

## INFRASTRUCTURE AND DEVELOPMENT – MALAYSIA’S EXPERIENCE

Sufian Jusoh

World Trade Institute, Bern, Switzerland ([sufian.jusoh@wti.org](mailto:sufian.jusoh@wti.org))

### Abstract

The Malaysian experience highlights the importance of public investment in infrastructure in facilitating technological and economic development. This article outlines the country’s milestones in infrastructure development. It argues that the state must actively facilitate technological change by providing the infrastructure necessary to attract foreign direct investment and encourage local entrepreneurship.

### Introduction

Malaysia has just celebrated the 50<sup>th</sup> anniversary of its independence from United Kingdom on 31<sup>st</sup> August 2007. 50 years ago, there was no such country called Malaysia, but a territory called the Federated Malay States or Tanah Melayu, consisting of four small Sultanates from the federated Malay states and five unfederated Malay states, which were separate British territories. In addition, the North Borneo and Sarawak both in the Island of Borneo joined the Federation of Malaysia in 1963. The Federation of Malaya and later Malaysia was very a poor country. Ghana, a country in West Africa also obtained independence from United Kingdom in the same year. At that time, Malaysia was less developed than Ghana.

Nevertheless, in 2008, Malaysia has become one of the success stories in Southeast Asia, despite still having many weaknesses which are also prevalent in many other multiracial emerging nations that have to manage the many demands and interests of the different ethnic groups. Malaysia is now an upper middle income country by the World Bank’s standards and one of the 20 important trading nations in the world. This is not surprising as the land where Malaysia is now located has always been part of the main Asian trading routes. Its trade activities at that time peaked during the Melaka Sultanate between the 13<sup>th</sup> and 16<sup>th</sup> century.

Malaysia’s ability to climb out of poverty and renewed rise as a trading nation is related to the government’s the long term planning in the form of five year plans

(the current Malaysia plan is the 9<sup>th</sup> Malaysian Plan which ends on 2010) This Industrial Master Plan, includes the Malaysia Third Industrial Master Plan 2006-2010 and the Overall Perspective Plans (OPP). These plans are not just a statement of good intentions but have a clear focus on implementation to ensure that the whole country benefits from the plans. There is no doubt that pork-barrel bargains tend to benefit certain organized interest groups more than others but the problem is not unique to Malaysia.

Malaysia has developed its infrastructure based on the various master plans. This infrastructure enabled Malaysia to facilitate the country’s development. This article focuses on two areas, namely road and highways, and industrial and technology parks.

### Roads and highways

According to the Highway Division of the Ministry of Works Malaysia, in Malaysia, Road transportation accounts for 96% of total passenger and goods transport in the country. It is not surprising that roads and highway play an important role, to connect people and industries and a proper road and highway network has managed to contribute towards economic development in the country. The road and highway networks also contributes towards the increase in the number of privately owned public transportation network in the form of express buses. As these express bus operators are run on a profit making basis, some areas are not in their routes, leaving the population to continue relying on privately own transport.

The Ministry of Works Malaysian states that in 2006, Malaysia has a road network infrastructure of 90,129 km of which 79% were paved roads. The highways in operation total 1,890 km comprising mostly of interurban highways across a country surface of 329.750 km<sup>2</sup> and designed for population of 25 million people.

Malaysian development plans have always believed that development efforts including roads and highways will

contribute towards a significant reduction in the incidence of poverty and a more equitable distribution of income. Comprehensive planning for roads in the country began in the 1<sup>st</sup> Malaysia Plan (1966-1970). During the 7<sup>th</sup> Malaysia Plan (1996-2000), the overall development of roads is guided by the Highway Network Development Plan that was formulated in 1993. In the 8<sup>th</sup> Malaysia plan, road and bridges were allocated a budget of US\$5 billion and which was 11% of the total budget for 2000-2005 and in the current 9<sup>th</sup> Malaysia plan the amount allocated is US\$ 4.7 billion which makes up about 9% of the total budget from 2006 - 2010.

Spending on roads and highways by the government does not include several privatized highway projects which mainly connect the southern part of Malaysia bordering Singapore with the northern part of the country bordering Thailand. In 1983, the Government introduced privatization as a national policy and a new approach in national development. This is due to the budgetary constraints in the highway network expansion program. Privatized highways are very successful in Malaysia and these highways have become an engine of growth in the country's development.

Under the privatized system, private companies are given concessions for up to sixty years in certain cases to collect tolls from the highways. The concession companies are responsible for obtaining all the finance, both debt and equity, necessary to construct, operate and maintain the highways. The private sector's main challenge to access funding is to have a financial model that passes sensitivity test analyses involving fluctuation in toll revenue, increase in costs, delay in construction and changes to concession agreement. The government benefits from the privatization program in terms of savings in capital expenditure amounting to RM 28.7 billion (US\$ 8.9 billion). In addition a total of 3,590 employees were transferred to the private sector.

Due to the 1997 economic crisis in Malaysia and other parts in Southeast Asia, many of the highway concession companies have been bought over by government related companies, thus, whilst maintaining a private status, these companies are de-facto owned by the government's investment arms. For example, United Engineers Malaysia (UEM) which is by far the biggest concession company with many important highway links in Malaysia is 100% owned by the Khazanah Na-

sional, which is the sovereign investment arm of Malaysia.

The importance and the impact of these privatized highways to the Malaysian economy cannot be understated. For example, the traffic volume for the month of December 2006 for the North South Highway, the most important highway link in Malaysia as reflected in million passenger car units/kilometer (pcu-km), saw an increase of 0.8% as compared to December 2005. Annual traffic volume in 2006 has increased by 1.6% (Works Ministry, 2007).

### Industrial and Technology Parks

According to the Malaysian Industrial Development Authority (MIDA), Malaysia has more than 200 industrial estates or larger parks developed and operated by State Economic Development Corporations, Regional Development Authorities, port authorities and municipalities. Private developers are also developing industrial parks. Among these industrial and technology parks, two of them, Kulim Hi Tech Park (KHTP) in the Northwestern State of Kedah and the Technology Park Malaysia (TPM) in the south of the capital Kuala Lumpur require special mention.

Covering an area of 1,450-hectare KHTP is the country's first, fully-integrated high technology park. Besides providing one of the best infrastructures for high technology manufacturing and R&D, the Park's Master plan also puts emphasis on the quality of life within a self-contained township. Amenities incorporated in the plan include a shopping centre, a hospital, educational institutions and recreational facilities. To meet the increased demand for industrial land at the park, KHTP will be extended to cover an area of 1,600hectares.

To-date, KHTP has attracted some RM21 billion (US\$ 6.48 billion) investments and houses over 20 companies including Intel, Infineon Technologies, Fuji Electric Malaysia, Celestica, Frontken, BCM Corp and wafer fabrication makers such as SilTerra and Hamadatec. Among major tenants of the Kulum Hi Tech Park are Intel and Fuji. Fuji is building its second substrates manufacturing plant, while Intel is setting up its facility for the design and development of chipsets, scheduled to begin operations next year as well as its new administration facility.

KHTP has also set up its own subsidiaries such as the Kedah BioResources Corp Sdn Bhd (KBioCorp). The new company is expected to spearhead the overall biotechnology initiatives of Kedah, including developing a biotechnology cluster over a 20 hectares designated site in the Park.

KBioCorp is also geared towards joint collaborations with the private sector and institutes of higher learning to further boost its biotechnology programmes.

Technology Park Malaysia (TPM) has been established to facilitate the eventual commercialisation of the R&D outputs of its tenants, mostly from the private sectors. Public sector research continues to concentrate within the campuses of universities and public research institutions. TPM offers low rental rates, incubators and some form of venture capital assistance towards seed organisations. Organisations conducting research in the IT sector may qualify for special incentives in the form of tax benefits, fast tracked approval for foreign professionals and other benefits from the multi media super corridor scheme.

In other words, TPM is to promote an environment which brings together key stakeholders in technology commercialisation. These include the technology providers (universities/RIs), the business community (industry), and the financial institutions (venture capital companies). In order to be more pro-active in its role, TPM has recently launched the Technology Intelligence Network to help prospect for potential technologies within Malaysia as well as outside the country. In addition, TPM will formalise the Technology Business Consultative Panel which will have representation from key stakeholders in the technology commercialization exercise. Apart from the technology providers, the other stakeholders include the business community, the government and venture capitalists.

TPM has been given the task to facilitate the technology commercialisation of herbal and nutraceutical products, especially those derived from the country's vast biodiversity. In order to carry out the mandate given, TPM management has decided to initiate a new mechanism to promote better linkages between the technology providers which include the universities and research institutes, the industry and business community and the financial establishments including venture capital companies.

Over the years, the linkages have not been sufficiently strong. As a result, there has been a lot of mismatch between the technologies that are generated by the R&D community and what the industries need. Lately this has developed into a media issue, the R&D group blaming the local industry for not being forthcoming in taking up the technologies they have developed and the industry complaining that the R&D findings have no

relevance to market needs.

However, the Government is starting to recognise the problem and is encouraging universities and public research institutions to have more strategic linkages with the private sectors and potential employers. In addition, private sector research institutions such as those owned by Sime Darby, the biggest plantation conglomerate in the world has also started to have more linkages with the public sector.

### Conclusion

The many projects to build roads and bridges to connect the various parts of the country fosters and smoothes the flow of goods, services and people, which contributes to economic development in Malaysia. Whilst the road and highway networks connect the various parts of the country and provide smooth flow of goods and traffic, industrial parks play an important role in the providing the necessary infrastructure for high technology companies that require specialist facilities. In addition, many indigenous research and development activities are also nurtured in these technology parks.

Knowing the importance of this physical infrastructure for economic development, Malaysia has been persistent in ensuring that physical infrastructure remains a top priority, including its operation and maintenance.

Malaysia's experience may be a good lesson to some other developing countries such as those in Africa. A good network of roads and highways and research and development facilities in the form of technology parks is ideal to foster economic growth across a vast region. Nevertheless, these infrastructure requires huge public sector and private sector investment, including the involvement of foreign investors and foreign funds. The current international economic climate may not be as favourable as the time when Malaysia started its drive for infrastructure development.

Thus, African countries have to rely to international development fund such as the World Bank to continue improving the infrastructure network. These countries may also decide to have research and development hubs by expanding existing facilities instead of building a new purpose built technology park.

## MODIFYING INFRASTRUCTURE PROCUREMENT TO ENHANCE SOCIAL DEVELOPMENT

John Hawkins (1) and Jill Wells (2)

(1) Manager Contracts and Disputes, Institution of Civil Engineers, 1 Great George Street, London SW1P 3AA tel +44 (0) 20 7665 2217 email [John.Hawkins@ice.org.uk](mailto:John.Hawkins@ice.org.uk)

(2) Programme Officer, Engineers Against Poverty, 1 Birdcage Walk, London SW1 email [j.wells@engineersagainstopoverty.org](mailto:j.wells@engineersagainstopoverty.org) tel +44 (0)20 7304 6839

### Abstract

The paper reports the findings of a study by Engineers Against Poverty (EAP) and the Institution of Civil Engineers (ICE) into the factors in infrastructure procurement that are currently inhibiting the achievement of social development objectives. The paper explores, the impact, performance and the sustainability of the asset and the service it delivers (the product), and the opportunities during the project's construction and operation (the process). The study adopted a very broad definition of 'procurement' to embrace all stages from project identification to the final monitoring, enforcement and evaluation. Methods included reviews of procurement documentation and practice in four case study countries (India, Indonesia, Kenya and Nigeria), roundtable discussions and in depth interviews with stakeholders. This yielded a long list of inhibiting factors but also some encouraging efforts at reform. The paper concludes that procurement procedures and contract agreement have the potential to promote social objectives. However, the objectives should be clearly identified in the project design, the budget and procurement strategy have to be appropriate and implementation must be monitored and enforced.

### Keywords

Procurement, social objectives, project design, tender, contracts, capacity building

### Introduction

This paper presents the findings of an investigation into the possibility of modifying the way in which infrastructure projects are procured in low and middle income countries in order to enhance the delivery of social development objectives. The research is based on the assumption that the procedures followed in the procurement of infrastructure and the details of the contracts entered into can have a significant impact on the

social and operational performance of the asset, as well as contributing to the achievement of broader social and economic goals. Procurement procedures can therefore be used as a vehicle to deliver social objectives in infrastructure projects.

The research was undertaken by Engineers Against Poverty (EAP) and the Institution of Civil Engineers (ICE) through its Presidential Commission, Engineering Without Frontiers (EwF). These organisations share a number of common objectives.

EAP is an international non-governmental organisation that works with the engineering industry to promote social and economic development. EAP is supported by the UK Department for International Development (DFID), the ICE and the Institution of Mechanical Engineers (IMechE)

The ICE represents over 70,000 professionally qualified civil engineers worldwide. It seeks to advance the knowledge, practice and business of civil engineering, to enhance the engineer's contribution to sustainable economic growth and promote ethical standards. Engineering without Frontiers (EwF) is a Presidential Commission of the ICE established to examine the engineer's role in meeting the UN Millennium Development Goals.

The aim of the research was to identify opportunities to improve the delivery of social objectives in procurement procedures and contracts. The areas of social development opportunity explored by the project are:

- ⇒ The impact/performance of the asset and the service it delivers (the *product*), and
- ⇒ The opportunities during the project's construction and operation (the *process*).

Opportunities within these areas fall into two main categories, those that benefit 'labour' (defined to include employees and the self employed in the formal and informal sec-

tor) and those that bring benefits to a broader group which we call 'society'. The greatest benefits to labour are derived from the process and to society from the product, but the division between these categories is not clear cut. Examples of the former are (i) the expansion of opportunities for employment with decent working conditions during construction and operation of the asset and (ii) the development of business opportunities through the local production of inputs (machinery, equipment, materials and components) to the construction process, as embodied in the concept of 'local content'. Examples of benefits to society are the delivery of an asset that is fit for purpose, is operated and maintained in an appropriate manner, serves the needs of the community over many years and contributes to social and economic development goals. Good governance is also considered as an objective as it provides the enabling framework for delivery.

The work was guided by a panel of expert advisors set up by the ICE, who met from time to time to monitor progress and review outputs. On the advice of the panel an early decision was taken to expand the usual definition of procurement to include 'project identification' at the initiation of the project and 'monitoring and performance evaluation' at the conclusion of the construction phase. Five stages in the procurement cycle were identified as: (1) Identification, planning and design (2) Finance and procurement strategy (3) Tender and selection (4) Contract agreement (5) Monitoring, enforcement and evaluation. Consideration was also given to the operation and maintenance of the asset.

## 1. Research methodology

At the outset the research aimed to address two key questions:

1. How do existing procurement procedures inhibit (or enable) the achievement of beneficial social impacts of infrastructure projects in low to middle income countries?
2. How can procurement procedures be improved and utilised as a mechanism to increase the contribution of the project to the achievement of social development objectives?

Three major avenues of enquiry were adopted to address these questions:

### 1.1 Case studies in four countries:

Analysis of current procurement procedures and how they are applied in practice is key to understanding the factors inhibiting or enhancing social performance. It is also important to establish where social objectives are identified within procurement procedures and contract documents. In order to achieve these objectives a detailed study of national procurement policy, procedures and documents was undertaken in a small number of countries chosen as case studies. Four countries were selected: India, Indonesia, Nigeria and Kenya. They were selected because they are strategic regional leaders with capacity to promote the recommendations emerging from the research and to influence other countries in the region.

In each country a detailed analysis was undertaken of national procurement policy and legislation, national standard bidding regulations and documents. The relevant development bank's harmonised bidding document and a limited number of project documents were also consulted.

This approach allowed the identification of social obligations in current procurement procedures. In order to examine the extent to which these contractual obligations are actually met, we looked at health and safety in construction projects in the case study countries. As the research progressed, it also became important to consider the infrastructure policies adopted by the governments to meet country MDG targets.

### 1.2 In-depth interviews:

Interviews were conducted with representatives of over 40 key stakeholders. Respondents included the following donors: The World Bank, Asian Development Bank, Department for International Development (DFID) and the European Commission. Other respondents were government departments, international and national consultants and contractors and NGOs. Each respondent was asked about their individual work experiences and their views on current practice. The information gathered from the interviews, together with the findings of the case studies, was used to identify the factors inhibiting the delivery of social objectives through procurement. Some enabling factors also emerged from the interviews with key stakeholders. The identification of enabling factors was supplemented by an extensive review of past and current initiatives undertaken by donors, financiers or other groups to

improve the performance of procurement systems to deliver social objectives.

### 1.3 Roundtable discussions:

Roundtable consultations were held in each of the case study countries. These meetings were facilitated and/or sponsored by the ICE country representatives, multi-lateral development banks, governments and private companies. Altogether over 100 delegates from across the stakeholder groups (donors, clients, consultants, contractors, NGOs and other local stakeholders) attended these one-day meetings.

Roundtable discussions were seen as a way of bringing developing country voices into the study. The participants in each meeting were asked to address two questions:

What are the opportunities to increase social development within engineering procurement procedures in the case study country?

What are the enabling factors for the opportunities to be achieved?

The issues raised in the discussions played a key role in drawing up the recommendations. While the views expressed were not attributed to individuals in the interests of confidentiality, it is felt that the findings and recommendations of the study (as summarised below) present a fairly accurate reflection of the views of those most directly involved in the delivery of infrastructure projects in the developing world.

## 2 Case study findings

Five common findings emerged from the study of procurement documents in the case study countries:

### 2.1 Public procurement reform is underway to improve governance

Since the late 1990s the governance of procurement policy in the case study countries has followed a similar pattern of reform and development. This is being driven by the donor's switch from funding individual projects to providing more general budget support, accompanied by an agreement to channel funding through national government systems whenever they are considered to be of adequate standard.

Following World Bank Country Procurement Assessment Reports (CPARs), Kenya, Nigeria and Indonesia took up the recommendation of the World Bank to establish a legal framework for public procurement based on the UNCITRAL Model Law on Procurement of Goods, Construction and Services (UNCITRAL, 1995)<sup>1</sup>. Kenya and Nigeria also adopted the recommendation to create a central authority to formulate procurement policy and monitor its implementation. The objectives of procurement legislation in these countries closely follow those stated in the UNCITRAL Guide to the Model Law, notably maximising competition, according fair treatment for suppliers and contractors bidding to do government work and enhancing transparency and objectivity. By following this principle, the Model directs a procuring entity towards competitive tendering with restrictions placed on other tendering methods such as restricted tendering and two-stage tendering.

The legal frameworks have also sought to improve the governance of public procurement by adopting a complaints and review procedure based on the guidance provided in the UNCITRAL Model, by prohibiting corrupt and fraudulent practises and including a code of conduct for all procurement officials.

### 2.2 A limited number of social objectives in standard bidding documents

National procurement legislation does not address the contract performance or implementation phase. Instead, the expectation from the CPARs is for national governments to publish standard bidding documents. Examination of the documents in the four countries found a limited number of social objectives related to labour (conditions of employment, health and safety and trade union rights) in the conditions of contract. All four countries also give a margin of preference in the tender process (commonly 10%) to domestic contractors. A margin of preference is also granted for the benefit of tenders using locally produced goods or services. Other local content policies include a classification system in Indonesia that reduces the ability of overseas contractors to bid and bonus scores for demonstrating a history of local participation in Nigeria. Environmental obligations are more common, with Environmental Impact Assessments (EIAs) increasing. EIAs so address some social issues, such as resettlement. However, the recommendations of the EIA reports are not always included in the scope of works and consequently not implemented.

### 2.3 Social obligations in Multilateral Development Banks bidding documents, but questions over enforcement

When Multilateral Development Banks (MDBs) finance a project it is their standard bidding documents that usually apply and their rules that take precedence when they conflict with national legislation. The 'Master Bidding Document for Procurement of Works', which includes the Multilateral Development Bank (MDB) Harmonised Edition of the FIDIC Conditions of Contract for Construction (2005), does address governance, labour and society issues. The obligations to the labour force go further than the national standard bidding documents examined, with prohibition of child and forced labour and an obligation to ensure the supply of food and water. There is also a requirement to appoint an accident prevention officer at the Site and a comprehensive contractual obligation for the contractor to conduct an HIV-Aids awareness programme via an approved service provider. However, stakeholders have questioned how these obligations will be priced and if and how the client and his contractor will measure whether the service provider has fulfilled his obligation. Also, many of the social requirements are a test of reasonableness or do no more than 'encourage' action. Two examples are a requirement that the contractor take 'all reasonable steps' to protect the environment' and that the contractor is 'encouraged' to employ staff and labour from sources within the country.

Other social requirements may be included as part of the condition of the loan or grant, but these are usually confined to governance issues and a requirement for Environment Impact Assessments.

### 2.4 Even minimal social obligations may not be met

Most contracts specify, as a minimum, that contractors must obey all local laws and regulations. Legislation is generally adequate with special provisions to ensure the health and safety of the construction workforce. In the three countries where this issue was studied (India, Kenya, Nigeria) legislation has been strengthened recently with the introduction of requirements for health and safety committees at all work places, with equal worker and employer representation.

However, the actual standard of health and safety on construction sites in the countries studied falls far short

of what is required by law. Monitoring and enforcement of the provisions for health and safety in contracts is inadequate. Health and safety inspectorates are generally understaffed and visit construction sites only after an accident has occurred. Few contractors are charged for contravening the regulations and when they are the penalties are too small to serve as a deterrent. There is no monitoring of health and safety from within the project team. Fear of losing contracts to competitors is a powerful factor preventing contractors from including the full cost of meeting their health and safety obligations in tenders. Workers also are fearful of losing their jobs if they complain about unsafe or unhealthy worksites. Many are simply unaware of their rights.

### 2.5 New procurement strategies to meet MDG targets and private participation

Governments have set specific infrastructure targets to meet the MDGs, particularly in the provision of water and sanitation, roads and power supply to improve the lives of villagers and slum dwellers. The role of infrastructure in stimulating economic growth and reducing (both directly and indirectly) the number of people living in poverty is also recognised. All four countries aim to mainstream MDGs into national planning and budgeting, but it is not clear whether this has occurred in practice. In three of the case study countries (India, Indonesia, Nigeria) responsibility for the delivery of infrastructure is being devolved down to local levels but questions have been raised as to whether these tiers of government have the technical capability to deliver.

The lack of finance to meet MDG targets also means that governments are looking to the private sector to deliver, operate and maintain infrastructure and related services and recoup their investment through user charges. Community organisations are also being encouraged to operate and maintain small scale and/or rural infrastructure assets using the funds generated from charging users for the service. This is leading to a change in procurement procedures with governments wishing to engage contractors on long-term concession contracts ranging from 15 to 25 years. Social objectives within the concession contracts go beyond the traditional ontracts with examples of the requirements from the EIA and SIA report built in the project documentation (e.g. India). There is also legislation relating to private sector participation in infrastructure that specifies various social obligations, For examples laws relating to infrastructure in Indonesia make

consultation with the local community a legal obligation for the client<sup>2</sup>. It is then for the client to decide how this consultation is managed within the procurement process.

### **3 Summary of factors inhibiting beneficial social impacts**

The detailed study of procurement regulations and contract documents in the four case study countries pointed to a number of factors in procurement procedures that could be inhibiting the achievement of social development objectives. For example, the lack of clear definition of social obligations in contracts and the failure to monitor and enforce the obligations that do exist in contract agreements or national legislation. The interviews and round table discussions covered a broader area (from project identification to monitoring and evaluation, operation and maintenance) and revealed other factors. The main inhibitors as they arise in the order of the procurement cycle are summarised below.

#### **3.1 Lack of public consultation, national plans or other clear criteria for project identification**

The process of delivering social development objectives through the procurement of civil works starts with the identification of a project. Respondents complained of a lack of transparency in the selection of projects and absence of public consultation, leading to fears that selection is based on personal or political interests rather than the interests of society as a whole. Project identification does not appear to be guided by national, local or sectoral plans, hence projects do not always meet a clearly identified need. Many projects are considered to be 'socially inefficient'. In the worst case scenario they may serve no apparent purpose – such as 'bridges to nowhere'.

#### **3.2 Failure to incorporate social objectives in project appraisal, design and budget**

The predominant source of project funding in low income countries is loans taken by governments from MDBs. Social conditions attached to loans are generally restricted to issues of governance. Donors fail to systematically consider social objectives during project appraisal or to set aside funds for their realisation. Social objectives are also overlooked by clients and there is little evidence of linkage between project planning and design and national development plans, national

policies (e.g. for employment generation) or legislation (e.g. on occupational safety and health). Failure to consider social objectives at the design stage and to budget accordingly, may hamper the achievement of these objectives when introduced later on.

#### **3.3 Failure to plan and budget for maintenance**

African respondents in particular highlighted the persistent problem of poor maintenance of infrastructure assets which shortens the life of the asset and the social benefits derived from it. One obvious cause of the problem is inadequate funding for operation and maintenance, whether from general taxation, specific taxes, or user fees. Less obvious is the fact that the design and specification can themselves have a big impact on the ability to operate and maintain the asset. For example, if designs require heavy dependence on foreign technologies and skills, maintenance becomes a problem from the moment that foreign workers depart. Conversely, the capability to operate and maintain the facility should be enhanced when designs employ local technologies, skills, materials and components, embraced in the concept of 'local content'.

#### **3.4 Inflexible procurement strategies and adversarial contract forms**

The predominant method of procurement in developing countries is essentially traditional, with the client serving as the contracting authority and appointing through competitive bidding a consultant to design and contractor to deliver the project. The traditional method of procurement has a long history of reliability. But many regard this method as inflexible and not always appropriate. It is also highly adversarial. There is also concern at the excessive focus on competition at the expense of other objectives, such as the development of the local economy. There are several different procurement strategies that clients and donors could consider that might be more suitable in certain circumstances in delivering the project and social objectives (e.g. design/build, turnkey, output or performance based procurement). But despite their successful use in developed countries, donors have been reluctant to allow developing country clients to adopt these models.

#### **3.5 Intense competition and selection based on lowest price**

All four case study countries have accepted the basic tenet of the UNCITRAL Model Law that best value is achieved by

maximising competition. However, accepting the lowest price tender can have negative repercussions with implications for the achievement of social objectives. If the tender price is very low the successful bidder may be led to cut costs by cheating on materials and taking other shortcuts that can affect the quality of the product. The successful bidder may also cut back on labour costs by pushing down wages, hiring casual workers and failing to meet contractual requirements to ensure the health, safety and welfare of the workers. In many countries intense competition (particularly from Chinese companies and other 'new entrants' to international contracting) is seen to be driving down standards and leading to neglect of social obligations. It may also preclude local contractors from entering the market as they do not have the financial capacity to take on the risk of bidding at such low prices.

### **3.6 Vague and conflicting messages regarding social obligations in contracts**

Vague and sometimes conflicting obligations in contracts complicate compliance. For example, as the case studies noted, contractors are expected to take 'reasonable care of the environment'. It is not clear what this means and interpretation is made even more difficult in a context where national standard and guides are lacking and little attention has been paid to the specification of sustainable resources in design and delivery. There is also ambiguity in FIDIC contracts on the employment of local labour, with one clause stating it is up to the contractor who s/he employs and another saying s/he should employ nationals wherever possible. Other contracts clauses, such as 'take due precautions to ensure the safety of staff' may state the general intent but lack operational detail to inform the contractor what actually has to be done.

### **3.7 No clear standards for social objectives and failure to monitor and enforce standards that exist**

In the countries studied project performance is often poor, with the technical as well as the social requirements of the contract not fulfilled. Sometimes the failure can be traced back to problems at earlier stages in the procurement process, such as poor design and specification, weak definition of requirements and/or inadequate budgets. But failure to enforce the conditions of the contract is also due to inadequate supervision from within the project team as well as weak gov-

ernment enforcement of regulations. In very poor countries, government regulatory agencies rarely manage to enforce standards due to lack of capacity, logistical difficulties and corruption. Monitoring and enforcement of basic requirement for health and safety is certainly inadequate in all of the case study countries. Project auditing (in the sense of analysis after completion to identify shortcoming, errors or mistakes) is limited. Respondents expressed the view that the implementation of many objectives, not just social, is not evaluated to a relevant and appropriate standard, with auditors tending to follow paper trails rather than actually checking the asset on the ground. Lack of effective standards for monitoring is a further problem.

### **3.8 Corruption is a major inhibitor at every stage of the procurement cycle**

Corruption is prevalent throughout the procurement and project life cycle, from identification of the project through to monitoring and enforcement, operation and maintenance. Corruption and fear of corruption is a major inhibitor to improved contractual and social performance. It hinders decision making, undermines the efficiency of the procurement process, blocks the entry of local firms and raises project costs. Consultants and contractors stated instances where they have walked away from bids because of corruption. Others build corruption costs into the price. In its Global Report of 2005 the anti-corruption group, Transparency International, estimates that almost 10% of investment in infrastructure is lost to corruption. The real figure may be much higher.

Analysis of the stakeholders who are mainly responsible for the factors that are currently inhibiting the setting and achievement of social development objectives through the procurement process threw up some additional inhibiting factors. For example, the fact that the MDBs measure success by the quantity of funds disbursed rather than the quality of outcomes, the focus of donors on financial auditing with minimal monitoring of social outcomes and the continuation by some donors of the practice of tying aid are all seen as detrimental to the realisation of positive social impacts from infrastructure spending. Governments are also criticised for failing to enforce their own regulations or to promote their own policies in infrastructure procurement.

## **4 Roles of key stakeholders as agents for change**

As well as the long list of problems summarised above, the research also detected some encouraging developments led by key stakeholders in the procurement process. It is by now a well established fact that the decisions taken in the early stages of project procurement have the greatest potential impact on cost. This is also true for the identification and exploitation of social development opportunities. Hence the greatest chance to influence the setting and achievement of social development objectives in public procurement rests with the donors who provide much of the funding, in partnership with the clients who create the culture for project implementation.

Donors are currently driving procurement reforms in low income countries and helping to build the capacity of procurement officials. This is related on the part of some donors (led by OECD/DAC) to a move away from project funding toward budget support linked to national and sector plans. We have seen in the case studies that the MDBs have now adopted standardised contract documents that do address some social issues, although there are questions over enforcement. MDBs have also recently agreed a common approach to fight corruption, to develop proposals to assist country capacity in anti-corruption measures and to cooperate with civil society and institutions to enhance transparency and accountability. It is now important that these opportunities are taken up and that inflexible procurement procedures and the drive for market competition do not compromise donors' desire to derive increased social benefit.

Governments are also influential in promoting social objectives as they set the framework in which projects are identified, planned, designed, procured, constructed and maintained. Governments of many countries are reviewing procedures and promoting reforms, although these efforts are complicated by decentralisation programmes. In some countries the social performance of companies is being included in assessment criteria for prequalification or registration. Environmental Impact Assessments are increasing and Social Impact Assessments are beginning to emerge. Community groups are playing an increasing role in project identification, management, operation and maintenance with positive effect. These developments indicate a growing momentum to encourage good practice and social development impacts in public procurement.

Two particular examples of good practice can be singled out. The first is the use of 'targeted procurement' by government clients to assist disadvantaged groups. Targeted procurement is a system for awarding tenders that provides the option to set targets or goals to achieve socio-economic objectives that are contractually enforceable, whilst retaining donor rules of competition, fairness, efficiency and transparency (Watermeyer, 2000)<sup>3</sup>. A scoring system leads to bidders competing on the basis of price and how they incorporate the social objectives into the project (for example, 90 points for price and 10 points for social objectives). Developed in South Africa to specifically target those groups disadvantaged under the apartheid system, the system has also been used to support local economic development, to promote growth within the small business sector and to target the unemployed in poverty alleviation programmes. However, successful implementation clearly depends on appropriate planning and design and clear identification of goals, as well as the willingness and ability to apply sanctions to contractors who fail to deliver the social objectives they are contractually committed to.

The second example addresses the key issues of monitoring, evaluation and enforcement. One clear message emerging from the research is that contract agreements that require certain actions on the part of the contractor (even if this is simply to observe the law of the land) have to be monitored and enforced through incentives or sanctions. The Social Aspects of Construction project, supported by UK/DFID and tested in Ghana, has demonstrated how social obligations in contracts (in this case labour standards) can be monitored as part of the supervisory process within the project team (Ladbury, Cottam, Jennings, 2003)<sup>4</sup>. The process is greatly facilitated if the labour force is fully aware of their rights and entitlements and all the key stakeholders are involved. On DFID funded projects in Ghana the stakeholders (including the client, contractors, labour department and trade unions) collectively identified the appropriate labour standards to apply and periodically reviewed problems and proposed solutions. Contractors complying with the standards were rewarded with bonuses. Over time and after a number of different monitoring approaches had been tried, the supervising engineers began to take over the role of monitors. The experiment has shown that consultant engineers can effectively monitor compliance with social obligations and review accounts when these are clearly defined and budgeted in contract agreements.

## Conclusion and recommendations

A number of key messages emerge from the research. First, it is clear that there are many stages in the procurement cycle and actions in one stage are constrained by decisions taken earlier. As a general rule the decisions that are taken in the early stages, have the greatest impact on the achievement of social development objectives. The biggest potential impact on poverty probably lies in the choice of the project. Therefore, project identification must be carried out in a clearly defined and transparent manner. It is suggested that it should be in line with national, local or sector plans and carried out in consultation with the community.

Second, it is equally clear that there is little point in including contractual obligations (whether the contract agreement or preferably the specification) that require certain actions on the part of the contractor unless the actions have already been considered at the design and planning stage and budgets drawn up accordingly. Some method has also to be agreed for monitoring and enforcing compliance. If these things are in place the contract agreement has potential as a means to promote social objectives at the tender stage.

Greater flexibility is needed in identifying a procurement strategy. The 'one size fits all' approach creates an inflexible system that is not appropriate for all projects. A move away from the lowest cost approach is envisaged, with a greater willingness on the part of donors to allow two stage and targeted procurement methods. A more flexible approach by clients and donors could improve the delivery of the project and the achievement of social objectives.

Fourth, the long recognised problem of poor maintenance is still very real. This is traced to the failure to consider the whole life cycle of an asset during planning and design, so as to ensure that the asset can be operated, as well as maintained, at minimum cost and with the resources that are available locally. If these considerations are at the forefront of decision making it is likely that 'local content' (of materials, labour and business) will automatically be enhanced. Respondents from all of the case study countries and many representatives of international agencies maintained that promoting local content is an efficient means of delivering significant social development impact. They recommended that

investment to meet the MDGs should use and strengthen national engineering industries and resources.

Finally, it is worth noting that corruption (a major inhibiting factor) is pervasive and must be tackled at all stages of the procurement cycle. Tackling corruption at the tender and selection stage alone (which is the stage that currently received the most attention) is unlikely to be effective as the problem will simply move to a different stage of the process. The first step in tackling corruption is to increase transparency. It is therefore essential that processes at each stage of the procurement cycle are as transparent as possible.

Based on the above, the following recommendations are put forward for discussion. The recommendations are presented in the order in which they arise in the procurement cycle.

### Project identification, planning and design

1. Project identification should be in line with national, local or sector plans and/or based on public consultation
2. The whole life cycle of the asset should be considered during planning and design and an operation and maintenance strategy developed for each new project
3. Social objectives should be clearly identified at the planning stage and incorporated into the design, with funds set aside in the budget for their realisation

### Finance and procurement strategy

- 4 Consider alternative procurement strategies to ensure the appropriate approach to deliver the specified social objectives

### Tender and selection

- 5 The social objectives must be clearly defined in tender documents and explained at pre-tender meetings
- 6 Attention should be paid in tendering to the bidder's social performance and capacity to deliver social obligations, through prequalification or the maintenance of robust registers

### Contract agreement

- 7 The project team must agree contractual mechanisms to deliver social objectives

### Monitoring, enforcement and evaluation

- 8 Contractual obligations must be monitored and enforced through incentives and/or sanctions
- 9 Social performance audits should be conducted with the same rigour as financial audits.

### Phase two project

Following completion of this project, the ICE and EAP acknowledged that further research was needed to test the feasibility of implementing the recommendations in particular contexts, as well as to test their effectiveness in achieving specific social development objectives.

Therefore, a phase two research project was commissioned to investigate the circumstances in which the inhibiting factors might be overcome and the procurement of infrastructure projects used to deliver key social development objectives. The overriding objective emanating from workshops and meetings with international donors and developing country governments to date is the need to build capacity in borrowing countries and expand the 'local content' of projects, so that more of the funds invested stay in the region.

The issue of labour standards has also been highlighted, with organizations such as the European Union embracing the International Labour Organisation's 'Decent Work' agenda and many countries keen to improve on construction health and safety. We therefore intend, in the second phase, to focus attention on the key social development objectives of (i) building local capacity (ii) expanding local content (including through employment generation) in the construction and maintenance of infrastructure, while paying due regard to labour standards (health and safety, and the environment).

We hope to demonstrate how and in what circumstances, the above objectives might be furthered through innovative approaches in public procurement. The work will be based on a review of previous research and analysis of evidence gathered from a number of case studies of past or current projects. We would very much welcome any approach or examples of building local capacity and expanding local content which could be developed into a case study. We expect the final outcome will be series of recommendations in the form of guidance notes or toolkits. We look forward to sharing the outputs of this work with you.

1. UNCITRAL (1995) 'Model law on procurement of goods, construction and services with guide to enactment'
2. Law of the Republic of Indonesia, Number 38 of 2004 concerning Road
3. Watermeyer, R. (2000), 'The use of Targeted Procurement as an instrument of poverty alleviation and job creation in infrastructure projects', *Public Procurement Law Review* No.5 pp.230-231. see also Watermeyer, R. (2003), 'Implementing preferential procurement policies in the public sector in South Africa', *Journal of the South African Institution of Civil Engineering*, 45(3) pp.11-22
4. Ladbury, S., A.Cotton and M.Jennings (2003) 'Implementing labour standards in construction: A sourcebook' Water, Engineering and Development Centre (WEDC) Loughborough University

### Endnotes