The Expanded Public Works Programme:
policy, rhetoric, reality and opportunities foregone during the expenditure of over R40 billion on infrastructure

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In 2004, as one of its strategic components for generating employment and alleviating poverty, the government initiated the Expanded Public Works Programme. The goal of the EPWP was to alleviate unemployment for at least one million people between 2004 and 2009. This goal was to be achieved by generating work opportunities in four sectors of the economy: infrastructure, environment, social and economic. The budget for the infrastructure component was R15 billion; actual expenditure amounted to over R40 billion. The article analyses the extent to which opportunities for the generation of employment opportunities amongst the poor, particularly the rural poor, were foregone in the implementation of the infrastructure component of the programme

INTRODUCTION

In South Africa, the problems of unemployment (approximately 40% unemployed according to the broad definition and over 25% using the narrow definition) and poverty alleviation are of national strategic importance.

The government of South Africa has made a nationally significant response to this problem through the largest development programme in the country's recent history. The Expanded Public Works Programme (EPWP) is a visionary component of the South African government's multi-pronged strategies towards poverty alleviation, job creation and skills development. The goal of the EPWP was to alleviate unemployment for at least one million people between 2004 and 2009. This goal was to be achieved by generating work opportunities in four sectors of the economy: infrastructure, environment, social and economic. Labour-intensive methods were to be used in the provision of public goods and services.

The first five years of the EPWP started in April 2004 and ended in March 2009. At the start of the programme, the EPWP Public Sector Budget totalled R21 billion, R15 billion for infrastructure and the balance to the environmental and social sectors (the budget for the economic sector had not yet been determined).

In May 2008 the Minister of Public Works announced that the goal of creating temporary work opportunities for a minimum of one million people had been achieved a year ahead of schedule.[1]

In December 2008 McIntosh Xaba and Associates (MXA) were appointed to carry out a meta-analysis of over 100 documents related to the national EPWP since its inception in April 2004, including 20 Quarterly Reports published on the EPWP website. It was intended that the findings of the study should guide approaches and strategies across all spheres of government in order to inform policy reviews of the programme. At the same time focus group discussions were held with communities in which the EPWP had been implemented and assets created. The authors were members of the team that performed the studies (MXA, 2009). During 2007 and 2008, they were also members of the team that directed and coordinated the monitoring and evaluation of the EPWP component implemented by the Gauteng Province's Department of Public Transport, Roads and Works (LITEworks (Pty) Ltd, 2008).

This article is not a summary of these studies, as they deserve fuller attention in their own right. However, it draws on their findings. Using other points of reference, this article goes beyond the conclusions reached in the studies. In particular we focus on

one sector: infrastructure.

The article begins with a brief outline of the objectives of the EPWP and proceeds to outline the conditions which were originally set, particularly for implementation in the infrastructure sector. These factors provide part of the frame of reference for assessment of results.

Having mentioned four of the 30 conclusions of the national studies, the article summarises four results from the meta-analysis across all sectors. Focus then turns to the infrastructure sector, which not only accounted for 84% of national expenditure, but also provided the greatest opportunity for the generation of a significant increase in employment per unit of expenditure. High levels of labour-intensity have been achieved elsewhere in South Africa and other countries in sub-Saharan Africa. This fact provides another part of the frame of reference for assessment. The article discusses the low levels of labour-intensity achieved during the EPWP. Several reasons are mooted.

The article continues with estimates of the scale of the opportunity foregone in generating employment opportunities, particularly amongst the rural poor. It closes with suggestions regarding the need for re-engineering, enforcement of regulations and contract conditions, and the continued need for a national training college for labour-intensive construction. A serious small contractor development component should form an integral part of the college's curriculum. Employment creation must be treated with the same seriousness as a mega-project. Engineers could play a much greater role in the generation of employment, income and skills amongst the currently unemployed urban and rural poor.

OBJECTIVES OF THE EXPANDED PUBLIC WORKS PROGRAMME

According to the Consolidated Programme Overview and Logical Framework, June 2004, the goal of the EPWP was:

> *To alleviate unemployment for a minimum of one million people in South Africa (at least 40% women, 30% youth and 2% disabled) by 2009* (EPWP Unit, 2004: 2 and 14).

To achieve this goal the government would:

- Over the first five years of the programme create temporary work opportunities and income for at least one million unemployed people.
- Provide needed public goods and services, labour-intensively, at required standards, through mainly public sector resources and public and private sector implementation capacity.
- Increase the potential of (at least 14% of public works) participants to earn a future income by providing work experience, training and information related to local work opportunities, further education and training, and small, medium and micro enterprise (SMME) development (14 % = infrastructure 8%, environment 10%, social 40%, economic 30% (sic)).[2]

This would be achieved by creating work opportunities in the following four ways:

- Increasing the labour intensity of government-funded infrastructure projects
- Creating work opportunities in public environmental programmes (e.g. Working for Water)
- Creating work opportunities in public social programmes (e.g. community care workers)

- Utilising general government expenditure on goods and services to provide the work experience component of small enterprise learnership / incubation programmes (EPWP Unit, 2004: 14; repeated in the EPWP Quarterly Report that was published in May, 2008).

Of the one million temporary work opportunities, 750 000 would be created in the infrastructure sector and 250 000 in the environmental, social and economic sectors. These work opportunities would be created during the normal provision of public assets and services. In the infrastructure sector 37 000 kilometres of road, 31 000 kilometres of pipelines, 1 500 kilometres of stormwater drains, and 150 kilometres of sidewalks were to be constructed using labour-intensive methods (EPWP, 2004: 7).

FRAME OF REFERENCE FOR CRITIQUE

Two pieces of legislation provide a frame of reference for assessment: the Amendments to the Basic Conditions of Employment Act 2002, and the Division of Revenue Act 2004.

On 25 January 2002 the Government Gazette (No 23045) of South Africa published the following:

> *No R63 Basic Conditions of Employment Act, 1997*
> *Ministerial Determination: Special Public Works Programmes*

and

> *No R64 Basic Conditions of Employment Act, 1997*
> *Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes*

Full details may be found in the Gazette (RSA, 2002). Here we wish to highlight a few of the principal features.

In the Ministerial Determination (R63), *inter alia*, it was stated:

- "Special public works programme" means a programme to provide public assets through a short-term, non-permanent, labour-intensive programme initiated by government and funded from public resources…
- "task" means a fixed quantity of work.
- "task-based work" means work in which a worker is paid a fixed rate for performing a task.
- Workers on a SPWP are employed on temporary basis.
- A worker may NOT be employed for longer than 24 months in any five-year cycle on an SPWP.
- Employment on an SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.
- A task-rated worker will only be paid for tasks that have been completed.
- An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

The Schedule Code of Good Practice (R64) included, *inter alia*:

- Reducing unemployment is one of the greatest challenges facing South Africa. Government has undertaken a number of initiatives to address unemployment and poverty, including the promotion of the labour-intensive Special Public Works Programme (SPWP). An SPWP is a short-term, non-permanent, labour-intensive programme initiated by government and funded either fully or **partially**[3] from public resources to create a public asset.
- On the task-based system, a worker is only paid for each task completed
- A "no work – no pay" rule must apply except in the following circumstances:.....Illness …..Injury.
- Training is regarded as a critical component of SPWP. Every SPWP must have a clear training programme that strives to:
  - Ensure programme managers are aware of their training responsibilities.
  - Ensure a minimum of two days training for every 22 days worked.
  - Ensure a minimum of the equivalent of 2% of the project budget is allocated to funding the training programme…

The training components were the *quid pro quo* demanded by COSATU to allow (1) payment to be made on a task basis, (2) 'no work, no pay' and (3) relaxation regarding the definition of 'temporary' from three months to 24.

Another crucial piece of legislation was enacted in 2002: the Division of Revenue Act, which has been updated annually. In 2004 the Division of Revenue Act made it **mandatory** to use labour-intensive methods for specific categories of infrastructure funded through the formal channels through which public infrastructure is funded: the Provincial Infrastructure Grant (PIG) and the Municipal Infrastructure Grant (MIG). It is important to stress that the funding allocated for the Expanded Public Works Programme (EPWP) formed part of normal government expenditure and, therefore, had to follow normal procedures as specified by National Treasury under the Division of Revenue Act. These procedures included an annual audit. Thus, the funding was not an "add-on" for emergency / poverty / drought relief. This marked a significant difference between the Expanded Public Works Programme and all previous programmes of this nature in South Africa. Thus, labour-intensive construction had been brought into the normal budgetary procedures and, at face value, was thus part of the major economy.

The specific categories for which it was mandatory for public bodies to use labour-intensive methods were: low-volume roads, stormwater drainage, sidewalks and trenches. Public bodies were **required** to implement these categories using the "Guidelines for the Implementation of Labour-intensive Infrastructure Projects under the Expanded Public Works Programme," (DPW, 2004), which were specifically produced for the EPWP.[4]

On 31 January 2005, in a speech to the Limpopo provincial and municipal government representatives, by the Deputy Minister of Public Works, Ntopile Kganyago said:

> *"We need to remember the law of the country as stipulated in the Division of Revenue Act (DoRA) requires that provinces and municipalities must use the Guidelines for Labour Intensive Infrastructure when using the PIG and MIG budgets for certain types of projects. These guidelines require that provinces and municipalities amend their existing contracts to ensure that certain activities are designed to maximise the use of labour instead of machines."* [5]

Additional conditionalities were enumerated in the Guidelines. These included:

- Consultants responsible for labour-intensive projects must have completed accredited training; the consultants who would design infrastructure and prepare contracts would have accredited training – specific to the person and not to the firm. The

intention was that in relation to design they would be equipped to design in such a way as to optimise the use of labour.

- The EPWP Guidelines contained "copy and paste" clauses for integration into standard contract documentation.
- Standard clauses would be included in the contracts, which would compel and thus ensure the use of labour-intensive methods.
- In particular, the contract would identify those items which had to be constructed labour-intensively and would compel their subsequent use by stating that if labour-intensive methods were not used for the specified items, the contractor would not be paid.
- Company owners, managers and supervisors of labour-intensive sites would also have to have accredited training. The contractors would receive accredited training in the following ways: the contractor would be trained to run a company; each contractor would have two site supervisors who would be fully conversant with the organisation of teams of labour-intensive workers.

The Consolidated Overview stated that a National Training College for Labour-intensive construction would be established.

Implementation would be audited to see if the specific categories of work had been constructed labour-intensively. Site operations would be audited, as would provincial and municipal expenditure to see whether the institution had complied with EPWP regulations.

Furthermore, future allocations of funding were to be dependent upon the extent to which an authority had complied with these conditionalities. For example, if the institution had not constructed the specific types of infrastructure labour-intensively, then they would not be given funding in the future. Treasury took on the role of monitoring the work in terms of compliance with the legislated "conditionalities". This allowed for public accountability, again in contrast with previous programmes that had attempted to promote the use of labour-intensive methods.

It was also stated that, in the infrastructure sector, because labour-intensive methods would be used, the 750 000 work opportunities would be **in addition to** the opportunities that would have been provided through conventional machine-intensive construction.[6] And, the expenditure on infrastructure would be without detriment to the fiscus.[7] (By contrast, expenditure on the social component of the EPWP required additional funding.)

The above elements provide the legislative and regulatory framework required for labour-intensive construction.

The factors mentioned above, combined with the objectives, comprise part of the frame of reference with which to evaluate the results of the EPWP.

MAJOR CONCLUSIONS FROM NATIONAL STUDIES

A number of conclusions were reached from the review of over 100 documents. These were categorised into three levels:

- Policy and programme
- Issues requiring attention above the level of programme management
- Programme and project management.

Here we will only mention four related to Policy and Programme:

- The direct and indirect beneficiaries of the EPWP clearly (and desperately) welcomed the short-term work opportunities, and those that had worked on the EPWP were eager to get further work opportunities. They wanted more, much more.

TIONS

- In relation to infrastructure, the EPWP is currently not a development programme[8] but rather an ad hoc collection of existing and new projects. In relation to labour-intensive construction and maintenance, a development programme consists of a planned series of related projects, directly and integrally linked to specific training programmes; the human resources required to implement the programme are largely produced through the programme itself.
- There was very little compliance with the requirements as set out in the Division of Revenue Act. To the best of our knowledge there has been little or no enforcement to date with respect to labour-intensity, type of project or component of project, related contractual documentation and training.
- Another major conclusion, which resulted in part from the lack of adherence to the DORA requirements, is that insufficient work opportunities have been generated, given the amount of expenditure. In relation to the infrastructure sector for instance, just over one million work opportunities were generated at a cost of R42 billion[9] instead of a projected 750 000 for the R15 billion budgeted in 2004.[10] This will be dealt with in greater detail below.

The first conclusion is of critical importance – beneficiaries wanted more work opportunities – because so many decision-makers and theorists with comfortable, well-paid jobs, state with confidence that, in South Africa, the poor are not prepared to do this type of work, or if they do, it will be done badly.

ANALYSIS OF DATA IN SELECTED CATEGORIES

The EPWP has generated a considerable amount of data. The quantity may be judged by the fact that the 20 quarterly reports contain over 3 949 pages of data. By contrast, the 20 reports contain only 315 pages of text (several reports consist entirely of annexures containing only data). In itself this reflects the over-reliance on numerical data and lack of attention paid to words. The reports state repeatedly that one of the main reasons for collecting the data is in order to make "data-driven decisions regarding interventions," yet the text of the reports repeatedly warns that the data needs to be treated with circumspection.[11]

From about halfway through the EPWP increasingly paid attention to one item: the number of temporary work opportunities. To a lesser extent the amount of training was mentioned.

Unfortunately, the amounts of physical assets produced were not contained in the summary reports and not mentioned in the text. And, a great deal of investigation would be required to extract such information. It is extremely disturbing that no attempt has been made to obtain the total amounts of the different types of assets produced during the expenditure of over R40 billion, especially given the amount of time and effort focused upon the recording of the details related to the number of work opportunities. In itself this indicates that the infrastructure component of the EPWP began to be viewed as relief or social welfare. It thus diverged from the original objective of serious engineering, which also addressed productive employment creation and development.

A meta-analysis was carried out of the data contained in the two summary tables annexed to each report. In some instances this was supplemented by more detail contained elsewhere in the many annexures.

Below, we will briefly record and comment upon the main findings with respect to four sets of data namely:

- EPWP budget versus actual expenditure by sector
- EPWP budget versus actual expenditure by province
- Labour intensity in the EPWP

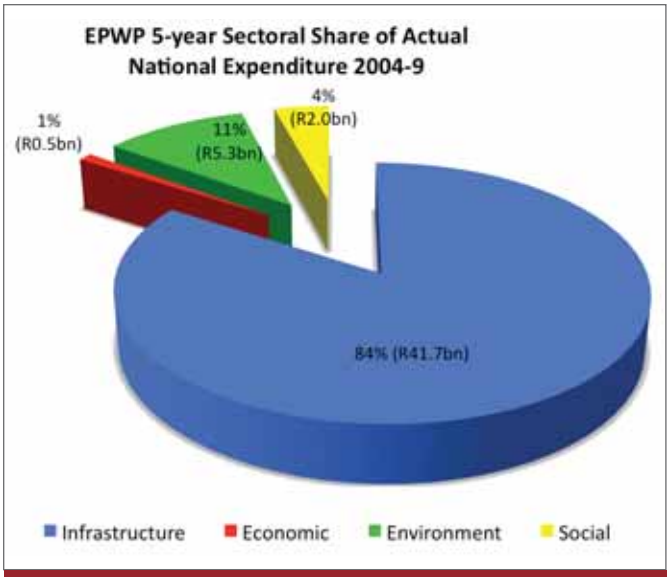

Figure 1: National expenditure 2004 – 2009

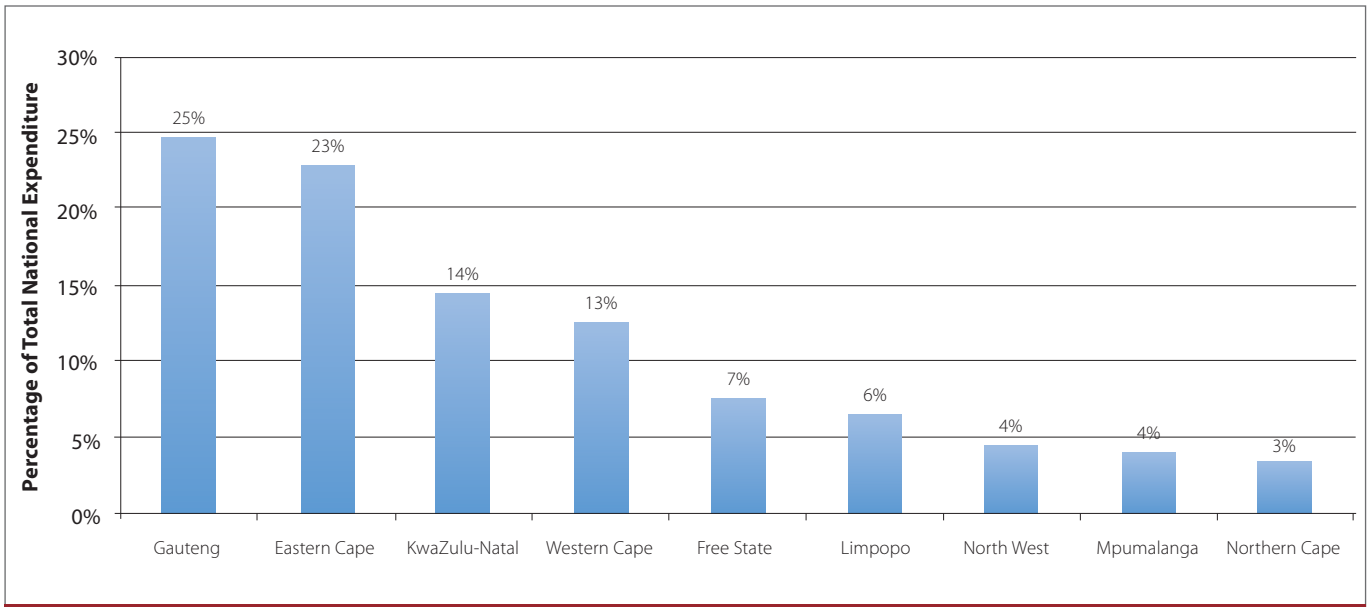

Figure 2: EPWP five-year provincial share of actual national expenditure (all sectors)

■ Labour intensity versus average project cost.

Having provided an overview we will then deal in more detail with the implications of the findings, especially with respect to labour intensity in the infrastructure sector.

EPWP budget versus actual expenditure by sector

The 2004 budget for the whole EPWP was R21 billion. By 2009 almost R50 billion[12] had been spent. This indicates a difference between the South African economy and most of the countries in sub-Saharan Africa – the additional expenditure was generated internally without reliance upon donor funding. Furthermore, the actual 2004-09 budget allocations amounted to more than four times the original budget, or twice the actual expenditure. Although this indicates a severe inability to spend the allocated budget, it again indicates the scale of internal resources available to South Africa.

The infrastructure sector had by far the greatest share, R42 billion or 84% of total expenditure between 2004 and 2009 (Figure 1). Actual expenditure on infrastructure amounted to 280% of the 2004 budget estimate of R15 billion.

While the dominance of the infrastructure sector inevitably influenced overall averages, similar discrepancies exist for the other three sectors between original budget, budget allocation and actual expenditure.

A comparison between allocated budget and actual expenditure showed that over the period 2004-09 the trend was for the EPWP to spend a lower proportion of the budget allocated.

The economic sector was the worst affected of the four sectors. This is more than interesting, given the amount of attention and emphasis placed upon the role of small, medium and micro entrepreneurial development by government in general and EPWP in particular.

EPWP budget versus actual expenditure by province

Gauteng Province and the Eastern Cape accounted for nearly half of the actual expenditure, while the remaining seven provinces shared the other half (Figure 2). Five provinces, namely Free State, Limpopo, North West, Mpumalanga and the Northern Cape, combined, made up less than one quarter of total expenditure. All five of these provinces have significant rural populations, parts of which have been termed "deep rural". With the notable exception of the extremely poor Eastern Cape, the above distribution of funding shows insufficient focus on the rural areas within the EPWP; as does the fact that over 25% of expenditure took place in Gauteng, which is the most urbanised province in South Africa. Mitchell (2008) has also concluded that there was a lack of emphasis upon the rural. This is a severe shortcoming in programme design. Moreover, we will see below that there is a need to focus greater attention upon the rural, because of the linkages between the type of infrastructure and potential for poverty alleviation in the construction and maintenance of specific categories of infrastructure.

Labour intensity in the EPWP

There was a steady decline in labour-intensity from 26% at the start of 2004 to nearly 11.3% at the end of the fourth quarter of the 2008/09 financial year. Even the social sector fell from 85% to 43% (Figure 3).[13] This is interesting: unlike the other sectors of the EPWP, the social sector was not expected to generate a significant increase in employment per unit of expenditure. After all, the social sector is not expected to produce a physical product. The decrease

in labour intensity in the social sector indicates that either administrative costs rose considerably over time or the data is faulty.

Labour intensity in the infrastructure sector fell from 27% in 2004/05 to 9.4% in 2008/09 (Figure 4). Therefore, the amount of employment generated per unit of expenditure fell by two thirds. This will be dealt with in more detail below. The economic sector fell from 12% to 7.6% with oscillations in between. In a nutshell, the labour-intensity in the infrastructure and economic sectors reflects "business as usual" through the use of conventional capital/machine intensive construction.

Labour intensity versus average project cost

The average project cost was derived from the division of the total actual expenditure by the total number of projects. Labour-intensity dropped significantly over time as the value of the projects increased. As project values doubled, labour-intensity decreased by about two thirds (Figures 5 and 6). Fast-tracking the nominal incorporation of larger and more sophisticated projects into the programme, in order to increase expenditure and the numbers of people employed, intensified the use of "business as usual".

INFRASTRUCTURE AND LABOUR INTENSITY

It is important to concentrate upon the infrastructure sector not only because it is the largest. More importantly, it is the main sector in which it was originally planned that a significant increase in productive employment would be generated per unit of expenditure.

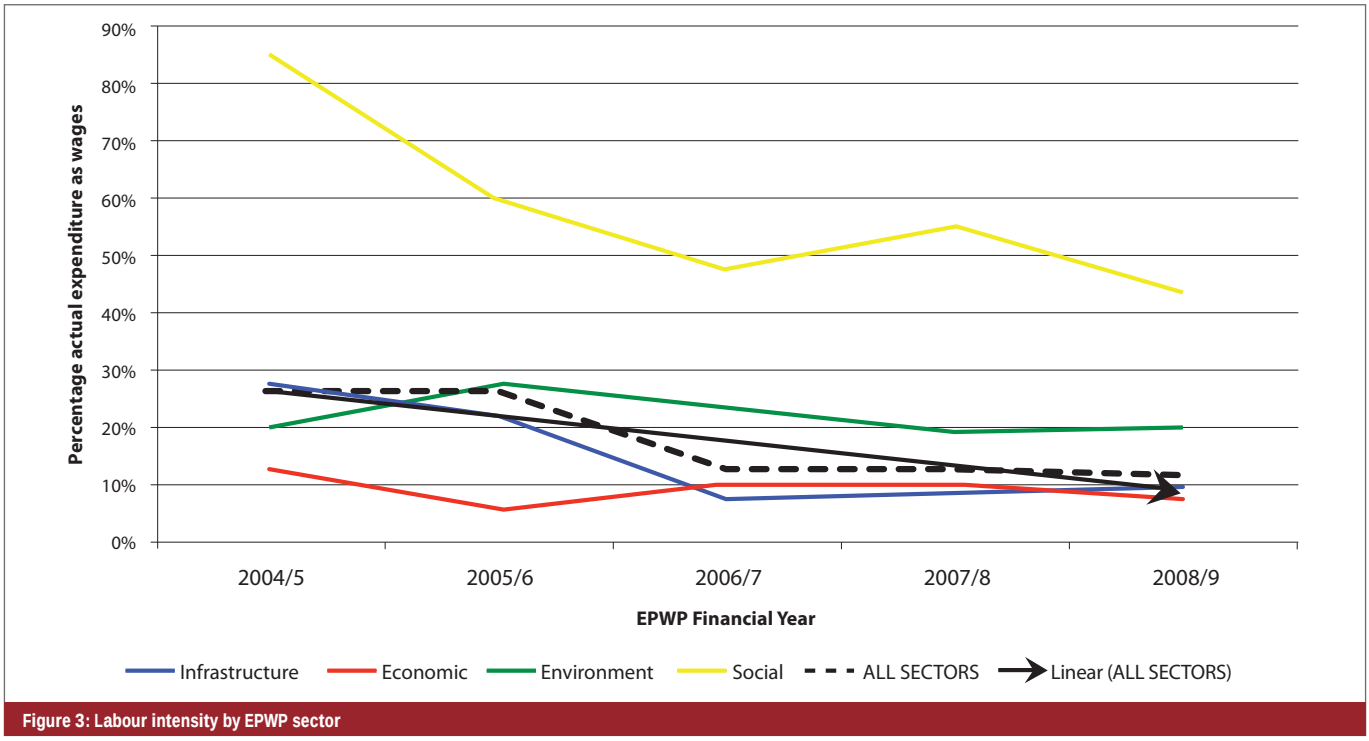

Figure 3: Labour intensity by EPWP sector

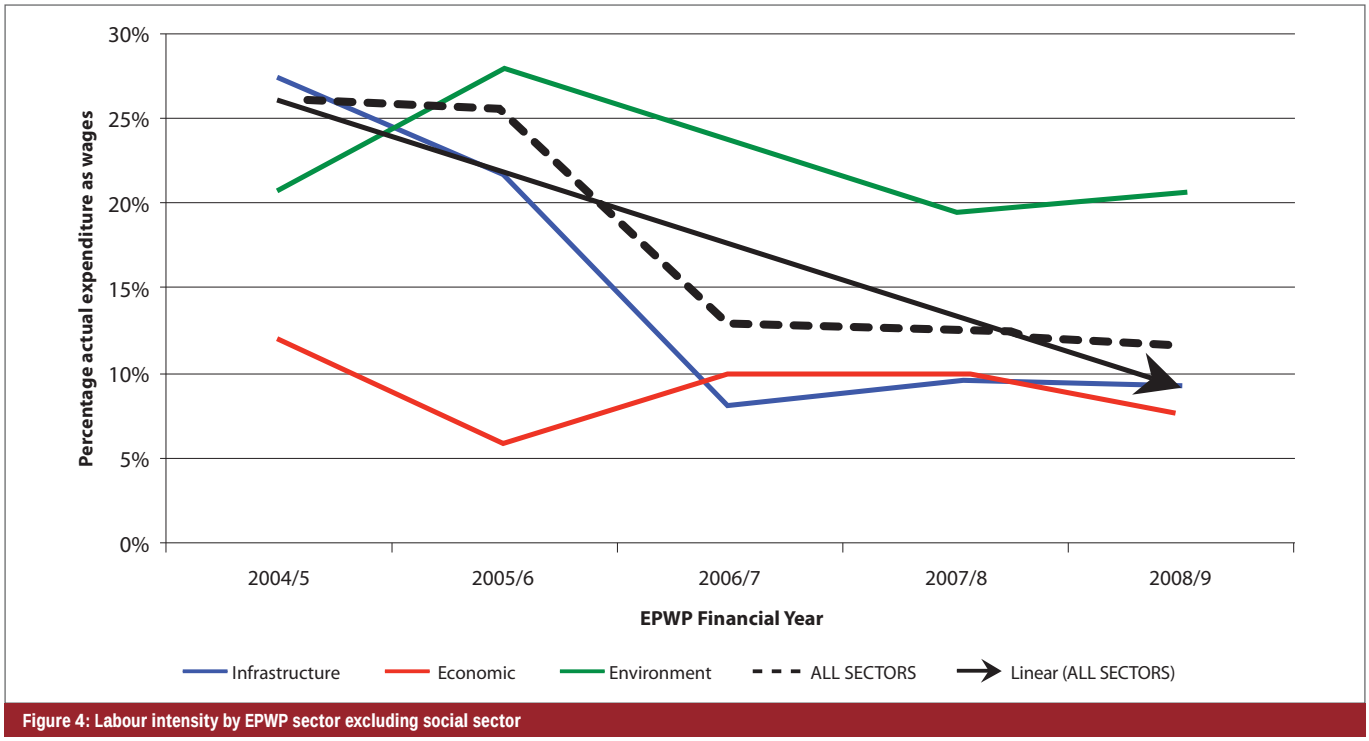

Figure 4: Labour intensity by EPWP sector excluding social sector

As mentioned earlier, hitherto in South Africa measures related to poverty alleviation and labour-intensive construction of infrastructure were funded by allocations sourced from outside the normal processes for the construction and maintenance of infrastructure. They were "add-on", "tack-on" or "emergency/relief" funds. This was not to be the case for the EPWP. This approach amounted to a fundamental difference between previous attempts linked to poverty alleviation – allocations had to form part of formal processes. Expenditure on labour-intensive methods was to have been part of normal expenditure on the construction and maintenance of infrastructure and thus subject to formal procedures regarding accountability.

In the Consolidated Programme Overview of June 2004 it had been estimated that R45 billion would be spent over five years in the formally planned provision of provincial and municipal infrastructure throughout the country (EPWP Unit, 2004). In the normal course of events, all of this infrastructure would have been constructed using conventional, machine-intensive methods.

However, it was estimated that R15 billion of this R45 billion would be spent on four categories of construction:

- Low-cost, low-volume roads
- Stormwater drainage
- Trenches
- Pedestrian and cycle paths.

These four categories of infrastructure are eminently amenable to being constructed using highly labour-intensive methods. Using techniques and procedures that have been well tried and tested elsewhere in sub-Saharan Africa, and indeed in South Africa, it could reasonably be expected that at least 40% of direct construction costs would be earned by the labourers. In Botswana and Kenya labour-intensities of over 50% were achieved using relatively low wage rates (if higher wage rates had been used, higher levels of labour intensity would have resulted) (Hagen, 1985; McCutcheon, 1992).

Furthermore, as we have noted above, insufficient attention has been paid to the rural areas. It means that less money was spent in

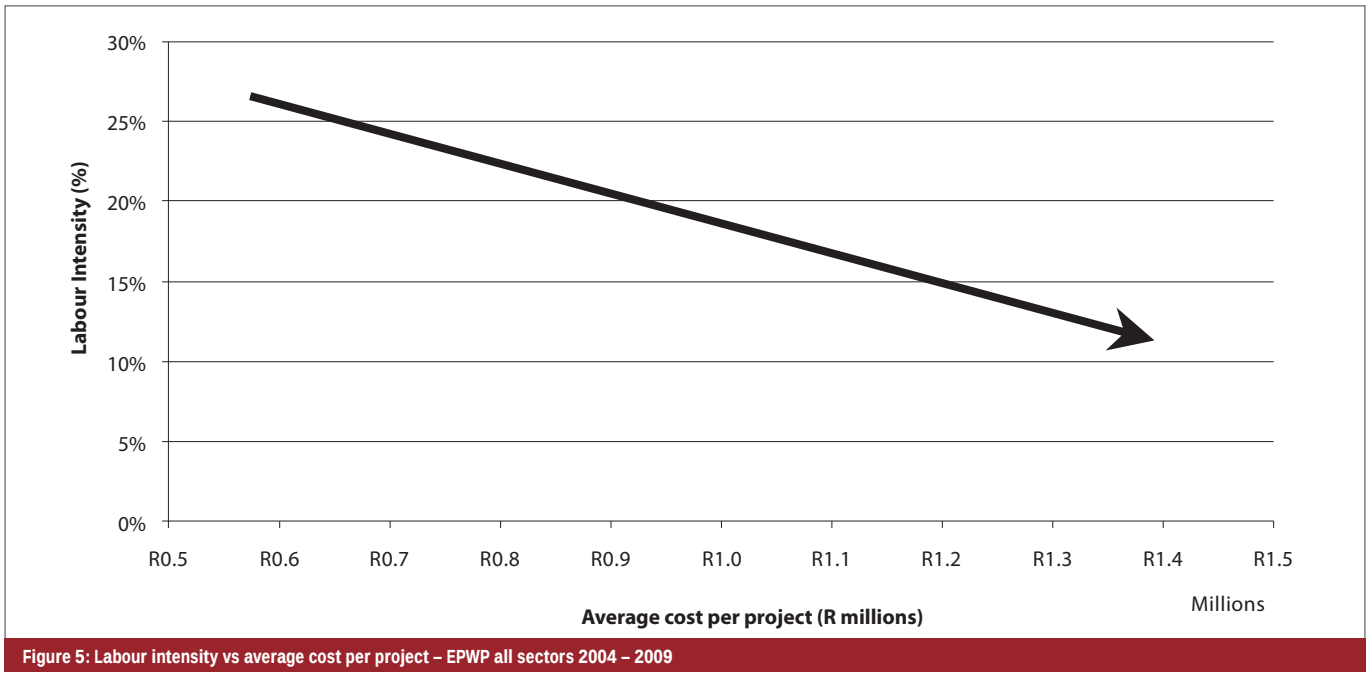

Figure 5: Labour intensity vs average cost per project – EPWP all sectors 2004 – 2009

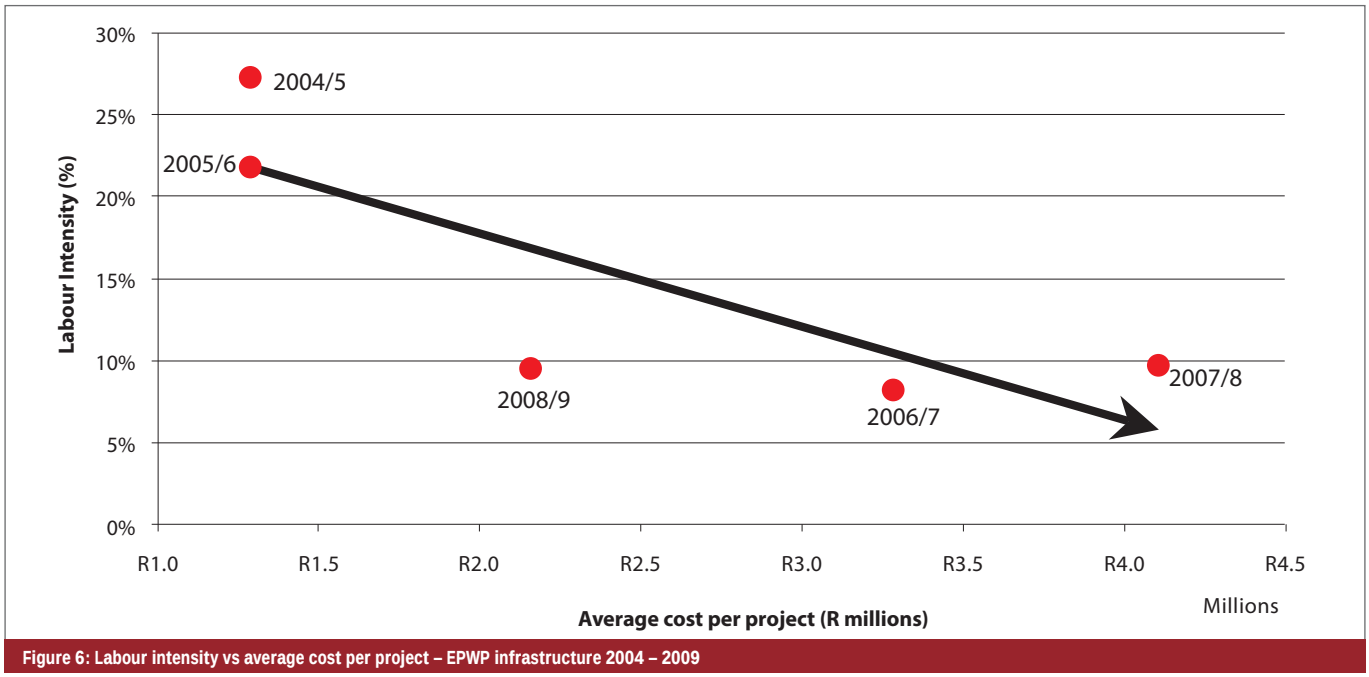

Figure 6: Labour intensity vs average cost per project – EPWP infrastructure 2004 – 2009

those areas on the types of infrastructure which are particularly amenable to being constructed using labour-intensive methods; also, where successful models from elsewhere in sub-Saharan Africa could be replicated. For example, the Kenyan Rural Access Roads Programme and its immediate successor, the Minor Roads Programme, constructed and maintained over 12 000 kilometres of low-cost, low-volume gravel road. At its peak the Programme employed, at the same time, over 10 000 people on construction and 5 000 on maintenance. Similar programmes existed in Botswana, Lesotho and Malawi (Quainoo and McCutcheon, 2009).

These facts form another part of the frame of reference for assessing the infrastructure component of the EPWP.

In relation to South Africa the demand for work is as great among the urban as the rural poor. In both cases proper community relationships are required to be established well before the start of a project. However, for various reasons, matters are more complicated in the urban areas and greater sensitivity is required in initiating projects. Experience has shown that people in rural areas are much more willing to work and do so without the disruptions that are experienced on a regular basis in urban areas.

Thus, greater emphasis upon rural areas would lead to larger numbers of people being employed under less complicated circumstances constructing and maintaining essential infrastructure, which is amenable to being built by labour-intensive methods.

Prior to the EPWP, attempts had been made to replicate the Kenyan Rural Access Roads programme through the Zibambele Programme in Kwazulu-Natal and Gundo Lashu in Limpopo. After April 2004 both were incorporated into the EPWP. But Zibambele is mainly concerned with daily maintenance. And Gundo Lashu focused, with mixed results, upon small contractor development in relation to a relatively high standard of road (ILO, 2007a and b).

It was mentioned above that the summary data in the Quarterly Reports do not provide information regarding the amounts and quality of infrastructure constructed. However, Gauteng province accounted for 25% of expenditure on infrastructure. Fortunately, the authors have had direct experience of the inner workings of Gauteng (LITEworks, 2008). Very little of the expenditure on infrastructure in Gauteng was devoted to the four categories that were supposed to be the main foci of the EPWP infrastructure sector.

The majority of expenditure in Gauteng was on a much higher standard of road, which could have been constructed using labour-intensive methods. Prior to the EPWP, over 400 km of the standard of road (residential and urban bus routes) had been constructed in various parts of South Africa (Hattingh *et al*, 2007; McCutcheon and Taylor Parkins, 2003). But the effective use of labour-intensive methods necessitates a re-engineering of the whole design, contract and construction process (McCutcheon *et al*, 2007a). This did not take place in Gauteng between 2004 and 2009.

The extent of the re-engineering required for low-cost roads is extensive, but not to the extent required for higher standards of road. Furthermore, the whole process takes place in a different socio-technical environment.

Thus, the major expenditure in Gauteng was related to a standard of infrastructure, which was not as amenable to the use of labour-intensive methods of construction, as the specific categories for which these methods were supposedly mandatory.

In addition, several things occurred, some extremely peculiar:

- Projects were simply labelled labour-intensive, but conventional methods were used.
- Consultants did not re-engineer the projects – new designs were not prepared, the greater use of productive labour was not the "design driver", appropriate specifications were not included in supposedly labour-intensive contracts.
- Some of the contracts included clauses that indicated that labour-intensive methods would be used, but the clauses were ignored.
- Contracts were awarded to small contractors who were not able to use labour-intensive methods.
- Not only were contracts implemented using conventional capital-intensive methods; in some cases extra people were hired to sit under a tree alongside the site where the equipment was working in order to raise the numbers. Mostly, even this tokenism was not considered necessary.
- These essentially machine-intensive, conventional methods resulted in costs per kilometre varying from two to four times the costs, which would have been achieved during the same period using machine-intensive methods, had the projects been implemented outside the umbrella of the EPWP.
- Given that these contracts generally use the same amount of labour as conventional, the extremely high total costs meant that the proportion of expenditure going to labour was even less than under conventional construction / normal conditions.
- To the best of our knowledge no enforcement of contractual clauses was made.

Part of the reason for this sorry state of affairs is that there is very little in-house capacity or competence within most public

bodies to assess technical matters. This is out-sourced to consultants. Unless the consultants have been thoroughly trained, they cannot design labour-intensive projects, or prepare appropriate contract documentation, or assess the effectiveness of implementation. The same applies to the need for contractors and site-supervisors to be properly trained.

Added to these factors is the prevailing prejudice in the civil construction industry against labour-intensive construction (McCutcheon *et al*, 2007a).

OPPORTUNITIES FOREGONE IN INFRASTRUCTURE

Here we deal first with the opportunity foregone in generating longer periods of employment, the potential link to rural employment, and the need to link small contractor development to labour-intensive methods. We then estimate the scale of wage opportunity that was foregone, and will be foregone in the next phase of the EPWP, if current procedures are not seriously revised.

Temporary work opportunities and rural employment

Above we have seen that in 2004 it had been envisaged that 750 000 of the million work opportunities would be generated in the infrastructure sector. This was lower than might be reasonably anticipated, but the planners understandably erred on the side of caution. In the event, over five years 1 069 819 work opportunities were generated, 43% greater than the target. Pro rata, the original budget of R15 billion would have been R21.4 billion. Actual expenditure amounted to nearly R42 billion. Therefore, the work opportunities in infrastructure were achieved at nearly double the anticipated cost.

The focus upon temporary work opportunities is distracting. In the EPWP a temporary job opportunity was defined as being of any duration.[14] This makes it difficult to derive data that is nationally and internationally comparable.[15]

In the infrastructure sector it had been anticipated that the average duration of employment would be 80 days, whereas an average of about 66 days was achieved over the full five-year period.

The emphasis upon 'temporary', exacerbated by increased concern about meeting a numerical target, distracted attention from seriously considering ways and means of achieving longer durations of employment and its associated benefits. And we have seen, above, that in allowing 'temporary' to be redefined as two years, the Amendments to the Basic Conditions of Employment Act had allowed for a much longer duration of employment than 80 days. Although very grateful for some opportunity to earn money, there were repeated complaints about the shortness of the duration and lack of continuity. The workers accepted the shortness of duration with reluctance.

Two years of steady work would have a far more beneficial effect for both individual and family. It would have also allowed for a much greater depth of training.

Continuing in this vein, in relation to the construction and maintenance of infrastructure, it would be possible for public bodies to plan 10-year programmes of construction and maintenance based on anticipated allocations received from the Provincial Infrastructure Grant and the Municipal Infrastructure Grant. The public body would be able to calculate the quantity of infrastructure per year and plan that there would be employment for a certain number of people. In urban areas there would be easy opportunities for continuous employment in both construction and maintenance. In rural areas people would have to move during construction, or be replaced because of distance, while maintenance could be more permanent because the stretch of road to be maintained could be relatively close to the home of the maintenance worker.

It is particularly important to emphasise that the types of infrastructure which are supposed to be built labour-intensively are particularly needed in the places where the poorer people live. This amounts to another opportunity foregone.

Small contractor development

The use of labour-intensive methods should be of considerable assistance to an aspirant small contractor. Considerably less start-up and operational capital is required. This factor was one of the prime considerations for the promotion of labour-intensive small contractors in East and West Africa.

Wages foregone

As mentioned above, it had been estimated that R45 billion would be spent over five years on the formal provision of provincial and municipal infrastructure throughout SA; R15 billion would be spent on four categories of construction for which it was mandatory to use labour-intensive methods. If proper labour-intensive methods had been used for these specific categories of infrastructure, a labour intensity of at least 40% of the direct construction component of the R15 billion expenditure would have been achieved.

In the event, for an expenditure of R42 billion, only R4.5 billion went to wages (10.8%).

There will be some dissension as to whether 40% of the direct construction component of R15 billion could have been achieved during the first five years. As noted above, the planners adopted a more conservative position. This would have made sense at the time, given the lack of large-scale experience. However, if these processes had been started in 2004, proportions such as these could definitely be anticipated for the next five years during EPWP Phase Two. The Second Phase has been initiated.[16] At the moment it is projected to be about four times larger than Phase 1, with infrastructure accounting for half the expenditure (EPWP 2009). If radical steps are not taken to improve labour-intensity, then based on the proportions achieved to date, many billions of rands will not be earned by the poor. Where are there similar opportunities in the national economy to generate employment opportunities for the poor and unskilled using money that has already been allocated for expenditure?

IN CONCLUSION

EPWP's total expenditure of nearly R50 billion amounted to more than twice the 2004 budget. This in itself indicates a difference between the South African economy and most of the countries in sub-Saharan Africa – the additional expenditure was generated internally without reliance upon donor funding.

The infrastructure sector had by far the greatest share, 84%, of the actual expenditure between 2004 and 2009. Here, expenditure of some R42 billion amounted to more than two and a half times the 2004 budget of R15 billion; roughly one million work opportunities were generated at almost double the anticipated cost. Labour-intensity decreased from 27.2% in 2004 to 9.4% in 2009, averaging 10.8% over five years.

In the infrastructure component of the EPWP nowhere near as much employment was generated per unit of expenditure, as

could have been achieved using proper labour-intensive methods within the context of a well-planned development programme (McCutcheon, 2008). In relation to labour-intensive construction and maintenance, such a development programme would consist of a planned series of related projects, directly and integrally linked to specific training programmes; the majority of the human resources required to implement the programme would be produced through the programme itself. Successful large-scale models have existed in at least four countries in sub-Saharan Africa. Through such a programme many billions of rand could be earned by the poor and unskilled. To repeat: where are there similar opportunities in the economy to generate employment opportunities for the poor and unskilled using money that has already been allocated for expenditure?

If a proper programme is not established, the second phase of the EPWP will be just as inefficient in generating a significant increase in effective work opportunities amongst the poor, particularly the rural poor, during the provision of public infrastructure. Reasons were provided above why labour-intensive methods were not properly used to anywhere near their possible extent. These included: emphasis upon high-standard infrastructure without the necessary re-engineering, which resulted in 'business as usual' i.e. conventional machine-based construction; insufficient focus upon rural areas where the four types of infrastructure, which were intended to be the main focus of legislation, are indubitably required; the employment of contractors who have little knowledge and less experience with labour-intensive methods; sleight-of-hand in renaming conventional machine-intensive methods as labour-intensive; downright dishonesty in employing people to sit under a tree while the work was being done by machines; and, resistance to and refusal by engineers to countenance the use of labour-intensive methods despite government policy and legislation.

This litany is partly the result of ignorance about labour-intensive construction combined with the difficulties of small contractor development. It is essential as part of a developmental programme to establish a National Training College for Labour-intensive Construction, as originally planned in the EPWP Consolidated Overview (2004). This could comprise a small national base responsible for setting common standards and curricula, with actual training decentralised to provincial and major metropolitan authorities. An important component of this college would be sound small contractor development.[17]

Even without the establishment of a fully coherent programme a significant number of work opportunities could be generated if existing legislation and regulation were enforced. If the measures outlined above in the "Frame of reference for critique" section were enforced, then clients, consultants and contractors would be compelled to move away from entirely machine-based methods. While the industry often portrays itself as being slow to change, it has been known to change its modus operandi quickly to follow the money, as has been done recently with respect to at least one mega-project. A few high profile cases of enforcement and the industry might be compelled to transform its methods of implementation.

A related conclusion is that it should be recognised that when R42 billion is being spent we are dealing with a mega-project. To date it has been admitted that at least R27 billion has been spent on Gautrain. Depending upon the actual specifications, a new power station costs at least R45 billion and takes at least 10 years to plan and construct.

For the current MTEF period, R77.8 billion has been provided for the EPWP.[18] In terms of expenditure it is clearly a mega-project. It is essential that a programme of the scale of the EPWP be treated as a mega-project; not as an assemblage of 16 869 odd projects (infrastructure: 9 603). At the very least, components should have been seriously modelled on programmes that have been implemented successfully elsewhere in sub-Saharan Africa.

As importantly: in the section "Objectives of the Expanded Public Works Programme" above, the envisaged total lengths of road, pipeline, stormwater drains and sidewalks were given. Unfortunately, the amounts of physical assets produced were not contained in the summary reports nor mentioned in the text of the Quarterly Reports. A great deal of investigation would be required to ascertain such information. The fact that there is no readily available record of the totals of the physical assets constructed is disturbing from a programme management perspective. This fact indicates the absence of overall programme management regarding the infrastructure component, as it was not possible to measure performance against plan. By contrast, an enormous effort was exerted on recording temporary work opportunities, which demonstrates management's primary concern. However, despite the emphasis upon numbers of work opportunities, the first five years of the EPWP did not result in a significant increase in the employment generated per unit of expenditure during the construction of infrastructure.

The absence of easily accessible and summarised information about the amount of physical assets produced, taken together with the emphasis upon the number of work opportunities, suggests that the infrastructure component of the

Expanded Public Works Programme was regarded as social welfare, or relief, and not as a developmental, employment-generating, infrastructure programme. Much more should be done to generate employment, income and skills amongst the poor, who are willing and eager to work, during the second phase of the Expanded Public Works Programme (2009 to 2014). Engineers could make a major contribution to the achievement of significantly higher levels of employment per unit of expenditure during the construction and maintenance of infrastructure in general, and particularly through EPWP funding. An increased commitment might be attained by viewing the EPWP as a mega-project.

NOTE

This article is based on the paper that was revised and updated by the authors in 2009.

ADDITIONAL NOTES

1 Announced during the EPWP Kamoso Awards event held in Sandton and repeated many times since, including EPWP Unit, 2009: 4.

2 Ibid: 2.

3 Emphasis added.

4 "*EPWP conditions have been placed on the PIG and MIG via the 2004 Division of Revenue Act.*" EPWP First Quarterly Report, Financial Year 2004/05, 1 April–30 September 2004, 9 September 2004.

5 Other evidence:
Presentation by Provincial and Local Government Minister, FS Mufamadi, on behalf of the Social Sector One Cluster, 25 May 2004, RURAL DEVELOPMENT AND URBAN RENEWAL: "*In the infrastructure sector, the conditions placed on the Municipal Infrastructure Grant (MIG) and Provincial Infrastructure Grant (PIG) have been finalised and published through the Division of Revenue Act 2004 (DORA). According to DORA, provinces and municipalities are required to implement a portion of their infrastructure projects in the 2004-05 financial year, using labour intensive construction methods. Guidelines have been finalised for the implementation of the EPWP.*"

Figure 7: Women mixing concrete in Bloemfontein on an EPWP project in March 2009

Speech by RZ Nogumla during a public works budget vote debate 10 June 2004: "*In the infrastructure sector the conditions placed on the municipal infrastructure grant (MIG) and provincial infrastructure grant (PIG) have been finalised and published through the Division of Revenue Act 2004 (DORA). As indicated above, province and municipalities are required to implement a portion of their infrastructure projects using labour intensive construction methods.*"

6 More details in the section titled "Infrastructure and Labour Intensity" in this article.

7 The EPWP creates work opportunities with no or little additional funding (EPWP Unit, 2004).

8 In relation to labour-intensive construction and maintenance, a development programme consists of a planned series of related projects, directly and integrally linked to specific training programmes; the human resources required to implement the programme are largely produced through the programme itself.

9 Rounded up from R41.8 billion; this is according to the EPWP M&E Unit's own Quarterly Reports' data.

10 To put this expenditure in perspective: it is of the order of magnitude required to build a 3 600 MW power station. From another perspective: about ten years of planning and construction would be required to produce such a functioning power station.

11 This, and other management aspects, will be the focus of another article/paper.

12 Rounded up from R49.7 billion.

13 For the financial year 2010/11 this fell still further to 6%.

14 "Job opportunity: Paid work for an individual on an EPWP project for any period of time. The same person can be employed on different projects and each period of employment will be counted as a job opportunity." (EPWP Unit, 2004: 10)

15 "Person year of work: One person year is equivalent to 230 person days of work. For task-rated workers, tasks completed should be used as a proxy for 8 hours of work per day" (ibid). 2004 person year estimate: 250 000 (ibid: 17); 2004 to 2009 actual person-years: about 307 000.

16 STATE OF THE NATION ADDRESS BY HIS EXCELLENCY JG ZUMA, PRESIDENT OF THE REPUBLIC OF SOUTH AFRICA, JOINT SITTING OF PARLIAMENT, CAPE TOWN 03 JUNE 2009. "*Another important element of our drive to create job opportunities is the Expanded Public Works Programme (EPWP). The initial target of one million jobs has been achieved. The second phase of the programme aims to create about* ***four million job opportunities by 2014****. Between now and December 2009, we plan to create about 500 000 job opportunities. Since the implementation of our programme will take place in the face of the economic downturn, we will have to act prudently – no wastage, no rollovers of funds – every cent must be spent wisely and fruitfully. We must cut our cloth according to our size.*"

17 Small contractor development is of major concern to governments and donor agencies. Failure rates are extremely high and the whole field requires re-thinking, then new policies, followed by new programmes.

18 2012 Budget Speech.

REFERENCES

The list of references is available from the editor. □

Source:
http://www.saice.org.za/downloads/monthly_publications/2012/2012-Civil-Engineering-July/#/