and technical staff.
- **Education, training and research organisations:** consisting of various universities and technical colleges to provide courses and training that lead to professional accreditation of learned societies.
- **Government:** to set up and fund agencies to undertake and provide information and advice to policy makers. In the UK there are a number of these agencies which include, for example, Hydraulics Research (HR) and the Transport Research Laboratory (TRL).

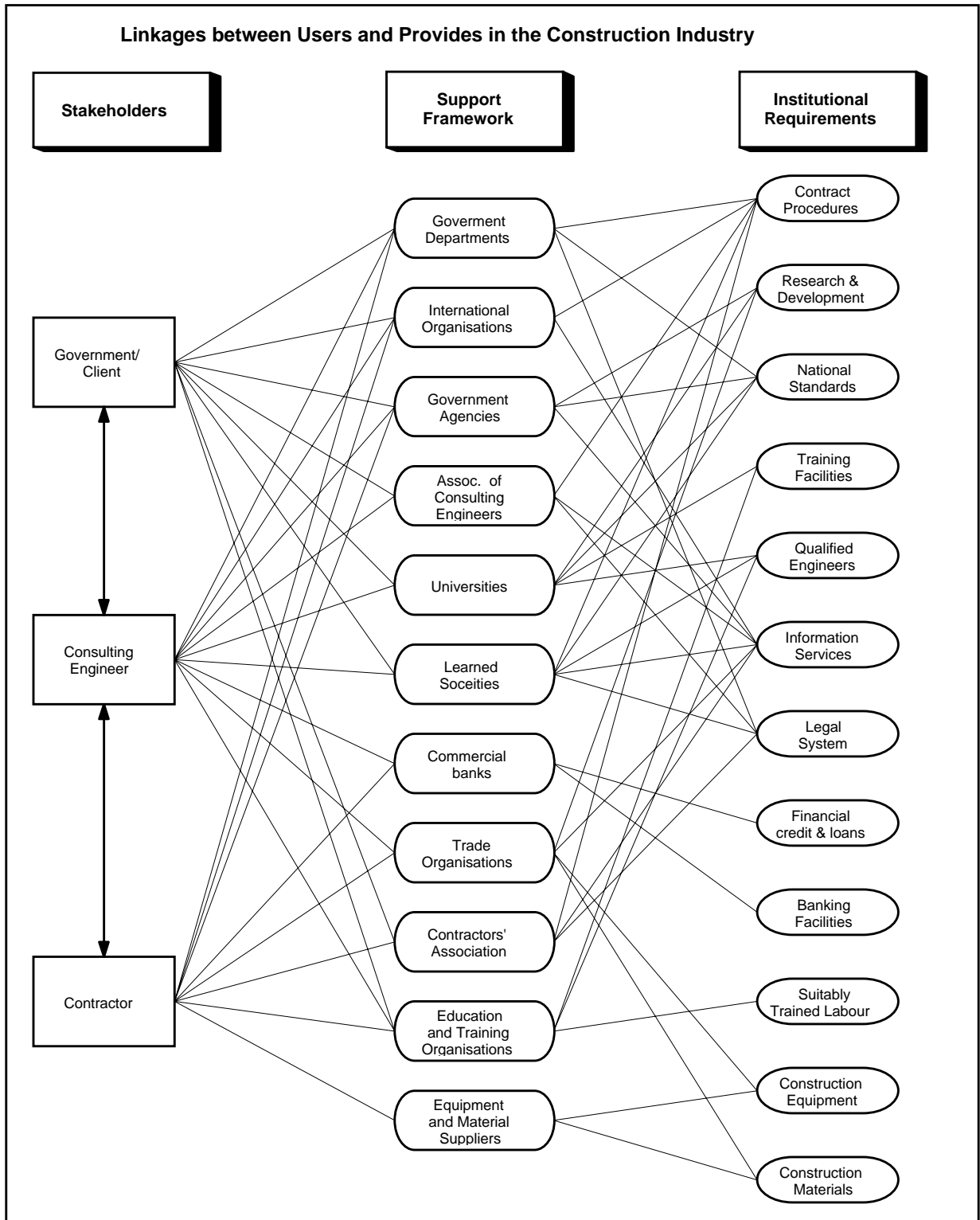


Figure 1. Linkages between the different institutions

5. THE CONSTRUCTION INDUSTRY IN DEVELOPING COUNTRIES

The construction industry in developing countries has the same institutional requirements to those of developed countries shown in the table above. The primary stakeholders are also the same however, the 'balance of power' is significantly different to that in developed countries. Figure 2 below symbolise the difference in strength of the stakeholders between developed and developing and emerging countries. The points to note are that firstly in developing countries the client is predominately the government while in developed countries the client can often be from the private sector. The lack of resources and experience of contractors in developing countries places them in a much weaker position than the government and client.

Under the traditional contracting system they are therefore forced to accept a proportionally greater contractual risk than they are able to bear when compared with their counterparts in developed countries. Finally, In developed countries, the majority of contract administration work is undertaken by consulting engineering firms. In developing countries, the consulting profession is almost non existent in developing and emerging countries.

The support framework in developing countries is also very weak. While organisations may exist in the majority of the categories discussed above there is often only one or two in each category, which have limited resources to provide a high level of support. In developed countries, many of the organisations in the support framework are financed by the three stakeholders. Within developing countries this financial resource is not available as the engineering profession is virtually non existent, contractors have very limited financial resources and the government budgets are unable to meet the requirements of the road maintenance budget, without supporting the industry framework which carries out the maintenance.

Training of construction personnel at all levels from engineers and construction mangers to artisans and labour is one of the primary functions of the support framework. Studies undertaken by the World Bank (Auerhan, 1985) highlighted that while a lack of funding was a major problem with the poor education system in Sub-Saharan Africa, it was not the only cause. The study highlighted that a lack of resource management and planning within the education system was also a cause. In addition the reputation of management topics within the education system is low, which results in a lack of qualified staff and specialists in these areas. This situation has a number of knock on effects to those receiving training on construction related activities. While they are able to receive education on the 'hard engineering' skills there is poor education provided for the 'soft engineering' skills of construction and business management. The lack of physical infrastructure and centralisation of education facilities, usually in the capital city results in poor training in the provinces. Finally, the lack of information resources within the education sector contributes to the general lack of information resources within the construction sector.

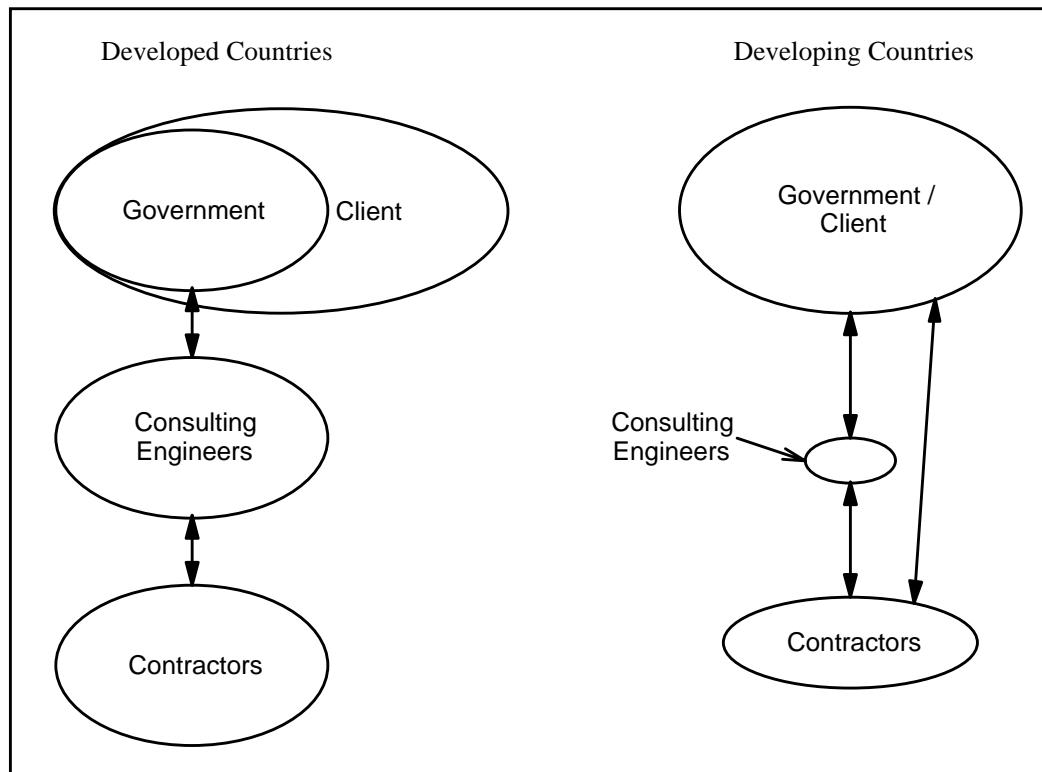


Figure 2. Relative strengths of stake holders in the road construction and maintenance sector

Within developing countries the tripartite system does not work as the consulting engineering profession is virtually non-existent. This situation requires a different mode of operation for the industry where the client takes on the main roles of the engineer. This means that the government departments must undertake the design work and then prepare, tender and supervise the contracts for work that they require to be undertaken. Within the existing state owned enterprise system there is in general the capacity within the road authority to undertake the design work. The outputs from the design group were passed to the labour gangs to execute the work and to ensure that it was constructed to agreed standards. This, results in little experience and capability to prepare and administer contract documents, supervise independent contractors and measure and certify work completed for monthly payments.

There are therefore two distinct institutional problems, which must be addressed by countries who are attempting to utilise the private sector to undertake road construction and maintenance.

1. The lack of a consulting engineering profession
2. The poor capacity within the support framework to assist the contracting sector.

In addressing item 1 the long term objective may be to develop the engineering profession, however this is likely to take many years or even decades in some cases

before the sector has sufficient capacity to undertake the roles which would be demanded from it. As a design capacity exists in the government agencies the most appropriate solution in the short to medium term will be to develop the government agencies capacity to prepare, award and administer contracts.

The contracting sector is generally under developed however, this primarily can be attributed to the lack of the support framework for the industry. It will not be possible in the short to medium term to develop an extensive support structure however, a lower level of support, which addresses the core needs, must be provided.

6. INSTITUTIONAL DEVELOPMENT OF THE SUPPORT FRAMEWORK

In order to achieve ‘an institution framework for privatisation’ it is necessary to initiate and develop organisations, which can provide the support framework shown in Table 1. This process takes a long time and is particularly difficult with limited resources.

Different countries and donor organisations have tried different methods for assisting in the provision of the support framework. The common theme between each method is the establishment of an organisation or project that is able to provide a range of the different support services rather than only achieving one as occurs in many developed countries.

The 4 case studies described below aim to offer a broad spectrum of the different types of organisations or projects, which have been implemented in an attempt to provide the support framework. The table summarises the case studies indicating who has initiated and supported the initiative and the parts of the support framework that each organisation or project attempts to provide.

Table 1 : Examples of current support initiatives

Organisation / Project	Support provided by	Support Framework
• Khupuka	Non-Governmental Organisation (NGO)	1. Contractors Association 2. Education and Training
• Tanzania Civil Engineering Contractors Association (TACECA)	Tanzanian Contractors	1. Contractor Association 2. Education and Training 3. Equipment and Material Suppliers 4. Commercial Banks
• ASIST (Advisory Support Information Services and Training)	International Labour Office (ILO)	1. International Organisations 2. Government Departments 3. Government Agencies
• MART (Management of Appropriate Road Technology)	DFID (Department for International Development)	1. Government Departments 2. Government Agencies 3. Universities 4. Learned Societies

6.1 Khuphuka

Khuphuka was established in 1991 as a voluntary association by a group of community leaders who were concerned at the lack of economic opportunities available to the majority of people in KwaZulu-Natal, in South Africa. Their objective was to set up an organisation that would, through training linked to production, provide people with an entry point to the economy, while strengthening community structures and promoting development. The priority target groups are 1) community groups who are engaged in development or about to engage in development, 2) unemployed young adults (especially women - at least 30%), and 3) emerging and current entrepreneurs, such as micro manufacturers and building contractors. The Khuphuka concept is that the interests of these three groups are complementary, in that community groups could provide a market for the contractors, and the contractors could provide local employment opportunities.

Instead of simply trying to provide short term (and probably unsustainable) employment opportunities, Khuphuka aims to create employers, who will in turn create employment. The prospective employers are members of local communities, who participate in the community development process as partners with Khuphuka and learn the skills of identifying and implementing project opportunities (Miles and Ward 1998).

6.2 Tanzania Civil Engineering Contractors Association (TACECA)

The Tanzania Civil Engineering Contractors Association was founded two years ago with the aim to raise the capacity and capability of local contractors to a level where they can handle any construction project within the country. The vast majority of the membership is made up of Tanzanian contractors who range from large companies to small one-man enterprises. Each member pays an annual subscription, according to the type of work he undertakes, which provides the finance for the Association's activities. The main objective of the Association is to protect the interests and foster co-operation between its members enabling an enhanced participation in all construction programmes.

There are two activities currently undertaken by the Association which are particularly interesting as they highlight ways in which a contractors association are fulfilling roles that are usually provided by another organisation in the support framework (TACECA 97).

1. TACECA is actively encouraging joint ventures between large and small contractors. In these agreements the large contractor bids for and obtains large contracts. He will then pass some smaller parts of these contracts to the small contractors in his joint venture. In some cases the large contractor may also provide the construction materials and equipment for the whole project. The small contractors will be paid, by the large contractor for the work they have undertaken minus a percentage for his overheads (approx. 7%) and costs of any materials or equipment provided. This system benefits from the large contractors who have sufficient financial resources to manage large projects. The small contractors are effectively provided with the support framework through the large contractors of a banking system, equipment and material

supplies and education and training by the large contractors staff. The large contractors support the scheme as they are able to bid for larger contracts and the management fee levied from the small contractor helps cover their overhead costs.

2. In partnership with the National Construction Council of Tanzania the TACECA is attempting to establish a construction industry development fund which will provide consultants and contractors with access to funds for working capital and procurement of tools and equipment. It is proposed that the fund will be established by a combination of grants from the government and donor agencies and shares bought by contractors and other stakeholders in the community. Following the establishment of a sufficient fund, loans would be offered to construction enterprises at preferential rates. This will maintain the fund and cover its operating costs but will not result in a large profit. The fund will in effect operate as a commercial bank which solely works in the construction industry.

6.3 ASIST (Advisory Support, Information Services and Training)

The ASIST project is operated under the auspices of the International Labour Organisation's (ILO) regional structure for Africa with technical support from the Development Policies Branch (POL/DEV) in Geneva, and in close co-operation with the ILO's Multi-Disciplinary Advisory Team in Harare, Zimbabwe.

The overall objective of ASIST is to achieve a wide-scale adoption of employment-intensive approaches in national transport and infrastructure investment policies and programmes. This is within the context of the ILO's programme to promote employment-intensive investment policies as a strategy to alleviate poverty. The immediate objective of ASIST is to increase use and efficiency of labour-based methods to carry out infrastructure, particularly road, construction and maintenance activities in Sub Saharan Africa.

In order to meet the immediate objective, the project was divided into three components, as implied by its acronym: advisory support (technical and policy advice, and project backstopping), information services (networking, technical enquiry service, publications, research), training (international courses for engineers, senior technicians and trainers).

ASIST works closely and effectively along side national authorities, road agencies and project staff in its region providing the services described above.

6.4 MART (Management of Appropriate Road Technology)

The Management of Appropriate Road Technology (MART) initiative aims to reduce the costs of constructing, rehabilitating and maintaining road infrastructure, and vehicle operations in developing countries. It is based on a research project funded principally by the British Department for International Development (DFID formerly ODA) under its Technology Development and Research (TDR) provision. The project, is led by the

Construction Enterprise Unit of Loughborough University's Institute of Development Engineering, in association with two UK-based specialist consultants.

The current phase of the MART programme will inter alia draw together existing expertise in labour and intermediate equipment-based technology and the development of private construction enterprises to produce a series of guidelines on the four priority topics of:

- handtools;
- intermediate equipment;
- private sector development and institution building.

The MART initiative is strongly research-based, and both the DFID and the MART partners see its main impact as providing analysis and codification to support practical project initiatives. Thus much of the output will be in the form of journal papers and other formal publications suitable as reference material and providing an independent and reliable record of the advancing state of the art. The MART project therefore assists the support framework by codifying international expertise from donors, consultants, projects and other research organisations and providing the information in a more useable form for government agencies and departments and centres of learning such as universities and learned societies.

6.5 Review of the case studies

The approaches adopted by the four different case studies show assistance to the support framework at different levels. Khupuka and TACECA are similar as each attempt to provide assistance to contractors at the field level working directly with the groups affected by the lack of support framework. However, they are also different in their approach, as TACECA is an organisation in its own right that aims to fulfil the role of a number of different services in the support framework. However, while Khupuka is itself an organisation it exists to promote the development of other organisations and an increased capacity within the industry. The ultimate aim of Khupuka is to work itself out of a job, on the other hand the contractors association will always be required to lobby government on issues important to its membership.

MART and ASIST are similar initiatives as they both complement and assist the fragile support framework that already exists. They do not attempt to create new organisations but assist with providing the missing institutional requirements and facilitate the links between these requirements and the appropriate support organisations. The MART and ASIST predominantly have links with government departments and agencies and can therefore also facilitate in the development of the internal institutional building programme of these organisations. For example the MART initiative is currently finalising guidelines on the policies and issues to be resolved in the establishment of a private sector road construction and maintenance capability.

7. CONCLUSION

This paper has discussed the development of the private sector in developing countries, particularly Africa and the frameworks established in developed countries. It reviewed various obstacles encountered by small private contractors to develop and expand their business and highlighted the need for framework to govern private contracting.

This paper has also highlighted that there are many factors to consider when turning to the private sector to undertake road construction and maintenance. Primarily there are two processes that must be undertaken.

Firstly, the implementation of the contracting and contract administration procedures themselves. As the use of the private sector to undertake road maintenance and construction, expands the government road authority has to change its role from an executing agency to a contract supervisory agency. This change produces a multitude of problems as there are often no suitable forms of contract for road projects. The road authority staff are accustomed to organising labour groups and not accustomed to managing contracts. They are not aware of the procedures and roles, which they are required to undertake when managing contracts. There is therefore a need to restructure the road authority and redirect and retrain staff at all levels to highlight the new tasks which they will have to undertake when managing road contracts.

Secondly, there is also a need to develop an attitude change from a state owned approach to a private sector approach. This change can pose problems to staff as the changes highlighted in Table 2 will occur at a faster rate than cultural changes. (Prokopenko 1992)

Table 2: Differences in the State and Private sector approaches

State owned enterprise characteristics	Private sector characteristics
<ul style="list-style-type: none"> • Ensures jobs are allocated to the right person at the right time • Policies aim at trade-offs between economic and social objectives • Vertical management structure • Planning is a reactive exercise • Group unity is emphasised for motivation • Protocol, rank and status are important • Education is an investment in prestige 	<ul style="list-style-type: none"> • The available human resources (skills and potentials) are matched with corporate mission and goals • Policies aim to develop a coherent culture and balance current and future needs • Horizontal management structure • Planning is fully integrated • Individualism is emphasised for motivation • Informality and competence are important • Education is an investment in personal development / success

Finally, there is a need to undertake institution building, a separate task, that must be undertaken in parallel to the implementation of the privatisation programme. Institution building must be undertaken for both the client organisation and the construction industry's support framework to ensure that the assistance needed by the primary stakeholders, particularly contractors, will be available.

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