

CHALLENGES FACING LABOUR-INTENSIVE PUBLIC WORKS PROGRAMMES AND PROJECTS IN SOUTH AFRICA

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Abstract

History has shown that labour-intensive methods of works have long been used in creating remarkable infrastructure works. Labour-intensive programmes generate more direct and indirect local employment opportunities and income by using locally available input and thus creating a greater demand for local products and services than high-technology programmes reliant on imported technology and equipment. Investment in infrastructure has a huge potential to redress the high unemployment and poverty levels in South Africa and also to correct the skill deficits in disadvantaged communities. From a theoretical perspective supported by experience elsewhere in Africa, there are reasons for considering that properly formulated labour-intensive public works programmes and projects could be established to construct and maintain the required physical infrastructure, thus creating employment, skills and institutional capacities. This paper will look at past African experiences in implementing labour-intensive programmes and projects with regard to their successes and problems. The paper will then critically look at the experiences and problems encountered in the implementation of labour-intensive public works programmes and projects in South Africa. The paper closes with some recommendations for the future.

Keywords

labour-intensive programmes and projects, unemployment, poverty.

INTRODUCTION

History has shown that labour-intensive methods of work have long been used in creating remarkable infrastructure work. Labour-intensive programmes generate more direct and indirect local employment opportunities and income by using locally available input (materials, simple tools and local labour) and thus creating a greater demand for local products and services than do high-technology programmes reliant on imported technology and equipment. Investment in infrastructure has a huge potential to redress the high unemployment and poverty levels in South Africa and also to correct the skill deficits in disadvantaged communities. Commitment to alleviation of poverty has risen on the government agenda and will stay one of the focal points. This is motivated by the fact that currently around 24% of the population lives on less than \$1 a day. This is below the poverty line defined by the World Bank (World Bank, 1994). The levels of unemployment have been rising steadily over the years. The unemployment rate is an extremely important indicator of economic and social health. The level of unemployment was 7% in 1980; 18% in 1991 (McCutcheon, 1995); 15.7% in 1995 (Statistics South Africa, 2003); 30.2% in 2002; 27.4% in 2003; 25.6% in 2004; and 26.5% in 2005 (Labour Force Surveys (LFS) 2000 – 2005). The unemployment rate rose rapidly over the 1990s, then fell in 2003 and 2004, and rose again in 2005. This is due to a drastic fall in the demand for unskilled labour in the formal sector caused by structural changes in the economy as a result of a decline in the importance of the primary sector.

Over the past 25 years, several projects have been initiated in South Africa to counter unemployment and poverty (Thwala, 2001). It is envisaged that there will be others in the future. From a theoretical perspective supported by experience elsewhere in Africa, there are reasons for considering that properly formulated employment creation programmes based on the use of labour-intensive methods could be established to construct and maintain the required physical infrastructure, thus creating employment, skills and institutional capacities.

This paper will look at past African experiences in implementing development programmes and projects with regard to their successes and problems. The paper will then critically look at the experiences and problems encountered in the implementation of labour-intensive public works programmes and projects in South Africa. The paper closes with some recommendations for the future.

PUBLIC WORKS PROGRAMMES AND EMPLOYMENT CREATION

Public works programmes have a long history in industrialised countries as an economic-policy tool, both as a fiscal measure to expand or contract public spending during periods of unbalanced domestic demand and as a short-term measure to alleviate unemployment. In order to alleviate poverty and generate employment during the construction and maintenance of infrastructure projects, attempts must be made to encourage the use of labour-intensive methods. Bentall (1999:219) defined “labour-intensive approach” as an approach where labour is the dominant resource for carrying out works, and where the share of the total project cost spent on labour is high (typically 25% – 60%).

The term “labour-intensive approach” indicates that optimal use is made of labour and it is the predominant resource in infrastructure projects while ensuring cost-effectiveness and safeguarding quality. This involves a judicious combination of labour and appropriate equipment which is generally light equipment. It also means ensuring that labour-intensive projects do not degenerate into “make-work” projects in which cost and quality aspects are ignored. Labour-intensive construction results in the generation of a significant increase in employment opportunities per unit of expenditure in comparison with conventional capital-intensive methods. The ‘significant’ increase meant a 300% to 600% increase in employment generated per unit of expenditure (McCutcheon, 2001).

OVERVIEW OF AFRICAN EXPERIENCES THROUGH THE USE OF LABOUR-INTENSIVE APPROACH IN PUBLIC WORKS PROGRAMMES

The use of employment-intensive public works programmes is not new to Africa. In the 1960s, three countries in North Africa, namely Morocco, Tunisia and Algeria, experimented with such programmes. Although started initially as emergency relief work programmes, especially in rural areas, it gradually came to acquire a development orientation. The Moroccan experiment, known as National Promotion, was launched in June 1961. This large-scale programme was aimed at enhancing opportunities for the rural unemployed in productive works and slowing down the rural exodus and associated problems with rural populations in the development process. The importance of this programme was highlighted by its mention in the constitution of December 7, 1972, and subsequently by the creation in 1975 of the High Council of National Promotion Plan. According to one estimate, the programme provided employment for 85,000 workers per month during the peak season (Jara, 1971).

During 1959-1960, a large Tunisian work programme known as *Worksites to Combat Underdevelopment*, was carried out with 80 per cent of the cost being borne by Tunisian authorities and the remaining 20 per cent in the form of food aid from the United States. The employment created was equivalent to an annual average of 20.7 days per head of Tunisia's labour force (Thwala, 2001). In Algeria, the publicly-sponsored works programme, known as *Worksites for Full Employment* (*Chantiers de plein emploi [CPE]*) began operating in 1962 as a relief operation. It soon acquired a strong development orientation to maximise employment in a project of economic interest, namely reforestation work, to fight severe erosion. (Jara, 1971). In 1965, the *Peoples Worksites Reforestation* (*Chantiers populaires de reboisement [CPR]*) was created as a statutory body attached to the Forestry Division of the Ministry of Agriculture and Agrarian Reform. Since then, the World Food Programme has provided assistance and the scope of projects has been increased to include land reclamation and other infrastructure work.

A few countries have tried to create, through employment-intensive infrastructure work, relatively small 'functional economic areas' in the countryside in an attempt to stem rural-urban migration and retain more people on the land. An example is the *Djoliba pilot project* in Mali for converting a swollen rural village into an agro-urban community, which calls for several layers of investment in infrastructure. This project was to test the feasibility of the establishment of some 150 rural centres that would service more than 10,000 villages in Mali (Thwala, 2001). The *Volta River Settlement Programme* of Ghana, involving the creation of network of rural towns and access roads, is another example of rural spatial planning. Three times as many workers were employed in these resettlement preparations than were involved in building the Volta dam, showing the employment-generating potential of employment-intensive infrastructure investment.

In Kenya, over 12,000 kilometres of rural access roads have been constructed and over 80,000 man-years of employment have been created (McCutcheon, 1993). The *Kenyan Rural Access Roads Programme* is the overall responsibility of the Ministry of Transport and Communications but operates within the national *District Focus* policy which provides greater autonomy at the local level. According to McCutcheon (1993), the methods have been considered so successful that they have been introduced in the secondary roads network (the *Minor Roads Programme*). In Botswana, a national programme of labour-intensive road construction units has been set up within *District Councils* which are semi-autonomous bodies under the overall responsibility of the Ministry of Local Governments and Lands. This programme has resulted in the creation of over 3,000 jobs (total employment within the public sector is only 20,000) and the construction and upgrading of nearly 2,000 km of road. (McCutcheon, 1995).

Thus, within different institutional and organisational frameworks, a wide range of techniques of labour-intensive road construction has been extensively tried and tested over the past 25 years. Despite their valuable contribution to employment-generation, many of these earlier experiments in employment-intensive public works in Africa suffered from one or more of the following shortcomings (Barker, 1986; Abedian and Standish, 1986; UNDP and ILO, 1987, Ligthelm and Van Niekerk, 1986, McCutcheon, 1990, 1994, 2001; McCutcheon and Taylor-Parkins, 2003; and Thwala, 2001): the ad hoc nature of schemes, lack of spatial focus and often without any links to national rural development and infrastructural planning systems; makeshift administrative arrangements and failure to inject sufficient managerial and engineering skills and technical competence into project selection and execution, as well as choice of technology, resulting in poor project planning, programming and manpower management; lack of balance between centralisation and effective involvement of local administrations and popular bodies

in crucial programme decisions, planning and implementation; failure to adjust programme operation and intensity to seasonal labour demand for agricultural operations; lack of precision about target groups and programming on the basis of inadequate information about beneficiary groups; lack of adequate and sustained political commitment and allocation of public funds for the programmes; inadequate post-project maintenance arrangements; and inadequate emphasis on, and arrangements for, reporting cost-benefit studies and general performance evaluation.

INFRASTRUCTURE AND DEVELOPMENT

Infrastructure can deliver major benefits in economic growth, poverty alleviation and environmental sustainability – but it can only do so when it provides services that respond to demand and does so efficiently (World Bank, 1994). Until the end of the 1980s, infrastructure was neglected as one of the factors of economic growth. Since then, the effect of public infrastructure in the long-run performance of an economy has been debated in academic literature and public policy circles. According to Aschauer (1988) and Munnell (1992), additional infrastructure investment has a significant positive effect on aggregate and regional economic activity. Other scholars such as Hulten and Schwab (1993) argue that not only does infrastructure influence growth but other factors are correlated as well. Although correlation does not imply causality, it is significant that economic development and infrastructure are closely associated (Queiroz and Gautam, 1992). While there is no consensus on the exact nature of the impact of infrastructure on growth, many studies on the topic have concluded that the role of infrastructure in growth is substantial, significant, and frequently greater than that of investment in other forms of capital. A shortage of infrastructure services puts pressure on the public sector for more infrastructures. A capable and willing public sector is essential that decides whenever and where infrastructure is expanded. A strategy where infrastructure leads growth also requires policy makers to make spatial choices about which areas and regions are to receive additional infrastructure. When infrastructure follows growth, the choices are more sector than spatial orientated. Political choices under such conditions are more likely to involve economic sector interest groups rather than spatially orientated ones (DBSA, 1998a).

THE NEED FOR PUBLIC WORKS PROGRAMMES IN SOUTH AFRICA

Public work infrastructure programmes and projects are seen as a major development tool for transforming the lives of people throughout the developing world. The character of development, its direction and pace, and the way people share in its benefits are largely determined by how a country manages its development projects and programmes. The chronic socio-political problems of South Africa, augmented by the continuing weak performance of the economy, have resulted in a deteriorating labour absorption capacity of the formal economy, an expanding informal economy and rapidly rising unemployment and poverty. The collapse of commodity prices and the prolonged droughts of the 1980s and 1990s compounded the already poor economic performance and have entrenched the poverty cycle experienced by the unemployed and underemployed. The severity of these problems, as well as existing structural rigidities in the South African economy, signifies the need for an active policy to redress past developments. In an effort to raise living standards, sustainable economic growth and structural reform are necessary to empower deprived communities and to bring them into the mainstream of the economic process. Unfortunately, there is no policy that can attain these goals overnight. The required solution is invariably multifaceted and must be directed

at the very roots of poverty and unemployment - a mere treatment of the symptoms will not achieve sustainable results.

A major component of a policy aimed at breaking the cycle of poverty should be a large-scale, well co-ordinated public works programme. Implemented in conjunction with other supportive policies (in particular, fundamental restructuring of ownership within the economy), it has the ability to absorb large numbers of involuntarily unemployed persons and arrest the process of impoverishment. Not only does it act as a net to catch social tensions that culminate in crime and violence during an economic-political transition phase, it also facilitates the restructuring of ownership which in turn enhances the revival of economic growth and development.

IMPLEMENTATION OF PUBLIC WORKS PROJECTS THROUGH LABOUR-INTENSIVE METHODS IN SOUTH AFRICA: EXPERIENCES, PROBLEMS AND PROSPECTS

The Government of National Unity initiated the National Public Works Programme (NPWP) after the 1994 elections. In essence, the NPWP consists of a process of labour-intensification and increased training and capacity building in the provision of infrastructure. The NPWP is a key component of the Government's Reconstruction and Development Programme (McCutcheon, 1995). The NPWP has shifted towards a Community Based Public Works Programme (CBPWP) which places more emphasis upon smaller companies and regulatory bodies than a national programme. Prior to the NPWP, another initiative was the setting up of the Framework Agreement that was later incorporated into NPWP. The Framework Agreement is a social compact between Government, labour, the construction industry and the civics (McCutcheon, 1999). The main item in the Agreement is first, where industry commits itself, to maximise the use of labour-intensive systems of construction within public works programmes, with due regard to economics.

In August 1991 the Congress of South African Trade Unions (COSATU) convened a seminar on "One Million Jobs by 1992" whose purpose was to review experiences and opinions about public works programmes and to develop a strategy for the future public programmes in South Africa. Based on Abedian and Standish's report for the Human Sciences Research Council (Abedian and Standish, 1986), the Trade Union Research Project reported that the most prevalent causes of failure for public works programmes were: seldom scaled to the magnitude of national manpower needs; often introduced in a fragmented and unsystematic way; implemented using inappropriate technology; introduced on an *ad hoc* basis and not linked to an overall development policy; lacking administrative back-up; lacking adequate post-project maintenance; and almost entirely dependent upon the government's commitment to the programme. If there was a lack of commitment, this would be reflected in a lack of funding. The Public Works Programmes led to the creation of direct short-term employment during the construction phase as well as long-term and more durable employment from the productive utilisation and regular maintenance of the created assets. The net employment generated through the PWP's must also take into account indirect employment stemming from project activity (for instance, purchase and transport of locally produced material inputs) and secondary employment resulting from the PWP workers' increased consumption. Apart from their significant impact on employment and income levels of the poorest groups, the development assets created under the PWP's are expected to increase agricultural production, reduce environmental degradation, open up communication in hitherto inaccessible areas, and provide basic amenities for the beneficiary communities.

In South Africa, projects and programmes with similar objectives have not been as effective. Over the past 15 years, billions of Rands have been spent on projects and so-called programmes with stated objectives of both creating employment and providing physical infrastructure such as roads, water supply and sanitation (Thwala, 2001). To these objectives, community participation and entrepreneurial development have been added. One of the projects that was implemented was the Greater Soweto Upgrading Project (GSUP). The Greater Soweto Upgrading Project (GSUP) was introduced to eliminate the enormous backlog in the civil engineering services that prevailed in the Greater Soweto area in 1980 using labour-intensive methods of construction. The project represents a lost opportunity to use labour-based technology. The construction that was to be completed under phase 1 was to comprise roads, streets, storm water drainage, water supply reticulation and sewerage at a total value of \$150 million. Seventy per cent roads; 60% streets; 75% storm water drainage, 67% water supply reticulation and 76% sewerage facilities were completed under phase 1 (Thwala, 2001). A sum of \$150 million was supposed to complete the entire phase 1 but unfortunately it did not. The main problem was lack of proper planning and the fact this was managed as an emergency project. No employment figures were recorded for this project.

It is unfortunate that labour-based construction did not even attract a passing thought as it was ideal for the project. Not only would unemployment figures have dropped but entrepreneurial skills would have been developed leaving locals in a position to market themselves and secure employment. What was a labour-intensive project became a capital-intensive one. The contractors who were employed to construct the infrastructure employed more people from outside the project area. About 10% of the total budget was used on labour as compared to labour-intensive projects where the money spent on labour can be between 30% – 40% of the total budget (Thwala, 2001). It seems that the construction industry in South Africa still widely believes that labour-intensive construction methods are not an appropriate method of construction. There is a strong belief that labour-intensive construction methods are too slow (time); too expensive (cost); and quality is not of an acceptable level (quality). These constitute the main constraints by the industry when accepting labour-intensive methods of construction. However, given proper control, the cost of employment intensive methods have been shown to be no more expensive than using conventional methods.

The public works programme in South Africa should change as the policy environment changes from relief, emergency and “special” public works programme to a long-term structured employment-generation programme. The approach should link economic growth, employment and investment policies. The public works programme must aim to ensure that infrastructure is planned around local needs rather than vice-versa. The project was a total failure if seen as a development initiative. The community was not involved in any decision making; communities were not encouraged to become sufficiently organised to have input in the project and the community was not left with any new skills after project completion. The GSP was a learning experience. Engineers and planners must learn from the mistakes that were made and undoubtedly, similar projects can be successful in future. Based on both international and local experiences, the problems of public works development projects can be attributed to the following factors which must be avoided in order for large-scale projects to be successful in South Africa: lack of clear objectives linking short and long-term visions of the programme; and no pilot projects with extensive training programmes or lead-in time to allow for proper planning at a national scale.

Sufficient time should have been allowed to develop the necessary technology, establish training programmes and develop both institutional and the individual capacities. The programmes have seldom been scaled to the magnitude of national manpower needs. Very often, they have been introduced in an unsystematic and fragmentary style. This often led to technical haste which was compounded by incompetence and inappropriate technology selection; there have been organisational infirmities and inappropriate administrative arrangements; there has been a lack of political and government commitment to the projects and programmes; there has been an imbalance between centralisation of higher level co-ordination and decentralisation for local decision-making and execution of works; and inadequate post-project maintenance arrangements often undermined the efficacy of the projects. This was largely attributed to the failure to ensure there would be an authority with a sufficient stake in the projects and in their continuing effectiveness (that is lack of community participation and ineffective local government); the projects and programmes have been over-ambitious. This resulted from the lack of appreciation of the time it takes to build the necessary individual and institutional capacities at various levels; there has been a lack of clearly defined and executed training programmes that link medium- to a long-term development plan; there was no long-term development planning; most of these projects and programmes were highly politicised; the budget allocations were arbitrary; and very little sustainable employment was created.

Project objectives must be: specific instead of general; not overly complex; measurable, tangible and verifiable; realistic and attainable; established within resource bounds; consistent with available and anticipated resources; and consistent with organisational plans, procedures and policies. The objectives of the project must be made known to all project personnel and managers at every level of the organisation. If this information is not communicated accurately, then it is quite probable that upper management, project managers and functional managers will all have different interpretation of the ultimate objective thereby inviting conflicts. Objectives are most frequently re-established during the definition phase of project development. If resources are unavailable, alternatives must be considered. Once the total project objective is set, sub-objectives are defined in order that cost and performance may be tracked. If project objectives are not suited to the project, there are no guidelines to measure progress against.

Programme approach could not be taken for this initiative owing to its short duration. From its inception phase onwards, emphasis was placed on implementing projects as soon as possible, resulting in a general lack of planning. In future, a programme approach must be followed to ensure that general consensus is reached on the principles of labour-intensive construction. The short-term nature of the programme did not allow for the necessary dissemination of improved methods of labour-intensive construction or organisation. Adequate research and development were also not possible. The duration of the programme was simply insufficient to allow the methods of construction used to become more efficient.

CONCLUSION AND RECOMMENDATION

In the early phases, the emphasis was upon the creation of employment opportunities for unskilled labour. Over the past decade, it has become clear that in order to use labour productively, it is necessary to train a skilled supervisor who is technically and organisationally competent and thus able to direct and motivate the workers under his or her control. (In Kenya, the ratio of labourers to site-supervisors is about 70 to 1; in Botswana it is about 20 to 1) (McCutcheon and Marshall, 1998). Equally, for a successful national programme, it

is necessary to educate engineers about employment creation and train them in the specific skills required in planning, control and evaluation of large labour-intensive programmes (to date the ratio is about one engineer per 300 labourers). In time, an experienced technician or technologist should be able to do this level of work releasing the engineer for engineering and planning.

McCutcheon (1994) considers the following points as the main reasons for the success of the programmes in Kenya and Botswana: good preliminary analytical work and thorough attention to technical aspects throughout the work; pilot projects which tested all aspects (technical, administrative, organisational, institutional, wage rates and conditions of employment, training, planning, socio-economic / community) and acted as the embryonic training programme for future work; strong institutions with good management systems; yet flexible; extensive training; long-term political support; and long-term financial support.

Development programmes and projects in South Africa should change as the policy environment changes, from relief, emergency to a long-term structured employment-generation programme. The approach should link economic growth, employment and investment policies. Development projects must aim to ensure that infrastructure is planned around local needs rather than vice-versa. The Government needs to establish a long term programme on employment intensive construction. This cannot be established overnight and will take some years to grow into a national programme. Public spending on infrastructure construction and maintenance can be a valuable policy tool to provide economic stimulus during recessions. As long as quality and cost-effectiveness are not compromised, labour-intensive approaches to infrastructure development can also be an important instrument for economic growth (World Bank, 1994) but when public spending on infrastructure is not wisely deployed, it can crowd out more productive investment in other sectors.

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