EMPLOYMENT CREATION THROUGH PUBLIC WORKS PROGRAMMES AND PROJECTS IN SOUTH AFRICA: EXPERIENCES AND POTENTIALS

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Purpose/objectives: The aim of this article is to look at the experiences, problems and the potential contribution of employment creation programmes in alleviating the unemployment problem in other African countries through the construction of public infrastructure through the use of labour-intensive methods. The article then describes the problems and experiences that have been encountered in South Africa in relation to employment creation through the construction of public infrastructure.

Problem investigated: In South Africa the levels of unemployment and poverty are extremely high and unemployment is one of South Africa's most pressing problems. At the same time there is a lack of capacity and skills at institutional, community and individual levels. Labour-intensive programmes generate more direct and indirect local employment opportunities and income by using locally available inputs (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.

Design/Methodology/Approach: Drawing on research on labour-intensive, public works programmes and projects, the paper is mainly a literature review. 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. The article closes with some recommendations for the future programmes success.

Findings/Implications: The article attributes the failure of projects and programmes in South Africa to different factors which must be avoided in future in order for projects and programmes to be successful in South Africa. Investment in infrastructure has a huge potential to redress the high unemployment and poverty levels in South Africa and also to correct the skill shortages.

Originality/Value: This article challenges the project-based approach and recommends a programme-based approach which is long-term as to address the problem of unemployment and skills shortages in South Africa.

Conclusion: Public works 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.

Key words and phrases: Programmes, projects, labour-intensive, infrastructure, unemployment, poverty.

INTRODUCTION

History has shown that labour-intensive methods of work 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 inputs (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 become very high on the government agenda and will stay one of the focal points of government. This

is motivated by the fact that, currently around 24% of the population lives on less than $1 a day, below the poverty line defined by the World Bank (World Bank, 2007:291). The levels of unemployment have been rising steadily over the years. The level of unemployment was 7% in 1980, 18% in 1991 (McCutcheon, 1995) and 28% in 2003 (Statistics South Africa, 2003). The high unemployment rate can undermine the democracy if it is not reduced. It is envisaged that there will be others in the future.

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. The initiation of the National Public Works Programme followed a mandate provided by the Reconstruction and Development Programme (RDP) in 1994 to link reconstruction and development through an "infrastructural programme", as a key area where special measures to create jobs could link to building the economy and meeting basic needs to be redress apartheid-created infrastructural disparities (African National Congress, 1994). One of the qualifying RDP statements points out the need to "co-ordinate with and link to other job creation and labour-intensive construction initiatives" (African National Congress, 1994:6). For that reason, commitment to alleviation of poverty was very high on the government agenda and stays one of the focal points of government.

This article looks at some past African experiences in relation to Public Works Programmes, and then outline the potential contribution which employment creation programmes could make to alleviate the unemployment problem and strategy for achieving results. The paper then describes the problems that are experienced in South Africa hitherto in relation to employment creation through Public Works Programmes. Finally, the paper closes with some recommendations for the future.

STRUCTURE OF THE PAPER

The rest of the paper focuses on the following sub-headings: public works programmes and employment creation; employment-intensive approach; overview of African experiences through the use of labour-intensive approach in public works programmes; International Labour Organisation (ILO) initiative in promoting Public Works Programme; implementation of Public Works Projects through labour-intensive methods in South Africa: Experiences, Problems and Prospects; implications and recommendations and finally the conclusion

PUBLIC WORKS PROGRAMMES AND EMPLOYMENT CREATION

Public works programmes have a long history in the industrialised countries as an economic-policy tool, both as a fiscal measure to expand or contract public spending in periods of unbalanced domestic demand as well as a short-term measure to alleviate unemployment. In recent years, they have formed important components of special job-creation schemes launched by many industrialised countries in response to either economic recession or rising unemployment among youth (Thwala, 2001). In contrast to their short-term, anti-cyclical role in the industrialised countries, labour-intensive public works programmes have acquired far more significance in developing countries where they are now frequently resorted for one or more purposes, such as the following outlined by Jara in 1971: to deal with emergency situations arising out of natural calamities such as drought; floods and earthquakes, when provision of immediate relief employment to the affected area and repair and reconstruction of damaged assets and infrastructures become urgently necessary; to serve as a means for harnessing the potential resource of surplus manpower and for evening out seasonal fluctuations in employment and incomes, especially in areas exposed to pronounced seasonal unemployment and underemployment; to achieve permanent drought-proofing of drought-prone areas through systematic soil- conservation and

water-development measures, utilising large masses of unskilled workers; to attend to long overdue tasks of erosion control and other land-development works without which agriculture would begin to stagnate and agricultural inputs fail to produce the expected results; and to promote systematic development of essential infrastructure facilities integral to rural and urban spatial planning, that is, the promotion of rural development centres, community development blocks, small and medium market towns, regional growth centres and focal points, and new urban townships.

These major programmes generally comprise a wide variety of minor and intrinsically labour-intensive works such as soil conservation and reforestation; small and medium-scale irrigation (for example, canals, field channels and dams); drainage; flood-protection and land-development schemes; rural access and crop-extraction roads; and basic amenities such as inexpensive housing, drinking-water-supply projects, school buildings, and health and community centres. By sustaining demand for large masses of purely unskilled labour, these rural works programmes indeed provide an important contribution towards a simultaneous solution to the problems of rural employment, income distribution and growth. Besides the direct and indirect employment and income effects, the infrastructure they create supports agriculture and helps to preserve the ecological balance of land and forest areas which have long suffered excessive exploitation; they accelerate the integration of monetized and non-monetized sectors; they help to modify the prevailing spatial distribution pattern of rural settlements so as to facilitate the more economical provision of common facilities and growth of viable rural communities; and, finally, they meet some of the more elementary basic needs of the poorer sections (Thwala, 2001).

EMPLOYMENT-INTENSIVE APPROACH

Bentall (1999:219) “employment-intensive approach” is defined 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 “employment-intensive approach” indicates that optimal use is made of labour as 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 employment-intensive projects do not degenerate into “make-work” projects, in which cost and quality aspects are ignored. The employment-intensive approach is otherwise called the “labour-based approach”, indicating that labour is the principal resource, but that appropriate levels of other resources are used in order to ensure competitive and quality results.

According to the International Labour Organisation (1999) comparative studies of employment-intensive vs. equipment-intensive projects have shown that the employment-intensive approach: has a higher absorbency of unskilled labour (direct and indirect employment); improves income distribution; contributes to an increase in household income and consumption, thereby leading to an increase in national income; saves foreign exchange and thereby does not increase debt; is based on demand from the community level, and thus enhances democratic participation; is more cost-effective in low-wage labour surplus economies; and is more environmentally friendly.

Using a macro-economic model to measure the impact of labour-intensive investment projects on the economy of Madagascar, for example, a study estimated the differential effects of employment versus equipment-intensive approaches on the principal economic variables, i.e. production, consumption, employment, public finance, foreign trade. The analysis clearly shows the superiority of the employment-based approach, which is 30 to 80% less costly, creates 2.5 times more jobs, increases national income and household consumption 2.5 times and requires only 30% of foreign currency used by equipment (ILO, 1999).

The main objectives of the use of maximum employment in construction and maintenance can be divided into long-term development and short-term objectives. On the other hand, long-term development objective focuses on higher level productive employment with sustainable growth to

match an increase in working-age population, spurring economic growth and alleviating poverty (De Jong, 1995). The choice of employment-intensive technology for accomplishing project/ programme objectives needs careful consideration. Special attention must be paid to several factors: the suitability of the design and the possibility of changes in the design in favour of employment intensive technology; the suitability of site conditions; the appropriate mix of labour and equipment; the availability and motivation of labour; the wage rates and incentive schemes; and the achievement of production targets. Technical feasibility has a major impact on the decision.

Employment intensive-technology has a few difficulties which need to be resolved. According to De Jong (1995) labour is less suitable for long distance haulage; compaction; surfacing of roads; mixing; stabilization; high-quality pre-mix and production of certain aggregate gradings; high strength concrete. Also the applicability of equipment in construction has certain disadvantages. There are difficulties for equipment with respect to stone pitching; excavation in confined spaces and selection of materials from excavation. The results of employment-intensive works are dependent upon numerous factors. The quality of employment-based work can be comparable to equipment-based work, providing that appropriate management systems are established. The overall success is closely related to the way the projects are designed and to the economic environment. Besides the financial aspect, other issues such as the extent of alleviating poverty, savings on foreign exchange, and its impact on the social environment are significant factors to be considered when evaluating the success of these projects.

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 works 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 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 confirmed by its mention in the constitution of 7 December, 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 and increased GNP by 3, 6 percent (Jara, 1971).

During the period 1959-1960, a large Tunisian works 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 the severe erosion problem (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 have been increased to include land reclamation and other infrastructural works.

A few countries have tried to create, through employment-intensive infrastructural works, 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 Mali's more than

10 000 villages (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 infrastructural 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 gives great autonomy to 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 short-comings (Barker, 1986; Abedian & Standish, 1986; UNDP & ILO, 1987; Ligthelm & Van Niekerk, 1986; McCutcheon, 1990, 1994, 2001; McCutcheon & Taylor-Parkins, 2003 and Thwala, 2001:1) The ad hoc nature of schemes, lacking spatial focus and often without any links to national rural development and infrastructural planning systems; 2) 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; 3) Lack of balance between centralisation and effective involvement of local administrations and popular bodies in crucial programme decisions, planning and Implementation; 4) Failure to adjust programme operation and intensity to seasonal labour demand for agricultural operations; 5) Lack of precision about target groups and programming on the basis of inadequate information about beneficiary groups; 6) Lack of adequate and sustained political commitment and allocation of public funds for the programmes; 7) Inadequate post-project maintenance arrangements; and; 8) Inadequate emphasis on, and arrangements for, reporting cost-benefit studies and general performance evaluation.

INTERNATIONAL LABOUR ORGANISATION INITIATIVE IN PROMOTING PUBLIC WORKS PROGRAMMES

Within ILO's World Employment Programme, research began in 1973 to collect and analyse information on practically all previous experiments in this field, in order to determine the feasibility of such programmes and the conditions which ensured their successful implementation. The results of this research were crystallised in a comprehensive guidelines document, offering practical suggestions and effective procedures for designing such programmes (Costa, 1977 in Thwala 2001). ILO's promotional work in this field has since then been guided by several resolutions/ recommendations of the Advisory Committee on Rural Development and has reflected the interest shown in this programme by an increasing number of Member States, especially in Africa, other United Nations specialised agencies and multi-lateral and bilateral donors. Since 1975, ILO's efforts were supported by an UNDP-funded interregional project. ILO's assistance to Member Governments in this field has particularly focussed on the following areas: identifying the relevance and place of special employment-intensive public works programmes in their national development plans and employment strategies; building up technical know-how and the organisational and managerial infrastructures at national, provincial, and local levels for the systematic planning and implementation of the programmes; providing technical advisory and training support for the design, launching,

implementation and follow-up of such schemes; safeguarding of relevant ILO Conventions and Recommendations as far as they apply to various aspects of these programmes (for example, recruitment of workers; workers' remuneration; minimum age of worker; hours of work; safety of workers on worksites; promotion of rural workers' organisations); generating an increased flow of external resources from international and bilateral donors in support of such programmes; introducing monitoring and evaluation systems.

The designing and eventual launching of the various special public works programmes currently being implemented in Africa and other regions have involved several steps. The first was the preparation of country reports by national research teams, comprising an inter-ministerial group of planners, economists, administrators and civil engineers (during 1975 -–1976 under the UNDP/ ILO Interregional Project on Planning and Administration of Special Public Works Schemes). A total of 12 African countries initially prepared such national reports which eventually formed the basis of Public Works Programmes. The countries involved were: Benin, Burundi, Botswana, Burkina Faso, Ethiopia, Lesotho, Mali, the Niger, Rwanda, Somalia, Tanzania, and Tunisia. Other African countries were subsequently assisted to prepare and determine the feasibility of such programmes through ILO's technical advisory services. The role that such employment-intensive public works programmes can play in the overall employment or development strategy of particular countries in Africa was also examined and highlighted.

The second and third steps involved discussion of the country reports and exchange of information at two technical meetings at Carthage and Kathmandu (June-September 1976); and the organisation of three interregional training courses (Comilla, Bangladesh, (June 1977); Lucknow, India, (September 1977); and Arusha, Tanzania, (May-June 1978). This was for senior programme administrators, engineers and economists; several national seminars and training workshops; and the launching of ILO advisory missions to assist interested governments in studying the technical feasibility of programmes they intended to launch.

This step-by-step approach and judicious use of the various means of action of ILO's World Employment Programme, that is, research and investigative studies, technical advisory services, training activities to build up national capabilities, and technical co-operation in support of actual implementation of programmes, resulted in the systematic launching of many pilot and large-scale special works programmes in Africa. The World Bank and the International Labour Organisation (ILO) have carried out studies of programmes of labour-intensive construction of infrastructure in many developing countries (such as Kenya, Ghana, Botswana, Chad, Benin, Lesotho, Zimbabwe, the Philippines, India, Indonesia, Honduras, and the Dominican Republic, among others) since the early 1970s. A major fifteen year study by the World Bank (1971-1986) concluded that, generally speaking, traditional or unimproved labour-intensive production methods were not economically competitive with modern machine-intensive techniques. However, on the basis of field studies, it was also concluded that labour-intensive production methods can be developed and improved to the extent that they do become economically competitive with machine-intensive techniques for many construction activities. Improvements to labour productivity and the quality of labour-intensive work can be brought about by, inter alia, using improved work methods, developing sophisticated methods of organising and managing labour-intensive construction sites, using incentive systems of payment, using improved tools and equipment, improving the nutritional condition of the labour force, and both initial and on-going training of supervisors.

The pre-requisites highlighted in the discussion suggest that if carefully designed and implemented, employment-intensive construction holds promise for developing countries facing unfavourable economic climates. What has been the South African experience with regard to employment creation through provision of infrastructure? The rest of the paper attempts to answer the above question.

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 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 been 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 set up of the Framework Agreement, this 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.

The seminar was very useful in the sense that it provided a good background to the subject. 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 of public works programmes that they were: 1) seldom scaled to the magnitude of national manpower needs; 2) often introduced in a fragmented and unsystematic way; 3) implemented using inappropriate technology; 4) introduced on an *ad hoc* basis and were not linked to an overall development policy; 5) lacking administrative back-up; 6) lacking adequate post project maintenance; and; 7) 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 findings of the study reveals that in South Africa Public Works Programmes with similar objectives have not been properly implemented and managed. 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. Based on both the 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: 1) there has been a lack of clear objectives linking the short and long-term visions of the programme; 2) there were no pilot projects with extensive training programmes or lead-in time to allow for proper planning at a national scale. This should have allowed sufficient time to develop the necessary technology, establish training programmes and develop both the institutional and the individual capacities; 3) 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 hastiness, which was compounded by incompetence and inappropriate technology selection; 4) there have been organisational infirmities and inappropriate administrative arrangements; 5) there has been a lack of political and government commitment to the projects and programmes; 6) there has been an imbalance between centralisation for higher level co-ordination and decentralisation for local decision-making and execution of works; 7) 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); 8) the projects and programmes have been over ambitious. This was a result of the lack of appreciation of the time it takes to build the necessary individual and institutional capacities at various levels; 9) there has been a lack of clearly defined and executed training programmes that link medium to a long-term development plan; 10) there was no long term development planning; 11) most of these projects and programmes were highly politicised; 12) the budget allocations were arbitrary; and; 13) very little sustainable employment was created.

Regardless of the problems and challenges encountered in previous Public Works Programmes in South Africa, the Government currently had embarked on a national Public Works Programme known as the Expanded Public Works Programme (EPWP) which aims to draw a significant number of the unemployed into productive work. This programme involves creating temporary work opportunities for the unemployed, while ensuring that workers gain skills and training on the job, and so increase their capacity to earn an income in the future. The programme is one of an array of government's initiatives to try to bridge the gap between the growing economy and the large numbers of unskilled and unemployed people who have not yet enjoyed the benefits of economic development.

The fundamental strategies to increase employment opportunities in the economy are aimed at increasing economic growth so that the number of net new jobs being created starts to exceed the number of new entrants into the labour market. They are also focused on improving the education system an access to training in a way that better equips the workforce to take up the largely skilled work opportunities which economic growth will generate. Therefore, in the meantime, there is a need to put in place short to medium-term strategies that seek to reduce the vulnerability of the unskilled and marginalised. The EPWP forms one of these government measures aimed at creating additional job opportunities through providing a combination of work opportunities and skills development and training for a minimum of one million people by the year 2009.

The emphasis of the EPWP is to expand the use of labour-intensive methods in government-funded service delivery projects to create more work opportunities and stimulate entrepreneurial activity. Many public sector organisations in the country are already implementing the public works type of projects and programmes and one key objective of the EPWP is the expansion and replication of existing best-practice programmes, under the Code of Good Practice for Special Public Works Programmes (SPWP), or learnership employment conditions. EPWP projects and programmes is the built-in attempt by the public sector body to define and facilitate exit strategies for workers when they leave the programme, as a way of helping to build bridges between the first and second economy.

The new initiatives by the South African is reinforced by studies done by the World Bank (1994:2) which found that infrastructure can deliver major benefits in economic growth, poverty alleviation, and environmental sustainability - but only when it provides services that respond to effective demand and does so efficiently. The literature that had been reviewed in this paper clearly demonstrates that Public Works Programmes still play a major role in providing employment opportunities to many people in the Developing countries. It is clear from the literature that there are many problems and challenges which are encountered when implementing these programmes. In order to better implement and manage this programmes in South Africa, lessons need to be learnt from countries like Kenya, Botswana who had implemented these programmes successfully.

IMPLICATIONS AND RECOMMENDATIONS

South Africa the National Public Works infrastructure programmes has the potential to redress this problem of disproportionately high unemployment levels and also to correct the skills deficits in disadvantaged communities. Among other things, these may be achieved through an efficient institutional set up, effective community participation, and construction technology that is pragmatic and innovative in nature. In the early phases of the Expanded Public Works Programmes (EPWP) the emphasis must be upon the creation of employment opportunities for unskilled labour. 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. For a successful national programme it is necessary to educate engineers about employment creation and train them in the specific skills required in planning, implementation, monitoring and evaluation of large labour-intensive programmes. In time, an experienced technician or technologist should be able to do this level of work releasing the engineer for engineering and planning.

One of the challenges currently facing South Africa is the shortage of skilled construction workers. This had huge implications for the successful of the Expanded Public Works Programmes and other huge infrastructure projects in South Africa. One of the critical point that must be made at this point in time is that skills shortage is a worldwide problem not only a South African problem. The Expanded Public Works Programme (EPWP) can play a major role in the employment of unemployed graduates. Thus the Expanded Public Works Programme must be planned to address the issue of unemployment in a holistic manner. In order to achieve this both government, training institutions and the private sector must work together in the skill revolution for the betterment of the country. Public Works Programmes will not achieve the desired benefit if the there is lack of capacity to plan and implement it successfully.

In order for Public Works Programmes in South Africa to be used as a poverty and employment creation tool the following is recommended: improving basic infrastructure in both rural and urban areas; creating employment by orienting investments towards employment-intensive public and community infrastructure in both urban and rural areas; constructing, rehabilitating and maintaining infrastructure using local labour, local resources and local capacities, thereby maximising employment and income-generation for the poor; providing technical advisory and capacity-building services for the planning and implementation of different types of employment-intensive infrastructure (roads, irrigation, drainage, soil conservation, water supply, slum upgrading); 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. The Public Works Programme must move away from project planning and implementation approach to programme planning and implementation based approach for better management.

CONCLUSION

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 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. Community-based projects develop democratisation and local organisation at grassroots levels. Through the establishment of local associations, poor people are able to plan improvements in their community, negotiate with local authorities for a greater share of investment resources and learn to organise construction and other projects. The associations which are developed will also provide a good basis for other initiatives, such as mutual health funds for the informal sector.

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