Overview of Public Works Programmes in Sub-Saharan Africa

30th September 2009

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Acknowledgements

This report was prepared for Carlo del Ninno and William Wiseman of the World Bank Social Protection Network. Many thanks are due to Carlo for his comments on an earlier version of this report, and also to the indomitable team of ODI researchers who carried out the web research and detailed narrative analysis to populate the data base on which section two of the report is based, namely Gina Bergh, Raania Rizvi, and Fiona Burtt and to Maia Stead for her management of the regional PWP data base and quantitative analysis. Finally, thanks also to Jen Morgan for diligently formatting the report.

The report draws extensively on a major piece of work reviewing public works programming in Africa (McCord, 2009a) to which we refer the reader seeking more detail on many of the issues set out below. The authors apologise for the extent of self-referencing in this report. This is an artefact of the under-researched nature of the role of public works in relation to social protection in sub-Saharan Africa, the scarcity of literature on this subject, and the efforts of the Public Works Research Project (PWRP) in the Southern Africa Labour and Development Unit (SALDRU) at the University of Cape Town to address this scarcity.

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List of Acronyms

AFRICATIP	Association Régionale des Agences d'Exécution des Travaux d'Intérêt Public
AGETIP	Agence d'Exécution des Travaux d'Intérêt Public contre le sous-emploi
ALMP	Active Labour Market Policy
CFW	Cash for Work
CBPWP	Community Based Public Works Programme
DFID	Department for International Development (UK)
ECCD	Early Childhood Care and Development
EGS	Employment Guarantee Scheme
EIIP	Employment Intensive Investment Programme
ELR	Employer of Last Resort
EPWP	Expanded Public Works Programme
ERRA	Ethiopian Rural Roads Authority
EU	European Union
FFW	Food for Work
FFT	Food for Training
FGT	Foster-Greer-Thorbecke
GEP	Government Employment Programme
HIMO	High Labour Intensive Works
HIV/AIDS	Human Immune Virus/Acquired Immune Deficiency Syndrome
IFW	Inputs for Work
ILO	International Labour Organisation
ILTPWP	Improving Livelihoods through Public Works Programme
ISRDS	Integrated Sustainable Rural Development Strategy
LIC	Low-Income Country
MASAF	Malawi Social Action Fund
MEGS	Maharashtra Employment Guarantee Programme
MIC	Middle Income Country
NGO	Non Governmental Organisation
NREGA	National Rural Employment Guarantee Act
OECD	Organisation for Economic Cooperation and Development
PIC	Poverty Incidence Curve
PSM	Propensity Score Matching
PSNP	Productive Safety Nets Programme
SALDRU	Southern Africa Labour and Development Research Unit, University of Cape Town
SRM	Social Risk Management
TASAF	Tanzania Social Action Fund

Executive Summary

This report provides an overview of Public Works Programme (PWP) activity in sub-Saharan Africa, drawing on a specially created database of 167 programmes across the region, original survey work and a literature review. The overall objective of the work is to contribute to the understanding of the role and possible use of PWPs in the region, learning from experiences in Africa and gaining insights from successful programmes implemented internationally.

The report first sets out a typology of PWPs which is adopted as the basis for analysis throughout the report. Next the characteristics of current PWPs in sub-Saharan Africa are explored. The programmes were found to be largely donor funded (83%), predominantly food for work (60%), and are equally divided between those whose primary objective is the provision of safety nets or social protection at a household level (type A), and those for whom the creation of infrastructure using labour intensive techniques in order to promote aggregate employment is primary (type C). Only six programmes (4%) were identified which offer some form of ongoing income insurance (type B), along the lines of the Employment Guarantee Scheme programmes found in South Asia, such as the (NREGA).

The limited availability and poor quality of primary data on programme cost, outputs, outcomes and the socio-economic profile of programme participants limit the potential for addressing questions of cost, targeting or impact in the region. The need for improved data and reporting consistency across programmes is highlighted. A review is made of the available literature, and survey data on two programmes in South Africa is used to explore key questions relating to targeting and impact in detail. The key findings are that programme design can reduce exclusion errors, but that PWP participation may not reduce headcount poverty, or significantly reduce income or other aspects of poverty unless it is well targeted.

Finally the popularity of PWPs in the social protection discourse in the region is discussed. A critical policy misalignment highlighted, whereby programmes offering short term employment are implemented with the objective of providing social protection or promoting graduation in situations of chronic poverty where they are not effective. The report concludes that while short term PWP employment can play a vital role to promote consumption smoothing in acute situations of labour markets disruption, the social protection function of PWPs in sub-Saharan countries experiencing chronic poverty and unemployment is likely to be limited unless South Asian style programmes guaranteeing employment are implemented. Whether such programmes are fiscally, or administratively feasible remains an open question.

Introduction

In the context of recent food-fuel price and financial crisis there has been a renewed interest in the use of Public Works Programmes (PWPs). A recent review paper (del Ninno, Subbarao and Milazzo, 2009) found that in addition to being used effectively to in response to either a one-time large covariate shock, or in respect to repeated shocks, PWPs in low income countries, also have been used often with an antipoverty or poverty reduction objective. However, information on the use of PWPs in Africa and its possible role to reduced poverty and to respond to the latest financial crises is still relatively scarce.

In this report, a review of PWPs is carried out with a specific focus on sub-Saharan Africa, drawing on a literature review, original survey work, and a database of 167 PWPs across the region. The overall objective of the work is to contribute to the understanding of the role and possible use of PWPs in the region, learning from experiences in Africa and gaining insights from successful programmes implemented internationally. The intention is to identify the key components of good programme design, and lessons for successful implementation.

Structure

This report is comprised of four parts; the first sets out a typology of PWPs which is adopted as the basis for analysis throughout the report, the second examines the characteristics of existing PWPs in sub-Saharan Africa based on a data base of programme information, the third explores the questions of cost and targeting effectiveness, drawing on more detailed programme information from the region from a selected number of programmes including detailed survey work carried out on two PWPs in South Africa, and the fourth briefly discusses the role of PWP in the current social protection discourse among donors and governments in the region, and sets out key challenges for future programming.

Part One: Setting Out a Public Works Programme Typology

Before the characteristics of PWPs in the sub-Saharan region are interrogated in detail, a typology of public works is presented, which will be used to facilitate analysis and discussion throughout the report.

While the term 'Public Works', (and in some instances 'workfare'), is widely used in the social protection and safety nets literature, there is no common definition, and many widely differing programmes share the generic PWP terminology, despite considerable in programme variation and design. Despite this heterogeneity, the term PWP is frequently used without adequate clarification of the characteristics of the particular programme under discussion, resulting in conceptual confusion and programme design incongruities. The adoption of common terminology without a shared understanding of the meaning exacerbates the challenge of appropriate policy choice and undermines the quality of PWP design, particularly in sub-Saharan Africa.

In order to address this confusion, a basic typology of PWP interventions is used in this report. The typology is based on a review of over 200 programmes internationally, and the associated literature (McCord, 2008a). This typology sets out four distinct forms of PWP, defined on the basis of core design features and primary objectives. The four types of PWP are i) those offering short-term employment, and ii) government employment programmes offering some form of employment guarantee, iii) those promoting labour intensification of government infrastructure spending, and iv) programmes which enhance supply-side characteristics, promoting 'employability'. While some programmes may include aspects of more than one of these types and often have a range of objectives[1], PWPs tend to have a primary identity which enables them to be located in one of the four categories, and this primary identity tends to have a significant influence on programme design, and the aspects of programme activity which are prioritised. The four types of programme are discussed below in relation to a review of current PWP programming in sub- Saharan Africa and internationally.

Type A Programmes

Type A programmes provide a single short episode of temporary employment, and are particularly appropriate as a response to temporary disruptions to the labour market resulting in acute labour demand shortage. These programmes are primarily concerned with the provision of safety nets, and have been implemented on a large scale in East Africa as response to livelihoods disruption as result of conflict and drought. These programmes tend to offer basic 'risk coping' or 'protective' forms of social protection, and the wage transfer objective dominates objectives relating to the provision of assets, which may in many instances be essentially a 'make-work' activity, carried out primarily to satisfy the work conditionality. This type of programme is often considered to be synonymous with the generic term PWP, and is typical of PWPs currently implemented in many sub-Saharan African countries, examples being the PWPs included in Social Fund programmes in Malawi and Tanzania. Such programmes are typical of those implemented widely in southern Asia, in response to natural disasters such as floods or typhoons, which temporarily affect formal and informal household income earning opportunities, allowing consumption smoothing for a temporary period until the labour market returns to normal.

1 For the range of possible PWP objectives associated with the typology, see McCord 2008a.

Type B Programmes

Type B programmes are government employment programmes (GEPs) in which the state acts as an 'employer of last resort' (ELR) providing employment on a sustained or repeated basis. Employment may be provided either directly by government or indirectly through private sector employers or civil society organisations under contract, and may be created in any sector; this form of PWP has the scope to create employment outside conventional sectors, and in the region employment as Home Based Carers for those with HIV/AIDS and nursery carers in the Early Childhood Care and Development (ECCD) sector have been included within these programmes. A subset of GEPs, in which the state guarantees employment on demand, are known as Employment Guarantee Schemes (EGSs), which provide non-contributory income insurance through guaranteed employment for all who seek it. The best known examples of such PWPs are to be found in South Asia, with the Maharashtra Employment Guarantee Scheme (MEGS) (Dev 1995), and the recently launched NREGP in India being the best documented (India: Department of Rural Development 2007).[2] Such programmes are rare in sub-Saharan Africa, although the public works component of the national Productive Safety Nets Programme (PSNP) in Ethiopia is similar inasmuch as it aims to address the regular disruption of livelihoods which occurs as the result of persistent drought by offering a period of employment each year for up to five years for participating households. While the extent to which employment can be offered to all seeking it in this case is constrained in practice, particularly in years of serious drought, by both budgetary and capacity constraints, the concept underlying the programme however is consistent with that of the South Asian programmes, inasmuch as it is based on a recognition that it is the responsibility of the state to provide large scale employment to populations in need on an ongoing basis.

Type C Programmes

Type C programmes aim to increase the labour intensity of construction sector activity in order to increase aggregate labour demand. These programmes are implemented primarily in the infrastructure sector, and entail the specification of labour-based techniques in order to promote the absorption of increased amounts of labour for each unit of asset constructed. The work of the Ethiopian Rural Roads Authority (ERRA), the AGETIP (Agence d'Exécution des Travaux d'Intérêt Public contre le sous-emploi) in Senegal, related AFRICATIP-supported programmes in Western Africa, and the ILO's Employment-Intensive Investment Programmes (EIIPs) are typical of this type of intervention, promoting the use of labour-based techniques in the infrastructure sector. While these programmes are primarily aimed at infrastructure provision, they also confer basic short-term 'risk coping' or 'protective' social protection benefits, through the wage stream which terminates at the point of programme completion, and on average this type of programme offers employment for a four month period. Such programmes also frequently entail the promotion of small contractor development, in order to establish a cadre of entrepreneurs able to manage ongoing infrastructure provision contracts in a labour-intensive way. Such programmes do not necessarily require additional funding, but rather a shift in the factor intensity of existing expenditure to increase employment.

Type D Programmes

Type D programmes aim to addresses supply-side constraints to employment, and promote the 'employability' of workers by providing workplace experience and skills formation among the unemployed. Such programmes are most appropriately implemented when the key constraint to

2 Under the NREGA in India, employment is defined as a constitutional right, and the state offers a guaranteed number of days of employment each year to one unemployed work seeker from any rural household seeking employment. The worker is employed for a maximum of 100 days each year on the creation of community assets and is paid the minimum wage.

employment is identified to be lack of skills rather than lack of employment opportunities per se. These programmes have been adopted principally in Organisation of Economic Cooperation and Development (OECD) countries at times of high frictional unemployment, i.e. when the fundamental problem has been skills shortages in the labour pool, and are rare in sub-Saharan Africa. This type of programme assumes that sufficient numbers of jobs are available for the unemployed if they are adequately retrained and supported, and is associated with a political concern to encourage the unemployed to take up available work opportunities rather than to provide them with unemployment benefits, a policy described as labour 'activation' (for a critique of this approach see Meth, 2009). This approach will confer social protection benefits and promote aggregate employment only if the underlying assumption – that sufficient employment is available to absorb a significant number of the unemployed if they acquire additional skills and experience – holds true. Otherwise, such initiatives are likely to result in worker substitution within the existing labour force rather than in significant increases in aggregate employment.

Programmes to enhance employability by addressing supply-side problems tend to be components of broader Active Labour Market Policies (ALMP), rather than social protection policies, and their success is contingent on their ability (a) to successfully transfer skills to participants, and (b) to identify skills on the supply side which match skills in demand in the economy. The feasibility of such approaches is open to question in developing countries facing structural rather than frictional unemployment (see for example Karuri et al., 2007 with regard to South Africa).

These four types are summarised in Box 1 below, and are referred to types A, B, C and D in this report, for the sake of brevity.

Box 1: PWP Typology

Type A
PWPs offering a single short-term episode of employment with a safety net or social protection objective
Type B
Programmes offering repeated or ongoing employment opportunities as a form of income insurance, which in some cases entails a guarantee of employment for all who seek it
Type C
Programmes promoting the labour intensification of government infrastructure to promote aggregate employment
Type D
Programmes enhancing employability by improving labour quality

Discussion of the Typology in Sub-Saharan Africa

While type A programmes have essentially microeconomic objectives relating to a short term safety net function at household level, type B programmes offer more sustained social protection in the form of income insurance which is more appropriate in contexts of covariate risk, resulting for example from structural unemployment and chronic poverty. However, this critical distinction is not widely reflected in programme type choice in Africa, and type A programmes tend to be implemented in contexts of chronic poverty and unemployment, despite the fact that they are appropriate in situations of acute labour market disruption. Only a handful of PWP in sub-Saharan Africa are type B, offering the kind of support provided under the NREGA in India, including the Zibambele case study in South Africa, discussed in section three below. Type B programmes address the right to employment on the basis of an assumption that the state is obliged to provide support to the working age poor through large scale programming, while type A programmes provide support only to an arbitrary subset of those in need, and for a limited period.[3]

3 It is interesting to note that NREGA programmes have been visited by African officials working on the design of PWPs, but most have failed to incorporate the most fundamental concept underlying the NREGA in programme design – the

Type C, labour intensification, programmes are a very different form of PWP which focuses primarily on increasing aggregate employment at the macro level, rather than social protection outcomes. Social protection benefits under such programmes are limited to short term consumption smoothing, as in type A above. However it is generally assumed that such programmes will have a beneficial potential social protection impact, and this assumption forms part of the rationale for the adoption of such programmes, which promote a shift in the factor intensity of the construction industry, and is used to allay concerns regarding any cost or efficiency premia this may imply. An example of this is Phase 2 of the national EPWP in South Africa, which is a type C programme, but is presented nationally as the primary instrument of social protection for the working age poor, despite the short duration of employment provided and the chronic nature of the underlying labour market crisis. Type D programmes are different again, being predominantly linked aspirations of labour market 'activation', and the removal of participants from dependency on ongoing social protection provision. While this is seldom articulated as the primary objective in sub-Saharan African PWPs, many programmes are based on the assumption that participation will result in 'graduation' and an 'exit' from poverty, with PWP participation representing a form of 'treatment', without adequate reference to the labour market context and the availability of appropriate employment opportunities. This is the case in the EPWP in South Africa which adopts the language of 'graduation' despite the lack of evidence that this is occurring on any significant scale, (Meth and McCord, 2009a).

The key conclusion to be drawn from this discussion is that while the different types of PWP are conceptually discrete, and appropriate for meeting differing objectives in different contexts, there is often confusion at point of programme design and implementation in sub-Saharan Africa, with a mismatch of the form of PWP selected, and the social protection outcome which is anticipated, with type A and C programmes offering short term employment, frequently implemented in contexts of chronic poverty. This represents the critical failure in PWP programming in the region.

Having established a PWP typology, and discussed the social protection function of each, a detailed review is now offered of PWP programming across the region.

responsibility of the state to guarantee a minimum level of support to all those eligible and seeking state employment, as for example in the case of the national Expanded Public Works Programme (or EPWP) in South Africa (McCord, 2007).

Part Two: An Overview of PWPs in Sub-Saharan Africa

In this section of the report PWP activity in the sub-Saharan Africa is reviewed and key patterns and trends relating to programme design and implementation are identified, drawing on information from a data base of programmes in the region.

Overview of the Database

The analysis of patterns of current PWP design and implementation in sub-Saharan Africa is based on a database of 167 current or recently implemented programmes from 29 countries in sub-Saharan Africa, listed in Table 1 below.

Table 1: Sub-Saharan Africa Countries included in the database

Country	Number of Public Works Programmes included in the database
Angola	2
Botswana	2
Burundi	10
Cote d'Ivoire	3
Congo Brazzaville	1
DRC	4
Ethiopia	27
Ghana	1
Guinea Conakry	7
Kenya	2
Liberia	13
Lesotho	7
Madagascar	9
Malawi	8
Mali	11
Mozambique	3
Niger	5
Nigeria	0
Rwanda	4
Senegal	5
Sierra Leone	3
South Africa	8
Somalia	4
Swaziland	2
Tanzania	6
Uganda	2
Zambia	5
Zimbabwe	8
Total number of programmes	**167**

The database was developed on the basis of a web review, using publicly available secondary data on programs implemented within the last decade.[4] Almost three hundred programmes were identified in the initial search, but of these almost half were excluded due to inadequate electronic data availability, the fact that the programme was an earlier phase of a later programme included in

4 The database is an extended and updated version of an earlier data base completed in 2005, which was developed by the Public Works Research Project, in SALDRU at the University of Cape Town with funding from UNICEF East Africa Regional office, as part of a review of social protection provision in the East and Southern Africa region (McCord, 2005).

the database, or because the programme was implemented more than ten years ago. For each programme a range of secondary electronic sources were interrogated in an attempt to identify data on key design and implementation elements. The main areas investigated in the database are listed in annexe 1, although where additional information could be extracted to gain greater insights into the programme, further categories were added.

Data constraints

The database is limited in that it does not represent an exhaustive listing of programmes, and most of the data on which it is based was extracted from secondary sources. In addition it may also be biased in favour of programmes for which data is available electronically, implying an inherent selection bias away from smaller and lower cost programmes which are not supported by international donors. A further bias may occur in any analysis of the characteristics of these programmes due to the fact that equal weight is given to all programmes irrespective of their size, leading to a potential overrepresentation of the characteristics of smaller programmes.

In addition there were serious problems with the quality and comparability of the data itself, largely as a consequence of the lack of consistent terminology, and common reporting and evaluation conventions. Examples of these inconsistencies are reflected in confusion over who should be counted as participants and who as beneficiaries, how 'employment' created in PWPs should be counted, with a variety of options presented, including 'jobs created', 'days created', 'full time equivalents', and a range of costing approaches, with no norms governing which line items should be included within PWP budgets. These problems were compounded by a lack of basic factual information in the key project documentation, and the absence of consistent criteria against which PWP programming should be measured, in terms of inputs, outputs, or outcomes. As a consequence of these constraints the process of populating the database entailed the analysis of dense narrative, and the drawing of inferences and assumptions, which may not in all cases be entirely accurate.

The data was primarily based on self-reporting by implementing agencies, and in some instances reflected programme design, rather than necessarily corresponding to reality in terms of performance, and no verification of the data was possible. For this reason no attempt was made to assess the impact of the programmes reviewed, but rather to explore key conceptual and design issues.

Given the range of caveats set out above the database does not represent a complete summary of regional PWP programming, and any analysis based on the data base should not be considered statistically robust, but should be taken as indicative only. However, where consistent and general patterns emerge, it is appropriate to conclude that these represent key features of PWP programming in the region.

Future data requirements

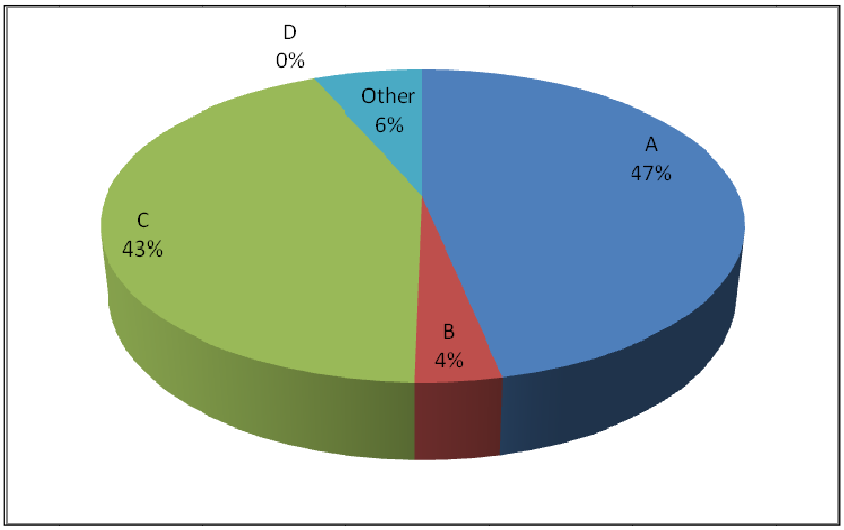
One key recommendation arising from this analysis is the need for improved and consistent documentation of PWPs in terms of both design and implementation across major donors, the development of agreed terminology, and common approaches to the calculation of key data relating to inputs, outputs and outcomes. Without this the possibility of robust and meaningful assessment of the cost and impact of PWP programming in the future will be seriously undermined, and prospects for evidence policy based policy selection will remain elusive.

The Nature of PWPs in Sub-Saharan Africa

The database of PWPs implemented in sub-Saharan Africa was first analysed in terms of the typology outlined above in order to gain an insight into the nature of current PWPs activity in the region. Given the reliance on secondary data, the typology was applied on the basis of the primary characteristic of the programme as set out in key programme documentation. Programmes were identified as type A where the primary characteristic was direct support to households, and type C where asset creation was primary, with household level benefits being anticipated indirectly as a result of the assets created. Type B programmes were identified where the employment and wage transfer was ongoing or repeated on the basis of need, and type D, where skills development was the primary objective. Due to the crude programme identification process, the results are not definitive indicators of PWP type, but collectively they indicate the broad characteristics of PWPs in the region.

When applied to the programmes in the database it was found that type A and C programmes dominate, together comprising 96% of all PWPs reviewed, see Figure 1.[5]

Figure 1: PWP Type



(n=167)

Type A programmes, with the objective of providing social protection through short term employment accounted for 47% of programmes, and those concerned with the labour intensification of infrastructure provision, type C, 43%, with only 4% of programmes offering some form of employment guarantee, or repeated or ongoing employment, in line with type B programming. This indicates that almost all PWPs in the region provide a single short term episode of employment.

This is interesting, as while a small number of the type A PWPs were implemented in contexts of acute labour market disruption, where a short term period of employment has the potential to provide significant safety net benefits though consumption smoothing, most were implemented in contexts of chronic poverty and unemployment, in which a short term episode of employment is less likely to be of significance in terms of its safety net impact. No type D programmes were found in the review, confirming the argument that most supply side interventions aiming to enhance employability are implemented in developed rather than developing Low Income Country (LIC)

5 It was not possible to include 11 of the PWPs in the database in the typology, due to insufficient data on primary programme objectives.

contexts (McCord, 2008a, del Ninno et al, 2009) although many programmes of the programmes reviewed included secondary objectives relating to skills development, and a common assumption in programme documentation was that skills development and labour market experience would lead to 'graduation'. In the following analysis, the data will be disaggregated by PWP type, where appropriate, in an attempt to illustrate the significant differences in design and conceptualisation which are associated with different forms of public works.

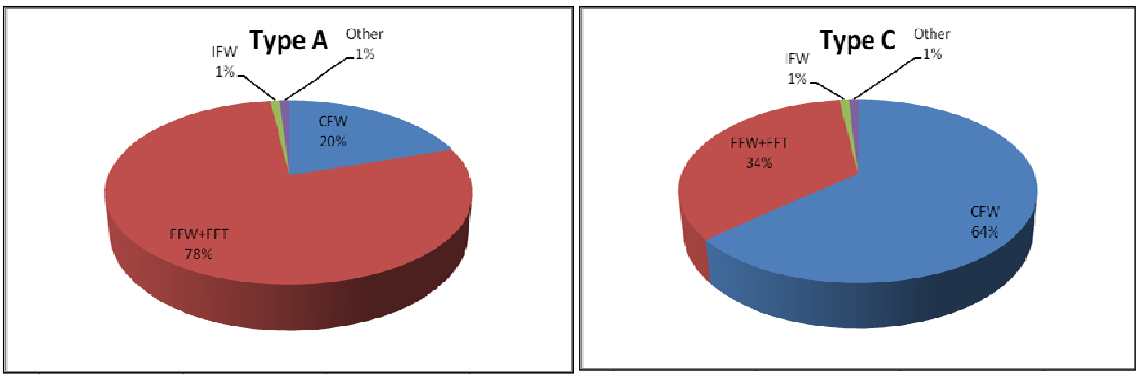
Cash for Work or Food for Work?

The popular conventional classification of PWPs is based on whether programmes offer Cash for Work or Food for Work (CFW or FFW). Thirty seven percent of the programmes reviewed were CFW, 46% conventional FFW, 15% Food for Training (FFT), 1% Inputs for Work (IFW), primarily providing agricultural inputs, and 1% other.

Overall in the region, the majority of programmes were some form of Food for Work (FFW), comprising 61% of the total. The term FFW is used here inclusively to cover several new variant forms of PWP which use food as an incentive to generate a range of socially desirable outcomes, including both conventional FFW and also Food for Assets (FFA), in which food is given to communities as an incentive rather than as a formal wage, in recompense for the creation of public goods, often after a period of conventional FFW programming, as well as Food for Training (FFT), in which participants are given food as an incentive for spending time undergoing training or skills development. Most of these programmes are funded by the WFP, in an attempt to use its primary asset, food, to promote a range of developmental outcomes, in addition to improving nutrition.

The form of PWP varied significantly across PWP type, with only 20% of type A programmes being CFW, compared to 72% of type B, and 63% of type C, see Figure 2 (for data see Annexe 2). This reflects the fact that many type A programmes are humanitarian in nature, and are more frequently supported by major food donors, such as WFP or USAID, than type B or C programmes.

Figure 2: CFW/FFW by Programme Type



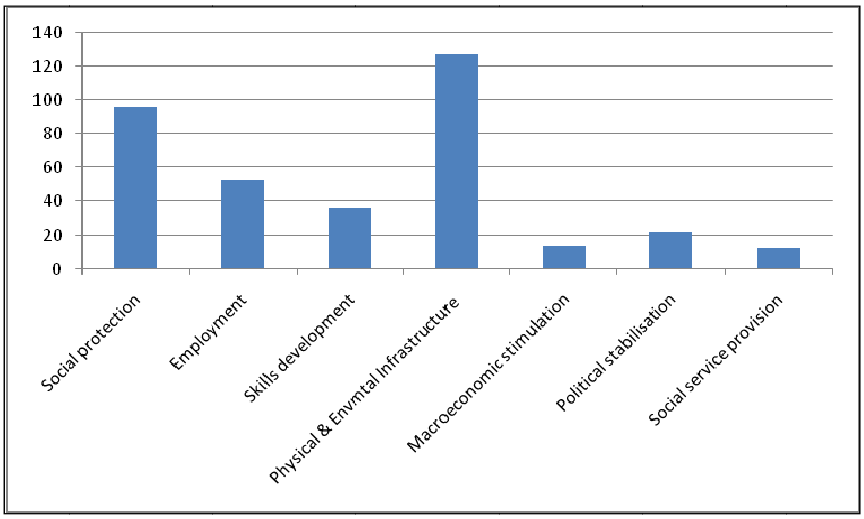
(A n=78, C n=72)

Programme objectives

A range of programme objectives were mentioned in the PWP documentation reviewed, of which by far the most frequent were the construction on infrastructure, mentioned in more than 80% of programmes (of which 52% was environmental or agricultural infrastructure, and 48% physical infrastructure, comprising roads, bridges, and other construction), and social protection/poverty alleviation/safety nets, which was mentioned in 61%, see Figure 3. These findings are consistent with the PWP typology findings above. The provision of employment was included in 34% of

objective statements, and 23% explicitly mentioned skills development, which is consistent with the fact that 20% of programmes reported human capital creation as an intended outcome.

Figure 3: Objectives of programme

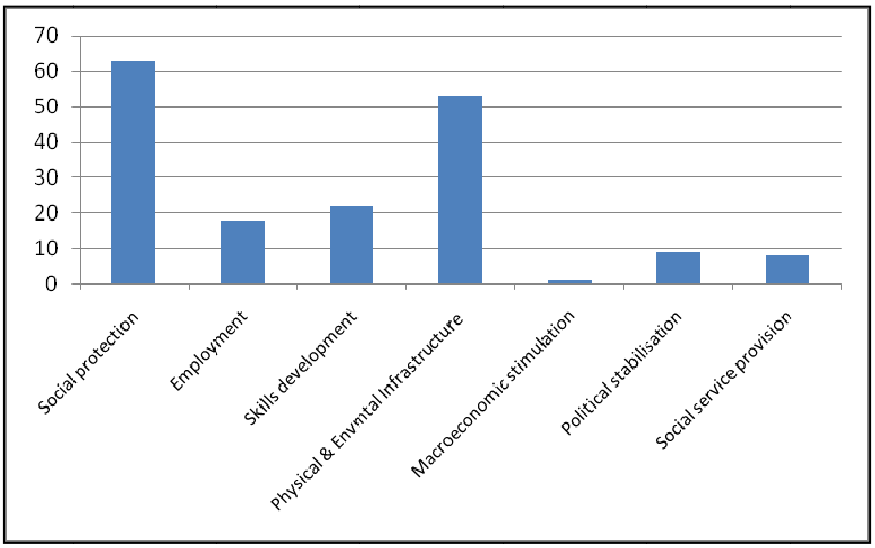


(n=158, 113 have more than one objective)

It is interesting to note that social protection is not given more priority, highlighting the relative dominance of infrastructure based programmes (type C), in which the objective is the provision of infrastructure while also promoting aggregate employment by increasing the labour intensity. Where infrastructure provision was stated as the objective the construction of facilities (such as schools, clinics and housing and roads) accounts for 60% of programmes providing material assets; while the construction of environmental or agricultural infrastructure was mentioned in only 40%.

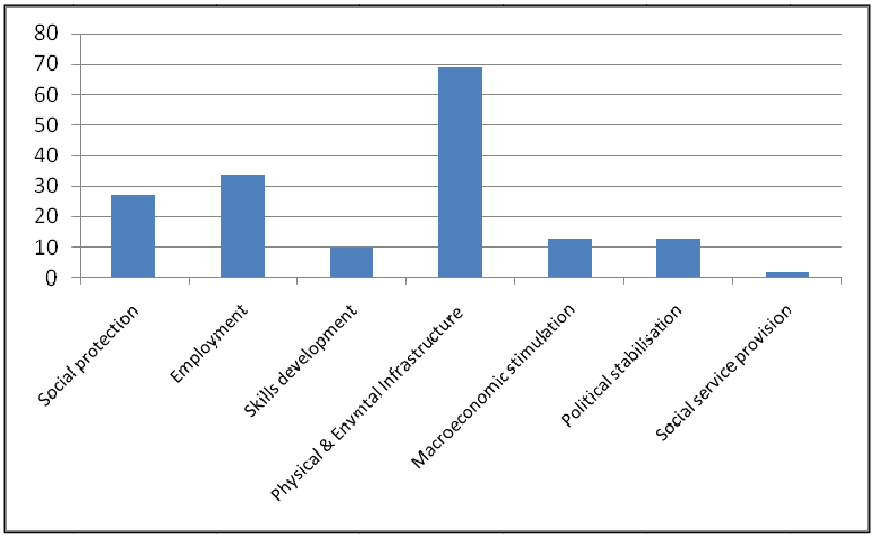
The objectives are broken down by types A and C below in Figures 4 and 5 respectively (types B and D were not adequately represented to be discussed in this way).

Figure 4: Objectives of programme (type A)



(n=76, 60 have more than one objective)

Figure 5: Objectives of programmes (type C)



(n=71, 54 have more than one objective)

As would be expected, the social protection objective is dominant in type A programmes and infrastructure provision in type C. It is interesting that the type A programme also includes significantly more mentions of skills development than type C, reflecting the focus on the individual and their livelihoods, while the type C includes a significant number of mentions of macro-economic stabilisation (23), which was only mentioned once in type A, reflecting the respective micro (household) and macro level emphases of the two programmes, with type C focusing on social protection enhancing macro-economic stimulation, infrastructure creation and aggregate employment promotion. Political stabilisation was mentioned explicitly in 15% of all programmes and the level was consistent across types A and C, indicating that both social protection at a micro-economic level, and employment creation and infrastructure provision at macro level are considered to be contributors to political stabilisation.

Programme Financing

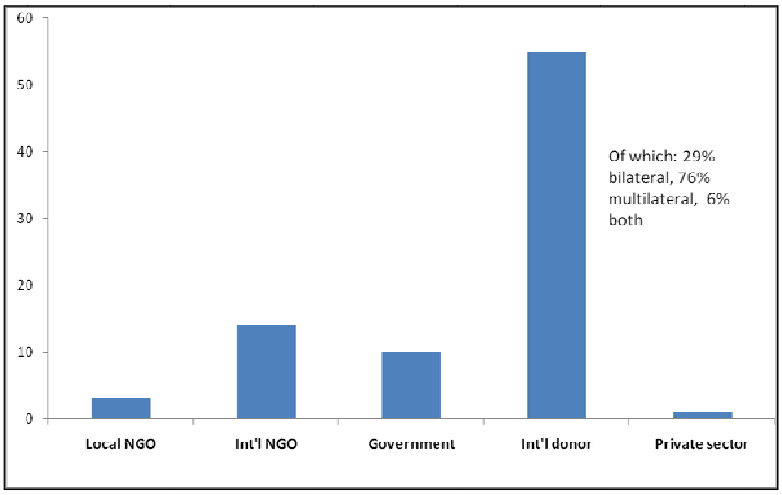
Budgets

The range of budgets associated with PWPs ranged from a few thousand to more than US$ 100 million, with mean annual programme budgets of US$ 43 million dollars (in US$ 2000 values). However, given extreme problems with data quality and comparability, and in many cases the difficulty of ascertaining how much of a complex multiple component programme budget was allocated to PWP programming, it is not possible to drawn any statistical conclusions from these figures, other than that PWPs are currently receiving major funding allocations, and that the cost of PWP programmes varies enormously from programme to programme.

Funding sources

Most of the programmes had multiple funding sources. The data indicates that multilateral donors are central to current programme funding, being mentioned in 83% of programmes. The next most frequently mentioned were national governments (22%), international NGOs (13%), the private sector (4%) and local NGOs (3%) see Figure 6. Of the international donors, 74% were multilateral and 19% bilateral, with 12% of internationally funded programmes having both multi- and bilateral funding. The range and frequency of funding was similar across type A and C programmes.

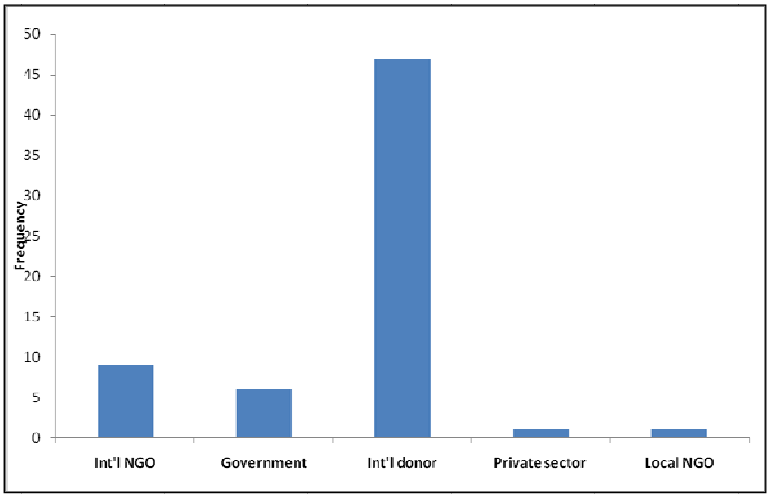
Figure 6: Type of funding agency



(n=154) 37 have more than one donor

International donors were identified as the major donor in 82% of programmes, International Non-Government Organisations (INGOs) in 10% and in only 6% of programmes were national governments the major funders, see Figure 7, illustrating the critical role of donor agencies in continued PWP implementation. The breakdown did not vary significantly across programme types (see annexe 3).

Figure 7: Major PWP funders



(n=146)

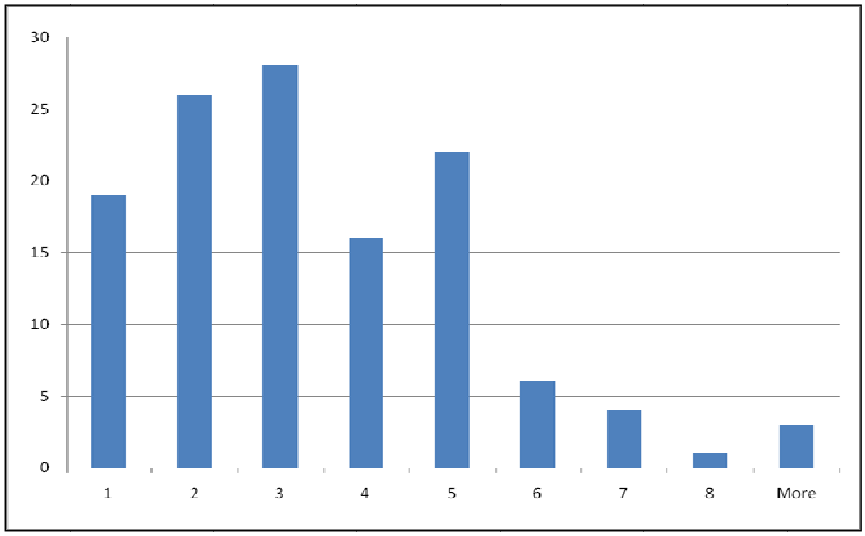
Design and Implementation

This section will review a number of key factors relating to programme design, which are critical in determining the social protection impact of PWPs.

Programme

Programme duration varied considerably across programmes, see Figure 8.

Figure 8: Programme duration in years



(n=125)

For programmes with complete data on start and end dates, 36% were of between one to two years in duration, with 53% being three to five years, and 11% six or more years, with the average duration being three years. Only 6% of programmes were implemented on an open ended basis, but in most of these instances it was not clear if this reflected absent programme end data, or a programme which was ongoing. The mean duration type A programmes was 33 months, compared to 48 for type C. The shorter duration of type A programmes may be linked to the fact that many are implemented in response to an emergency and once the humanitarian crisis is over the programmes terminate.

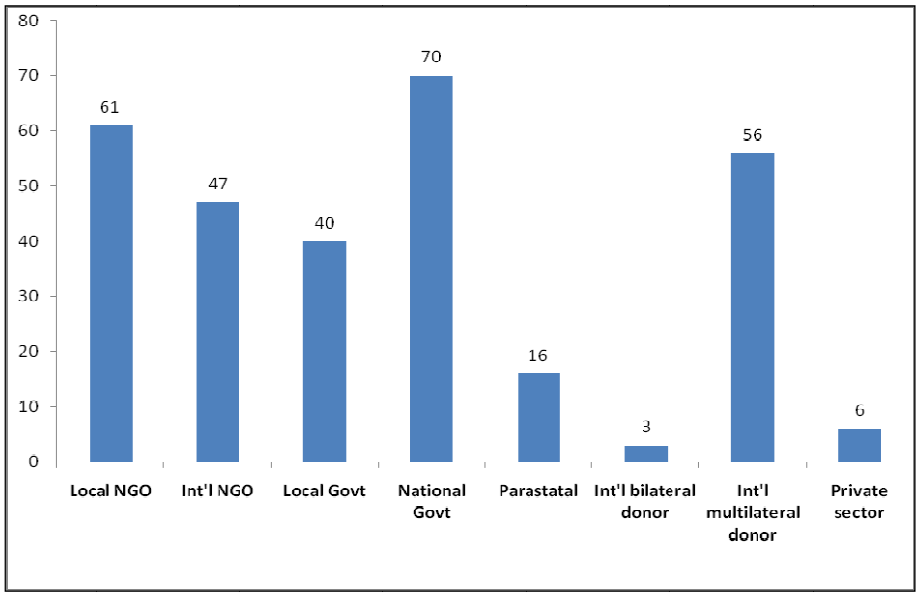
The duration of programmes may have implications for programme cost-effectiveness. Drawing on experiences in Kenya during the 1970s, McCutcheon argued that the short time scales of many PWPs, particularly type C programmes, result in a failure to realise the benefits of operating at the maximum efficient level, since set up costs and overheads (recruitment, training, development of procedures etc), are high during the initial start up phase, but fall significantly once a programme is established (McCutcheon, 2001).[6]

Implementing agencies

National government and local NGOs were the most frequently mentioned implementing agencies, although a range of different agents were identified, see Figure 9.

6 McCutcheon cites experience from the Kenya public works programme which suffered an initial 84:16 ratio of overheads to direct construction costs during its first three years (1974-76), which subsequently reversed.

Figure 9: Type of implementing agency



n=147 (81 multiple mentions)

When disaggregated by type, different implementation scenarios emerged, with type A programmes identifying NGOs, (both local and international), and international donors as the main implementers, while type C programmes identified national government as the dominant implementing agencies. This is consistent with the labour intensification of government expenditure on infrastructure which typifies type C programming, which would in many instances result in the identification of the government as implementer, while programmes concerned with safety nets are primarily implemented through NGOs, but all enjoying primarily external donor financing.

Coverage

Geographical mandate

Only 20% of programmes were nationally implemented, a figure which was consistent across programme types, with the vast majority being implemented only in limited geographical areas within a country, indicating that most programmes are either responding to localised issues, or in a contexts where the employment or poverty crisis is national, are focusing their response on specific locations, rather than attempting to provide employment or social protection on a national basis. This is an important insight, as it suggests that PWPs are not typically part of national social protection strategies, or where they are, that this strategy is not national in reach, providing support to only geographically limited segments of the population.

The scale of employment

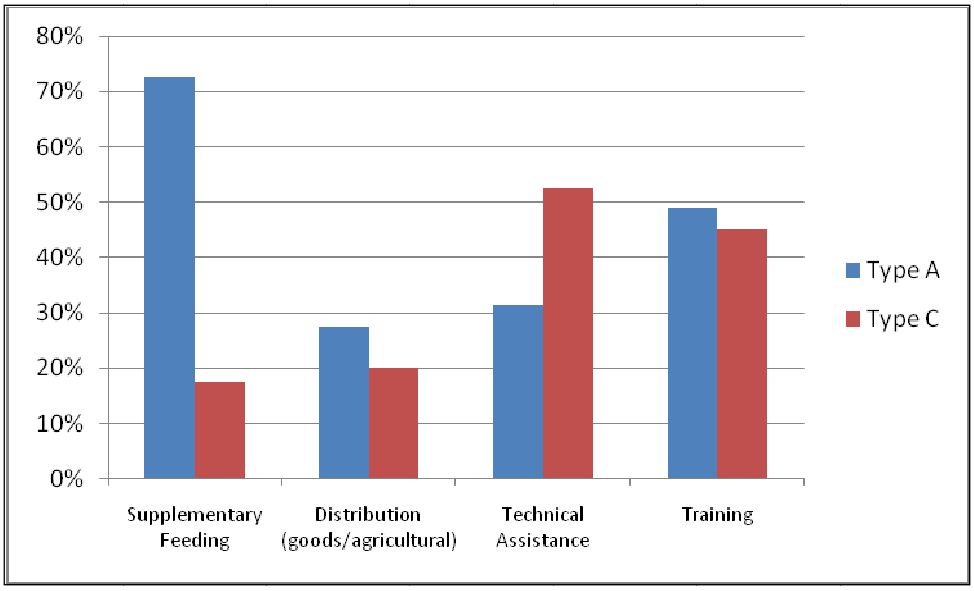
It was not possible to ascertain with any degree of confidence the number of PWP employees or beneficiaries across programmes, given the difficulty of interpreting the meaning of the term 'beneficiary' in any particular instance. In the countries reviewed the term beneficiary was variously used to mean i) direct PWP employees, ii) all members of households with PWP participants, or iii) whole communities in the programme area. Another problem is that while some programmes provided information on the total number of 'beneficiaries' accumulated over the life of the programme, others provided information on the basis of beneficiaries per annum, and others on the number of beneficiaries of the programme at any given point in time. While any statistical analysis of this data would not be meaningful given these inconsistencies, it is clear that within the

region the annual number of direct employees varies significantly between programmes, from those employing just a few hundred workers, to others employing over a million, indicating significant variation in programme scale.

Complementary interventions

One hundred of the PWPs reviewed had additional programme components complementing the PWP employment, and of these 57 had multiple additional programme components. The pattern of complementary programming varied by PWP type, see Figure 10, with type A programmes tending to have a larger number of associated programmes than type C.

Figure 10: Complementary programme components



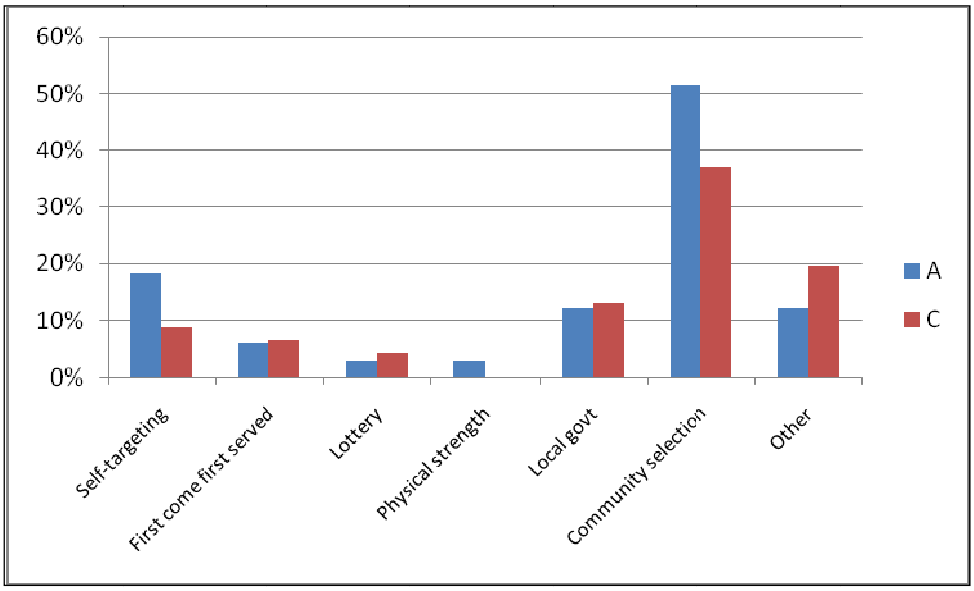
(A n=51, B n = 50, with multiple mentions)

Over 70% of type A programmes had complementary feeding programmes, providing a food ration for those unable to work or specified vulnerable groups outside the direct PWP beneficiary group, an outcome which is probably linked to the dominance of Food for Work programming in this programme type. Twenty seven percent provided goods or agricultural inputs, reflecting the humanitarian aspect of type A programming. Fewer type C programmes had complementary programme components, and those that did were primarily in the areas of technical assistance and training, in pursuit of the provision of infrastructure.

Targeting

Almost 50% of all programmes adopted community targeting techniques, with local government selection, and lotteries occurring in 12% and 8% of instances respectively. The results, disaggregated by type are set out in Figure 11.

Figure 11: Targeting mechanisms adopted

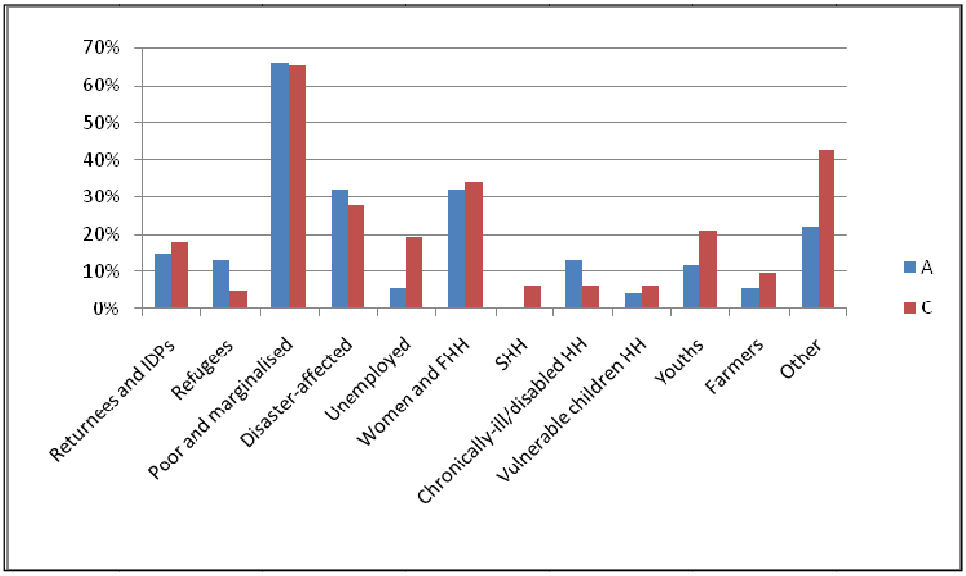


(A n=46, C n=33, with multiple mentions)

Community selection was more dominant in type A programmes than type C, as would be expected, given the greater concern with safety net objectives compared to the more market oriented and typically private sector implemented type C programmes.

In terms of target groups, the most frequently mentioned targets were 'the poor and marginalised' (in over 60% of both type A and C programmes) 'those affected by disasters' (mentioned in one third of programmes) groups which may well entail considerable overlap, and 'women and female headed households', also mentioned in one third of programmes. These findings are set out by programme type in Figure 12 below.

Figure 12: Target groups



(A n= 68, C n=61, with multiple mentions)

The category 'other' included significant numbers of ex-combatants, whose reintegration was a key objective linked with political stabilisation. It is interesting to note that this group is particularly frequently mentioned in type C programmes (over 40%). In such programmes the provision of infrastructure in a post conflict context is frequently associated with the employment of workers whose re-integration into the labour market is important for national stability.[7]

On average, 50% of PWP employees were women, although this conceals considerable variation across programmes, with some programmes such as the Zibambele programme in South Africa employing 95% women, while others in Somalia attained only 6% female participation, reflecting a combination of design and cultural factors.

Employment and payment modalities

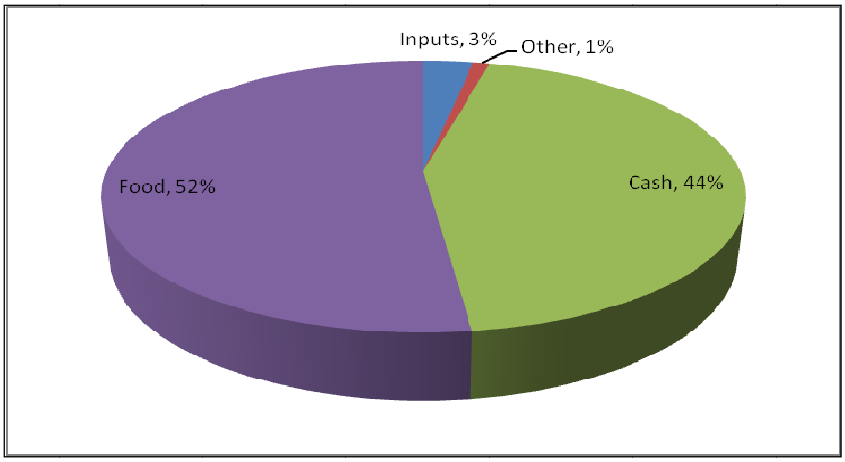
Employment duration

Only one quarter of programmes gave data for employment duration. For these 42 programmes the mean duration of employment was 4.8 months, with 33% of workers being employed for less than four months, 31% for four months, and 35% for between four and eight months. This short duration of employment is consistent with the dominance of type A and C PWPs. Employment was on average two months longer in type A programmes, at 5.75 months, compared to type C programmes, with only 3.71 months.

Form of wage

PWPs using food as the mode of payment, (including both Food for Work, Food for Assets and Food for Training), made up 52% of all programmes, while 44% offered cash, and 4% offered inputs or other forms of payment, see Figure 13. A small number of programmes had both food and non food components, which have been treated as separate programmes for the purpose of this analysis.[8]

Figure 13: Form of wage

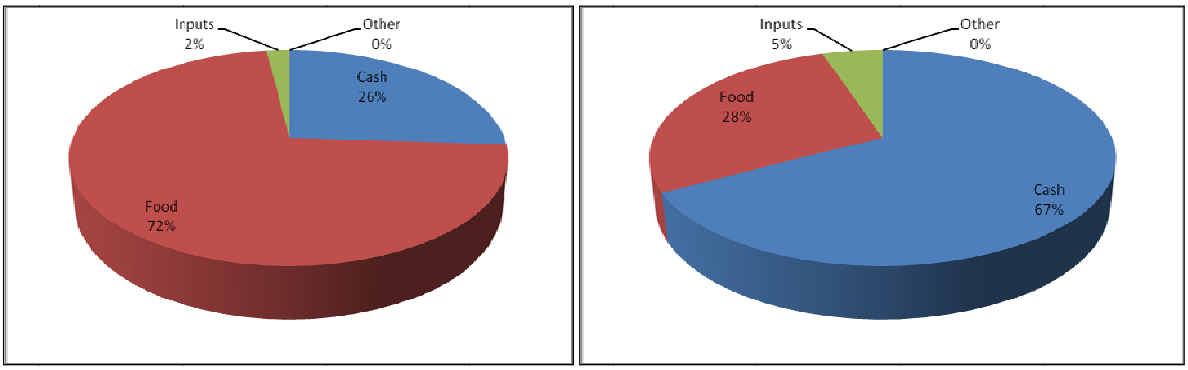


(n=176)

7 Unfortunately options for recording separate data on ex-combatants were not included in the database design, as it was based on a model developed in 2005 for East and Southern African countries where PWP play a more limited role in post conflict stabilisation than in West and Central Africa. This is an issue to be addressed in future analysis.
8 As a result n=176 for this analysis, which is greater than the total number of programmes included in the database (167).

The mode of payment varied across PWP type, with cash being offered in only 26% of type A programmes, compared to 67% of type C, see Figure 14.

Figure 14: Payment modalities in Type A and Type C programmes

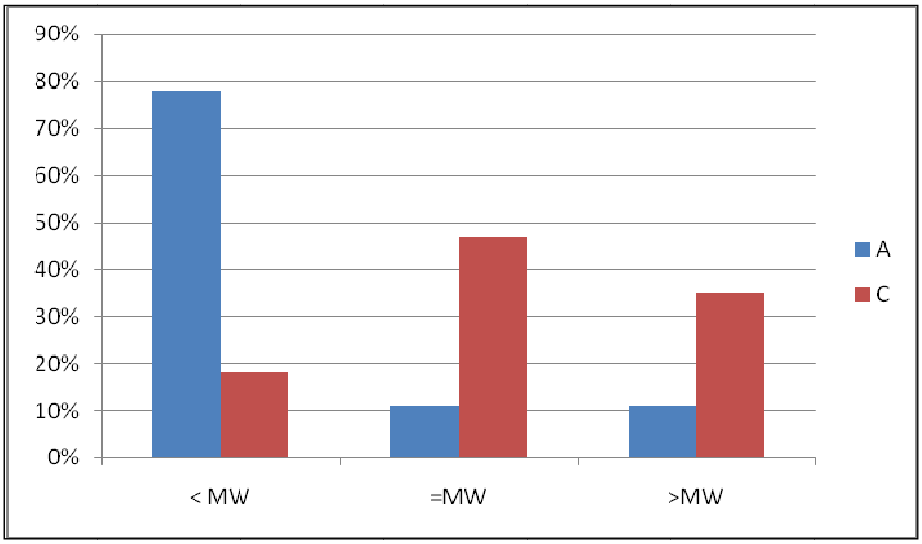


(A n= 82, C n=75)

The value of the wage: Payment in relation to the minimum wage

For the limited number of programmes where data on the relationship between the PWP wage and the minimum wage were available, 39% of programmes reported a wage set below the minimum wage, 36% reported a wage equal to the minimum wage, and only 25% paid above the minimum wage. When reviewed by PWP type, it is clear that in type A programmes where the wage is paid in cash (one quarter of type A programmes); it is usually set below the minimum wage (78%). For type C programmes however, the wage is set at or above the minimum wage for 82% of workers, reflecting the fact that these programmes are predominantly employment creation, rather than social protection programmes, and so less directly influenced by the concerns regarding 'dependency' and labour market distortion which are associated with social protection type A PWPs, see Figure 15 (for data table see Annexe 4).

Figure 15: The PWP age and the minimum wage



(A n=9, C n=17)

Interestingly, in most food-based PWPs, (predominantly type A), where the food ration was specified, the implied wage rate is significantly higher than where a cash wage is provided, as the

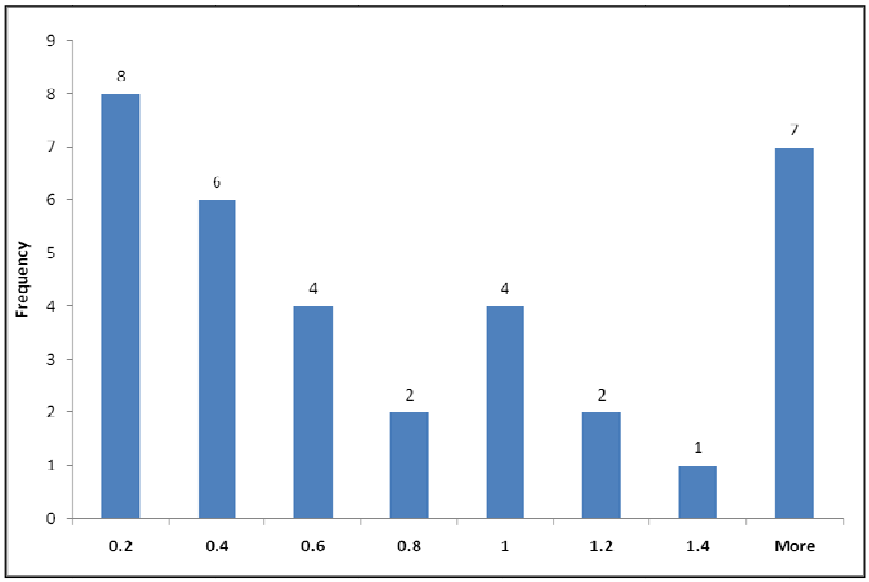
objective is to ensure adequate nutritional intake on a family basis, with the weekly ration being calculated to meet minimum household calorific requirements, without reference to its monetary value in relation to prevailing wages. In some (although by no means all) instances the higher real value of the FFW wage is likely to be linked to humanitarian contexts where participants are solely reliant on PWP employment, as in the case refugee or internally displaced situations. Since the objective in these cases is to ensure adequate nutrition, a specific poverty related objective, it is unaffected by the concerns about labour market distortion which depress a monetary wage. In contrast cash wages tend not to be set with the objective of attaining a specified reduction in poverty, or enabling participating households to reach certain minimum consumption thresholds, but are guided by a concern to avoid labour market distortion, even if the resulting wage is not sufficient to close specified nutritional or income gaps, and as a result, the wage in a cash PWP tends to be significantly lower than in a food based PWP An example is the low wage paid to participants in the Malawi Social Action Fund (MASAF) PWP, which resulted in total household income which fell significantly below the level required to purchase household nutritional requirements, even once household own production had been taken into account (Chirwa et al, 2004).

This illustrates the significant diversity of objectives in terms of the intended function of the wage in food and cash based PWPs, and how it is calculated resulting in significantly different social protection outcomes. This is consistent with the broader issue that, paradoxically, humanitarian interventions tend to have materially differing outcome targets from 'developmental' ones, with a greater focus on meeting certain thresholds, guaranteeing basic rights, and safeguarding minimum levels of income and consumption.

The concept of the 'minimum wage' is however itself problematic, as it is a somewhat arbitrary legislative construct which is rarely enforced in LICs, and may be above or below the prevailing wage (see del Ninno et al, 2009). The minimum wage may fall below the market wage if it is not regularly updated, (as in the case of Malawi, see Chirwa et al, 2004) and hence paying a wage equivalent to the minimum wage may in some instances indicate a wage which is below the prevailing market wage. In a highly segmented labour market, where the market wage in the bottom segments may itself offer below subsistence levels of remuneration, resulting in the phenomenon of the working poor, this strategy of ensuring the PWP wage is below the prevailing wage may be counter-productive in terms of the desired safety net function of the programme (ibid).

In order to gain some objective insight into the value of the PWP wage in terms of the national economic context, and to facilitate some means of comparison across programmes, the total wage, (calculated by multiplying the cash monthly wage by the duration of employment) was compared to national GNI per capita, see Figure 16. The results must be treated with caution, but give an indication of the significant spread in terms of the real market value of PWP employment, ranging from 20% to more than 140% of per capita GNI. This diversity suggests that the programmes reviewed might result in very different incentives for participation, impacts on the labour market and social protection outcomes.

Figure 16: Value of wage paid relative to GNI per capita



(n=34)

Payment frequency

Payment was predominantly on a monthly basis, accounting for 57% of programmes, with 11% offering payment on a daily basis, 17% fortnightly, and 4% less frequently than monthly, although delays and irregularities in payments were mentioned in many instances. Monthly payments were the most frequent in all PWP types, although daily wages were only reported in type A programmes where they accounted for 34% of programmes (see annexe 5).

The nature of employment

Ninety-three per cent of programmes (all but two of the programmes for which data is available (n=28)), required participants to work for 5 to 6 days a week, but for 63% the daily work requirement was only 3-5 hours, and there was no significant difference between programme types A and C, see annexes 6 and 7. The only programme offering part time employment, in terms of hours per day and days per week was the single type B programme for which information was available, which was explicitly designed to facilitate participation by poor women, recognising the labour constraints they faced.

These findings are significant, as in combination with the low wage, the work requirement may potentially exclude individuals with domestic (non-remunerated) labour obligations (child care, water gathering etc), and households with limited labour availability, for whom the marginal cost of participation may be higher than for those with more abundant labour (Barrett and Clay, 2003, McCord, 2009a) potentially undermining the poverty targeting objective which informed the selection of a low wage. The exclusion of poor labour constrained households from PWPs, due to their limited capacity to participate remains a perennial problem in social protection provision in the region, leading some countries to adopt cash transfer programmes in place of PWP employment in order to extend social protection to this group, although these programmes tend to have very limited coverage. Examples of this are the pilot cash transfer programmes for labour constrained households in Malawi and Zambia (which cover less than 2% of the poor, (McCord, 2009b), and cash transfer components of some PWPs which allocate a percentage of the total programme budget to grants, as in the case of MASAF in Malawi, and the Productive Safety Nets Programme in Ethiopia.

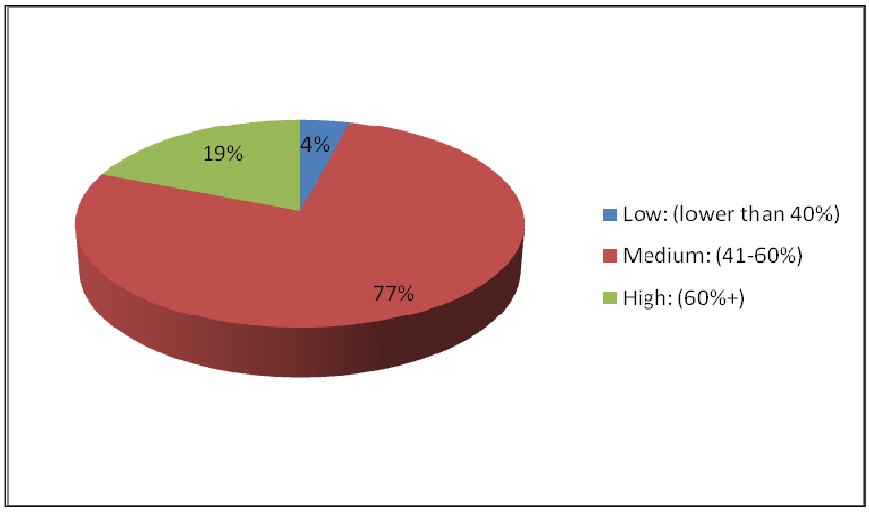
Cost-effectiveness

Given the limited data available on both cost and also programme outputs and outcomes, only limited insights into cost-effectiveness can be derived from the data base.

Wage as a percentage of programme cost

Few programmes reported the proportion of budgets spent on wages or presented their budgets in such a way as this could be calculated. The labour intensity of the 26 programmes for which data are available is illustrated in Figure 17.

Figure 17: Labour intensity of PWPs (labour costs as a % of total cost)



(n=26)

Across all programmes an average of 46% of total programme cost was allocated to wages. Seventy seven per cent of programmes (n=20) spent between 30 and 60% of the total budget on wages (medium labour intensity), a finding which is consistent with findings by Subbarao et al who suggested that internationally, wage typically represented between 30% and 60% of total PWP cost with the remaining budget being absorbed in material and management costs (Subbarao et al, 1997). Only 19% of programmes allocated more than 60% to labour costs see Figure 17. This is considerably lower than in del Ninno et al's recent analysis which found that, contrary to Subbarao et al's findings, in the majority of the international programmes examined (62%), labour intensity was higher than 60% (del Ninno et al, 2009). Given the variance in estimates of PWP labour intensity performance internationally it is not possible to assess the relative performance of sub-Saharan PWPs.

While the mean was similar across programme types (48% for type A and 42% for type B), the percentage of programmes allocating above 60% to wage was higher in type A programmes than type C, 28% and compared to 11% respectively. This is likely to be due to the higher material and technical costs involved in infrastructure creation in type C programmes, given the greater priority given to the infrastructure output in type C, compared to type A. However, the fact that this data was only available for 16% of all programmes reviewed, and the fact that there is no consistency in the definition of total programme cost calculation across programmes (see above) suggests that these findings are indicative only, and signals the need for improved programme data in order to explore the question in more detail.

Conclusion

Drawing conclusions from the 167 programmes reviewed is problematic given the poor quality of the data available. However, some key insights emerge from the data presented above.

Programmes in the region are almost exclusively types A and C, offering short term employment, the primary objectives are safety nets/social protection and infrastructure creation respectively and the main target group is the poor and marginalised. These programmes are heavily reliant on international donor funding, and receive only limited allocations from national resources. The programmes are mostly medium labour intensity, which is either consistent with, or lower than international averages depending on the international comparators selected (Subbarao et al, 1997, del Ninno, 2009).

Most programmes are locally rather than nationally implemented and many are part of larger initiatives or have complementary programme components, either for participants or other community members. Two thirds of programmes overall are Food for Work/Food for Assets, but this differs significantly between type A and C programmes, with a greater preponderance of FFW in type A (78%). Where paid in cash, the wage for type A programmes is less than the minimum wage, but in type C programmes it is equal to or higher than the minimum wage. When the wage is paid food, it tends to have a higher equivalent value than the cash.

Overall the data indicate that there are major differences between type A and type C programme design and implementation. However, while the type A/C distinction was useful when the database was first developed, the expansion of the database to include countries affected by humanitarian disasters and conflict may require the subdivision of type A into two sub-components to allow for differentiation in terms of a development/humanitarian, chronic/acute labour market disruption, food/cash wage, social safety net/social protection axis. There are potentially significant differences between such programmes, and separating them in future work might allow for further insights which are currently obscured. If this subdivision were complemented by donor analysis further light might be shed on the relationship between donors and programme design.

There were only six type B programmes included in the data base. Because of this small number, type B programmes were excluded from much of the analysis as the findings would not have been significant.

The population of the database was constrained by reliance on secondary web based data. To achieve a more detailed and nuanced analysis the development of a larger database using primary research methods would be desirable. One practical recommendation arising from this section of the report is the need for the establishment of reporting norms and conventions within the community of agencies implementing PWP, in order to promote the possibility of programme analysis and cross programme comparability.

Part Three: Analysis of the Cost-Effectiveness and Targeting Efficiency of PWPs

The third section of this report analyses the cost-effectiveness and targeting efficiency of PWPs in sub-Saharan Africa and the impact of the PWP transfer on household income.

Given the limited primary data available on costs, outcomes and targeting performance, and the difficulties in assessing the credibility and consistency of data which is available, a comprehensive review of the cost-effectiveness and targeting efficiency of PWPs in Africa is not attempted in this paper. For the same reasons any comparisons with the performance of alternative social protection programmes such as cash transfers are necessarily tentative.

The approach taken is to review the main approaches to assessing the cost-effectiveness of PWPs internationally, and examine the main conclusions from the limited literature which applies these approaches to programming in the region. The literature primarily addresses PWPs in Southern Africa and Ethiopia, and the issues raised in this literature are explored in more detail through the analysis of primary data from two case study programmes from South Africa (McCord 2004 and 2009a).

Cost-Effectiveness

Data on PWP costings and outputs are extremely limited in the African context, rendering cost-effectiveness analysis problematic, and the analysis in this section draws on the limited literature papers available which offer analysis or data on costings and outputs, with evidence largely drawn from research conducted in the Southern African countries of Malawi, South Africa, and to a lesser extent Zambia, (drawing largely on the work of Adato, Chirwa, Devereux, McCord, Smith, Taylor and White), as well as some from Ethiopia (Devereux and Smart). The issues arising from this literature review are explored in more detail through the analysis of two case study programmes from South Africa, for which survey data is available, see Box 2.

Box 2: Overview of South African Case Study Programmes

Gundo Lashu
The Gundo Lashu programme is a type C PWP, implemented in Limpopo province, which offered a single short term episode of employment in construction, averaging four months, typical of ILO EIIP programming, and the West African AGETIP, and most PWP activity throughout sub-Saharan Africa. The programme was primarily funded by international donors (the ILO and DFID), and was implemented through private contractors, using a lottery or first come first served approach to recruit labour.

Zibambele
The Zibambele programme is a rare example of an African type B PWP. The programme was implemented in KwaZulu Natal province, and offered ongoing part time employment in road maintenance for participants on an ongoing basis. Participants were selected using community participation on the basis of a poverty criterion. The programme was implemented by provincial and local government, and was funded by the provincial government.

Survey data on these programmes was gathered in 2003

The data interrogated have a geographical bias towards southern Africa, but nevertheless draw on more than a dozen different programmes, and represent a range of programme types funded variously by multilateral and bilateral donors (including the World Bank, the ILO, the EU and DFID), international NGOs, and national governments. The programmes discussed are predominantly type A and C programmes, reflecting the fact that such PWPs dominate in the region, but also include two type B programmes.

Prior examining the cost-effectiveness approaches adopted in the literature to date and their findings with regard to the region, key methodological problems are highlighted in relation to i) calculating the cost of PWPs, and ii) quantifying the amount of work created.

Calculating PWP cost

The lack of consistent information on the cost of programme implementation is a key problem. In order to assess cost-effectiveness, it is essential that the actual costs of a PWP are known, but this in itself is problematic as there is no consensus on the appropriate set of costs to be included in PWP cost-effectiveness analysis. This renders any attempt at comparison between PWPs, either nationally or internationally, problematic, and also undermines the potential for cost-effectiveness comparisons with other forms of social protection, such as cash transfers. A recent study which attempted to carry out a cost-effectiveness analysis of a range of PWPs in Malawi and Zambia highlighted the difficulty of gathering comparable basic data on total PWP cost from the main national and international agencies operating PWPs in the country (White and McCord, 2006).

There is no consistent approach to the assessment of the administrative, technical, management and capital costs implied by a PWP, or which of these costs should be included in any form of cost-effectiveness analysis. For the great majority of PWPs, data are not available on the total cost of PWP implementation and hence no measure of unit cost, nor any other measure for comparative costing can be calculated with any degree of confidence. This concern was highlighted by Devereux and Solomon in their 2006 review of international employment creation programmes:

> *'... there is a dearth of detailed disaggregated information on job creations [sic] costs, partly because the management costs are usually hidden in regular government administration.' (2006:6)*

Similarly a recent report by the RHVP initiative concludes with regard to PWPs that;

> *'Lack of scheme-level data on transfer and overhead costs and other scheme parameters prevents accurate cost-efficiency calculations for most schemes' (2008).*

Costings relating to PWPs tend to be idiosyncratic. There are several factors underlying this problem, relating in part to the complexity of PWP implementation. The cost data problem reflects the fact that PWPs are institutionally complex, often crossing several funding and expenditure jurisdictions as a result of the inherent complexity of PWP design and implementation. As a consequence of this complexity, there are a considerable variety of cost centres under which the diverse set of activities requiring PWP expenditure may be located; local government, Department of Public Works, Department of Planning, Department of Labour, Department of Education, NGOs, QUANGOs (Quasi Non-Governmental Organisations),[9] PMUs (donor-funded Programme Management Units),[10] donors, advisors or consultants. Creating a comprehensive picture of the real cost of PWP implementation would require the synthesis of data conventionally spread across a diverse set of cost centres in a range of different institutions.

PWP budgets frequently exclude the administrative and management costs, particularly when implementation costs are incurred by local government institutions, at district or village level. It is often assumed that the implementation of PWP related tasks should be performed without additional budgetary allocations or incentives, even though they may be additional to the existing scope of responsibility, and fall to already overburdened local officials, as in the case of MASAF in Malawi, or the EPWP in South Africa (UK DFID, 2003a; Karuri et al., 2007). In this way, many PWPs imply an additional set of unbudgeted work activities, with local government being required

9 QUANGOs are state-funded organisations outside the normal governmental structure, and may be responsible for PWP implementation.
10 PMUs implement PWPs in structures which are parallel to those of government.

to play a central, but unfunded, role in implementation. Hence the hidden cost of PWP implementation includes both unbudgeted activity, as well as activities which are budgeted outside the PWP budget.

This problem also reflects the fact that different types of PWPs may be differently conceptualised in terms of their budgets. For example, WFP and USAID do not tend to include the cost of the food component of their FFW programmes, with the result that the wage component in many PWPs implemented or supported by these agencies is often considered to be 'free', rather than reflecting actual costs in terms of purchase value, shipping and internal transport storage and handling costs. For donors such as WFP, the disaggregation of specific programme costs, and attempts to cost the value of the in-kind payment in PWPs is both technically problematic, and politically sensitive (White and McCord, 2006). The consequence of WFP and other donors' inability to share budgetary data on the total cost to the donor community of FFW programmes is a lack of transparency regarding the true cost of PWPs which utilise donated food as the basis for the payment.

As a result, when programmes are costed, the budget lines included as 'PWP' line items can vary greatly, with potentially sizeable hidden costs. The extent to which these are or are not included in estimates of programme cost can have a significant impact on cost-effectiveness conclusions. In this context it may be difficult to distinguish variation in cost-effectiveness from noise. Often donors and implementing agencies themselves have difficulties in assessing the actual total cost of PWPs, including implementation, given the extent of the unknown real costs of local government management, technical design and monitoring, material costs, contractor costs, etc.

The lack of conventions governing the calculation of PWP cost is compounded by a lack of transparency regarding which costs have been included or excluded, and how these costs are derived in each instance. This has implications for any attempt to assess the cost-effectiveness of individual programmes, and renders cross PWP comparison and any kind of cost-effectiveness across different social protection instruments, problematic. Together, these factors undermine the reliability of much current PWP comparative cost assessment analysis, particularly in sub-Saharan Africa.

Quantifying the amount of work created

Quantifying the amount of work created in a PWP for comparative purposes requires a common definition of the concept of 'work created'. Across the programme data examined a range of different units of measurement have been used to quantify the employment created through PWPs, including 'jobs', 'employment', 'workdays' and 'person years'. The term 'jobs created' and 'employment created' are frequently adopted in the PWP literature but such terminology is problematic in that it gives no indication of the quantity of employment created, limiting the potential for meaningful analysis of programme cost and cross programme comparisons.

This problem has been addressed in some of the international literature, notably that which is linked to the World Bank, by the adoption of the objective and analytically useful term 'workdays created' as the conventional unit of measurement of PWP performance (for example Subbarao (1997); Ravallion (1998); del Ninno et al (2009)). However, for the majority of PWPs in Africa (and internationally), data for workdays created is not available. Only 17 of the 167 programmes reviewed in the PWP database included this information in their documentation, using instead the problematic and unquantifiable terminology of 'jobs', 'employment' or 'work' created, recording the throughput of workers, irrespective of the period of time each was employed, rather than the aggregate amount of work days created. This omission from PWP documentation and monitoring and evaluation analysis represents a critical weakness in terms of attempting to assess the cost-effectiveness of PWPs, or effect comparisons between different PWPs and between PWPs and other forms of social protection problematic.

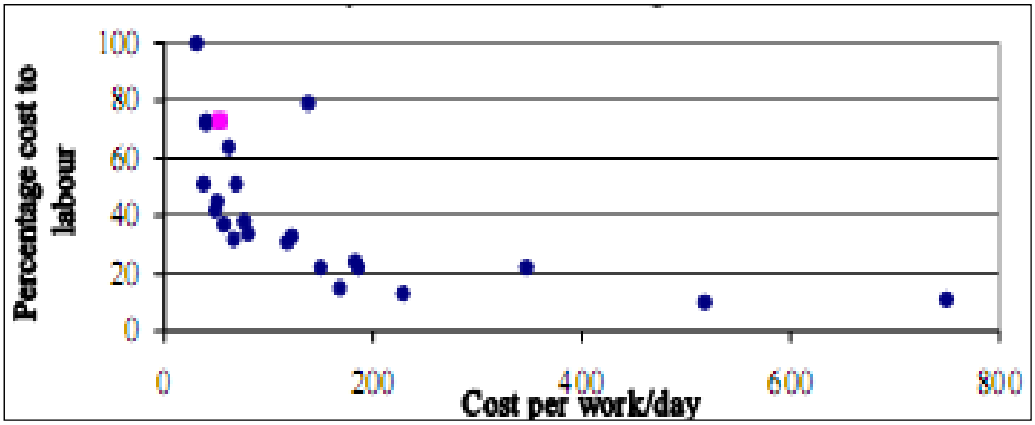
For the purpose of this study however, these (considerable) problems will be put aside, and a critical assessment made of the literature available, to ascertain whether they can offer any insights into regional PWP cost-effectiveness. Four main approaches have been adopted in the literature to address cost-effectiveness; i) the cost per day of employment created, ii) the percentage of total programme cost allocated to labour, iii) the cost per dollar transferred (empirically linked to (ii)) and iv) the Cost-Effectiveness Ratio Analysis approach developed by Ravallion (Ravallion, 1998). Each is critically reviewed below, with reference to sub-Saharan Africa.

Cost per day of employment

The first approach to cost-effectiveness is based on estimations of the unit cost of providing one day of employment. This approach is reviewed with reference to a range of PWPs. In order to assess the cost per day, it is necessary to determine the amount of employment created, and then to analyse this in the light of the programme budget. This requires two sets of information; the quantity of employment created and the cost of creating it (discussed above). Both sets of information are scarce in the African context, with very little comparable empirical data available.

Adato et al (1999) measured the cost of employment created in 101 PWPs implemented in the Western Cape Province in South Africa during the late 1990s by calculating the cost per workday.[11] This analysis of cost per workday over a range of programmes is almost unique in the PWP literature, as it is rare to have comparable data on either programme performance in terms of employment created, or programme cost. The findings are summarised in Figure 18 below.[12]

Figure 18: Western Cape cost/workday and labour percentage of total cost (Rands)



Source: McCord 2009a, Derived from Adato et al. (1999:200).

This graph illustrates the wide diversity of cost per workday within PWPs, even within a single programme and common geographical location. The wide distribution of costs ranges from R40 (US$7) a day for programmes requiring limited capital resources or management inputs, (e.g. the removal of alien vegetation from agricultural land, or urban rubbish collection), to R749 (US$123) for programmes entailing employment in high tech construction work [13](1999 prices). These findings suggest that the cost per workday is correlated with the labour intensity of employment provided within a PWP and that it is not in itself an indication of the cost-effectiveness of a programme.

11 These programmes were part of the national Community Based Public Works Programme (CBPWP).
12 The most efficient programmes, in terms of jobs created per unit of investment, with low cost per workday and a high percentage of total cost transferred as wages, are those which fall in the upper left hand quadrant of Figure 2
13 Dollar values calculated using the June 1999 exchange rate of US$1=R6.11.

Percentage of total cost to labour

The second approach found in the literature assesses the labour intensity of a programme, by reviewing the percentage of total programme cost paid out in wages. As discussed above, Subbarao et al suggested that internationally, wage typically represents between 30% and 60% of total cost (Subbarao et al, 1997), although del Ninno et al argued that internationally mean labour intensity was above 60% in PWPs (del Ninno et al, 2006). These international findings are compared with analysis available for sub-Saharan Africa, drawn primarily from Southern Africa.

In order to promote the cost-effectiveness of a PWP, in terms of labour intensity (the percentage of total programme expenditure allocated to participants), a cap on the share of programme cost allocated to non-labour costs is often included in PWP design specifications. Examples of this approach are found in the ILO supported Gundo Lashu programme in South Africa, where labour was required to represent at least 45% of total spend, and Phases I and II of the Malawi Social Action Fund III (MASAF) PWP in which a similar minimum of 40% was included (Chirwa, 2007). This approach can be problematic, particularly in situations where labour costs are rising more rapidly than capital costs, or where the wage/capital ratios are set without reference to the level of capital investment required to produce the desired physical assets. The latter case this can result in scenarios where the quality of asset created is compromised by utilizing cheaper but inferior inputs, in order to adhere to the ratio, or where capital rich components of infrastructure are not completed, to the detriment of the functioning of the overall asset. An example is where roads are constructed under a PWP, but the bridges required for the roads to be functional year round are not completed, due to their higher capital/labour cost ratios. Such outcomes are less common in type C programmes, where the creation of infrastructure is the primary objective of the intervention and so the quality and durability of the asset produced is likely to be a higher priority than for example in type A programmes, where the priority is the provision of employment.

In the Adato et al study of PWPs in the Western Cape in South Africa, the budget share accruing to labour varied from a low of 11%-22% for programmes relating to the creation of transport infrastructure, to almost 100% in the case of recreation ground maintenance. These findings were consistent with national level analysis by the South African National Economic Forum (1994) which found that simple projects and small scale agriculture related infrastructure entailed a 40-80% share to labour, compared to shares as low as 5-15% of total cost for water reticulation, storm water, sanitation, roads and railways projects. In the case of the Ethiopian PSNP the share of total programme costs allocated to labour was calculated to be 67% (Smart, 2007). This illustrates how the percentage of cost allocated to labour varies according to the capital intensity of the sector, and that the creation of socially or economically desirable infrastructure may not necessarily entail maximum labour absorption per unit spend, highlighting the potential trade off between the number of jobs created, and the nature (and quality) of the asset created. An examination of the two South African programmes for which detailed budgetary information is available indicates a labour share of 45% in the case of a rural road construction programme (Taylor et al, 2005), compared to 70% to 80% for rural road maintenance (McCord, 2002), again illustrating the importance of the capital inputs and level of technical complexity in determining the share of PWP budget which will be directly transferred to workers.

Cost of transferring one dollar

The third approach used in the literature for assessing cost-effectiveness is based on an assessment of the cost of transferring a dollar to a beneficiary through a PWP. This is a corollary of the labour shares in the total budget, discussed above, and subject to similar data constraints and inconsistencies. Systematic primary data on this costing is not available for most sub-Saharan African PWPs, but information is available from a range of secondary sources on programmes in South Africa, Malawi, Zambia and Ethiopia, which provide the cost of transferring a unit of benefit through both PWP. This information has been summarised in Table 2 below. Where possible,

actual data on the cost of delivering a US$1 through a cash transfer programme in the same country and the same year has also been included, in order to provide an indication of the relative costs of a unit transfer through PWP and cash transfers, based on White and McCord, 2006.

Table 2: The cost of transferring US$1 through PWPs (Literature Review & Synthesis)

Country	Programme	Year	Payment modality	Cost to transfer $1*	Cost to transfer $1 through Cash Transfer programmes in same country and year**	Source	Notes
Ethiopia	PSNP PWP Component	2006	CFW/FFW	1.48		Own calculations from Smart, 2007	Includes the value of transfers, public works capital inputs, training and monitoring and institutional support costs
Malawi	EU/GOM PWP	2001/2	CFW	4.54	1.65	White and McCord, 2006	
	EU/GOM PWP	2002/3	CFW	6.08		White and McCord, 2006	
	EU/GOM PWP	2003/4	CFW	7.06		White and McCord, 2006	
	EU/GOM PWP	2004/5	CFW	5.10		White and McCord, 2006	
	MASAF PWP	2003/2004	CFW	2.5		Chirwa, 2007	
	ILTPWP	2003/2004	CFW	1.15-1.61		Own calculations from Devereux and Coll-Black, 2007	Based on 'total cost', including the value of the transfers, capital inputs and administration
	MASAF PWP	2004/2005	CFW	3.75		White and McCord, 2006	
	MASAF III PWP	2005	CFW	1.41		Chirwa, 2007	
	Government/EU SPRINT	2005/06	CFW	1.75		Chirwa, 2007	
	I-LIFE	2005	FFW	8.21	1.23	White and McCord, 2006	Excludes management, administration distribution and material costs. High cost due to international food purchase and shipping
	Based on existing FFW	1999	FFW	2.97	1.34	Smith 2001	Both CT and PWP estimates are based on transfers to a particular population segment, the moderately poor
	Based on MASAF costings	1999	CFW	3.09	1.34	Smith 2001	As above
South Africa	Zibambele	2001/2	CFW	1.37		Own calculations from McCord, 2002	High labour intensity (70-80%)

	Gundo Lashu	2002/3	CFW	2.52		Own calculations from Taylor, McCord and van Seventer, 2005	45% labour intensity
	NEF	1992-8	CFW	2.08		McCord, 2002	
Zambia	Eastern Province Feeder Roads Programme	1999	CFW	5.14		White and McCord, 2006	
	Eastern Province Feeder Roads Programme	2000	CFW	4.83		White and McCord, 2006	
	Eastern Province Feeder Roads Programme	2001	CFW	4.88		White and McCord, 2006	
	ZAMSIF Emergency Relief PWP	2004/5	CFW	7.28		White and McCord, 2006	
	Project Urban Self Help	2004	FFW	1.81		White and McCord, 2006	
	Project Urban Self Help	2005	FFW	1.42	1.09-1.48	White and McCord, 2006	

** White and McCord, 2006.

Table 2 illustrates the wide range of costings found within PWPs in Southern Africa, ranging from US$1.37 to US$8.21 to transfer US$1 to a beneficiary. The table also illustrates the extent of cost-effectiveness variation found by different researchers analyzing the same programme, as in the case of the MASAF PWP in Malawi, where values of both US$1.41 and US$3.75 have been published for the same programme and over a largely identical period. Even where a single researcher has carried out the analysis, values of US$1.41 and US$2.5 are presented for subsequent years of the same programme, (Chirwa, 2007), illustrating the problem of inconsistent data and the lack of conventions governing cost calculation. RHVP underline this problem, arguing with regard to the apparent variation in Malawi PWP costings included in their 2008 analysis that, 'this apparent difference in cost-efficiency appears to stem from different approaches to attributing overhead costs' (RHVP, 2008).

Much of the variance in the PWP cost-effectiveness estimates in Table 2 is likely to result from inconsistencies in the calculation of the overall programme budget. In the case of FFW programmes, it may also be influenced by assumptions made in assessing the real cost of the food distributed in a FFW programme, rendering cross programme cost comparison problematic, as argued above. It is noteworthy that the FFW programmes are not consistently more or less costly that the CFW programmes, although this is likely to be due to inconsistencies in costing these programmes, with the food component being completely excluded as a line item in some costings, costed at national price at time of consumption in others, sometimes including and sometimes excluding internal transport storage and handling costs (ITSH) and in others being costed on the basis of actual purchase price and including international shipping costs (see also discussion in RHVP, 2008). It is interesting to note that the lowest cost programme is a multiple year type B CFW programme of road maintenance, the South African Zibambele programme, with a cost per unit transferred of only 1.37.

On the basis of sub-Saharan Africa research, McCutcheon has argued that multiple year programmes, offer considerable potential for cost reduction and increased efficiencies over time, and this may also be a factor in the cost variations (McCutcheon, 2001).

The table indicates that where comparable data are available, the cost provision of $1 through a PWP is consistently higher than provision through a cash transfer alternative in the countries

reviewed, based on Smith 2001 and White and McCord 2006. Smith's work in Malawi is particularly interesting, as it indicates a greater disparity between cash transfer and PWP costs, if the poorest, rather than 'the poor' are specified as the target group, with the cost of $1 transferred to the poor using a PWP being $2.97, compared to $1.34 for a cash transfer, while the cost of transferring $1 to 'the poorest' being $13.9 and $1.73 respectively, suggesting that poverty targeting may be significantly more costly through PWPs than cash transfers due to the complexity of achieving poverty targeting within PWPs. The robustness of these assertions is not explored in this study, but it does indicate a potential area of future research. The limited data available does however confirm the intuitive expectation that there is a cost premium associated with the adoption of PWP, over cash transfers, to deliver a resource transfer, and suggests that the premium may increase if the criterion is expanded to transferring US$1 to the poor or poorest. From a fiscal perspective, such a premium is acceptable only if the value of assets created and any other benefits specific to PWP provision of social protection, are commensurate with this premium, a question which remains largely unexplored in the literature and evaluations to date (McCord, 2009a). Interestingly recent work carried out by the ILO in Ethiopia using the newly developed Rapid Assessment of Poverty Impacts (RAPI) methodology indicates the difficulty of identifying the anticipated sustained household level benefits resulting from the assets created in a PWP, which would in part justify such a premium (Osei-Bonsu and Mengesha, 2007).

Devereux and Coll-Black also refer to the lack of data on the frequently anticipated but empirically elusive benefits resulting from infrastructure creation, questioning the value added offered by PWPs in return for the cost premium, with reference to a labour-intensive road programme in Mozambique;

> *'The programme memorandum stated that "public works can have higher transaction costs than direct transfer programmes, but contribute to social capital, to asset accumulation (reducing vulnerability), and to longer-term economic growth through the construction or maintenance of infrastructure." It is difficult to assess the validity of this statement given the lack (thus far) of evaluation documents.' (2007:148)*

The implication of the available PWP analysis in the region is that although the cost of providing social protection through PWPs is likely to be higher than provision by alternative means, it is not possible to identify with certainty or consistency what the value of the additional premium may be, in terms of cost per unit transferred, relative to cash transfers, nor is it possible to assess the extent to which commensurate economic benefits are attained, at either household, or economy wide level, through the adoption of a PWP approach.

Finally, it is critical to mention that while cash transfers provide an ongoing transfer, PWPs, as implemented in sub-Saharan Africa, conform almost exclusively to the type A or C approach, providing a single short term episode of employment (typical duration is five months). When considered in this light, it is clear that direct comparisons between the relative costs of PWP and cash transfer provision in the region are not inherently useful, as they are represent very disparate social protection interventions (see discussion in McCord, 2006b). More direct comparisons would be meaningful if comparing cash transfer provision with type B programmes, but in this case, it would be important to also take into account the cost and benefits of the infrastructure (or services) provided by the programme, in addition to the cost of transferring a unit of benefit to the participant.

Cost-effectiveness ratio analysis

The fourth, and most complex appraisal framework for addressing the question of PWP cost-effectiveness attempts to generate internationally comparable analyses of the cost-effectiveness of PWPs by calculating programmes' 'cost-effectiveness ratios', which are estimated by modelling the net gain to poor workers arising from a PWP, and then by deriving from this ratio the unit cost of a transfer to the poor (Ravallion, 1998; Subbarao, 2001). This model represents a significant

advance on the approaches discussed above, taking into account a number of critical factors which influence the social protection outcome and cost, and which extend beyond the basic labour intensity of the intervention, including i) the extent to which the poor are included in the programme (the poverty incidence of participants) ii) a calculation of the net (as opposed to gross) wage gain taking into account income forgone,[14] iii) indirect benefits accruing to the poor when assets are created in their neighbourhoods, and iv) the potential rate of cost recovery which might accrue to the state from the asset created.

While the Ravallion approach offers greater insights than a simple cost per workday analysis, it is still dogged by a number of significant data and conceptual limitations. In terms of data constraints, the main problems remain the paucity basic cost data, and the lack of adequate data to populate the targeting and impact components of the model, resulting in a reliance on assumptions to inform key components of the methodology, particularly with regard to incidence (the effectiveness of poverty targeting and extent of leakage to the non-poor), the accuracy of assumed local unemployment rate, the benefit cost ratio (the extent to which projects produce benefits sufficient to cover their costs), and the current and future value of the asset created to poor participants), as discussed in McCord (2002). Changes in any of the assumptions informing these components of the model could significantly alter the model's conclusions. The number of programmes which could be modelled without recourse to assumed values in these areas is extremely limited. As a consequence this type of cost-effectiveness is of only limited use in the development of an empirical evidence base to assess the relative performance of PWPs, and their selection as appropriate instruments for social protection (or other) purposes.

Notwithstanding these limitations, it is interesting to review the results of the few cases where this model has been applied to sub-Saharan African contexts, (Adato et e al, 1999 and McCord, 2002).

Application of the cost-effectiveness ratio model in sub-Saharan Africa

The cost-effectiveness ratio model was applied to the type B case study programme, and the programme cost-effectiveness ratio was found to be of 0.31, with a cost of 3.21 units for a 1 unit gain by the poor in terms of current benefits, (and a ratio of 0.74 and cost of R1.36 in terms of current and future benefits taking into account predicted future gains to the poor from the assets created). The mean values for internationally MIC and LIC comparators were 0.20 and 0.28 respectively, with unit transfer costs of 5 and 3.6 for additional current earnings (0.4 and 0.41 respectively for current and future gains, implying unit transfer costs of 2.5 (Ravallion, 1998). Hence the type B case study programme was more effective than both LIC and MIC programme comparators, with costs at the lower end of the MIC job creation scale (McCord 2002).

Adato et al carried out a similar analysis of type A and C PWPs in the Western Cape Province of South Africa using the same framework, and found a wide range of ratios, with substantially higher costs for a unit gain for the poor in all programmes but one. All but one programmes fell within a range of 2.27 and 28.82 for each unit gained by the poor (Adato et al 1999:210), see Table 3 below.

14 This is derived from expected earnings outside the programme and the probability of finding such work.

Table 3: The cost-effectiveness ratio in selected South Africa PWP and international comparators

	Cost of $1 transfer to the Poor (current and future)	Cost-effectiveness Ratio (current and future)	Cost of $1 transfer to the Poor (current)	Cost-effectiveness Ratio (current)	Source
Zibambele (Type B)	$1.36	0.74	$3.21	0.31	McCord 2002
W Cape Synthesis	$2.27-$28.82				Adato et al 1999
MIC	$2.5	0.4	$5	0.2	Ravallion 1998
LIC	$2.5	0.41	$3.6	0.28	Ravallion 1998

While the available data is extremely limited, and the findings are vulnerable to the assumptions made in constructing the data, the range of outcomes found by Adato et al in the cost-effectiveness ratios from PWPs in South Africa indicates the heterogeneity of cost-effectiveness of projects within a single programme (the South African national CBPWP). This reflects significant programme design variations, with higher cost-effectiveness ratios being associated with low capital cost programmes, such as the type B Zibambele programme. It is interesting to note that most of the programmes are considerably less cost-effective than the MIC and LIC norms. The limited application of the Ravallion approach in the region to date clearly illustrates the heterogeneity of potential cost-effectiveness outcomes, contingent on programme design choices.

Some limited conclusions can be drawn from this review of the four approaches to the assessment of cost-effectiveness in the region. Foremost is the need for the development of improved programme data, and conventions governing the calculation of programme cost and outcomes. Notwithstanding these limitations, it is clear that there is a significant range of cost-effectiveness in programming in the region, and, as would be anticipated, high labour intensity PWPs tend to be more cost-effective. This is particularly true for those programmes where the quality of output is not the primary objective, illustrating a potential trade off between asset quality and cost-effectiveness, in terms of the unit cost of the transfer to workers. However, the quality and impact of assets created is critical if the broader impacts of the programme, rather than just workdays created, are taken into account. The omission of the quality and economic impact of assets created in calculating the cost-effectiveness of PWP programming is a key problem in three of the four approaches dominant in the literature, which urgently needs to be addressed.

The Impact of the PWP Wage on Household Income

In this section an exploration is made of the contribution of the PWP wage to household income. Ideally the calculation of the impact of the PWP should factor in the economic benefits of the assets created, and the second round employment benefits. Regional research however, has focussed exclusively on the immediate wage income effects, rather than an empirical assessment of all the wage, employment and asset effects on a second round basis. For this reason second round benefits are not included in the analysis, and the review focuses exclusively on the impact of the PWP wage on household income.

A range of literature is reviewed, and survey data from the two South African case study programmes is used to examine the question in detail, focusing on both gross and net wage income and taking into account income forgone (McCord, 2009a). Next, various approaches to estimating the impact of the PWP wage on total household income and poverty are reviewed, drawing on survey data from the case study programmes. The main insight arising from this analysis is that different approaches to calculating both household income and the value of the wage can lead to disparate assessments of the impact of the programme at household level.

Household income

Most PWPs do not include baseline socio-economic profiling of programme participants, rendering an assessment of the household income among participants, and hence the impact of the PWP wage on household income problematic. Among PWPs offering short-term employment, or developed in response to an emergency, (type A and C programmes), baseline socio-economic data are rarely gathered on programme participants:

> *'For safety-net interventions, such as workfare programs, that have to be set up quickly in response to a macroeconomic or agro-climatic crisis, it is often unfeasible to delay the operation in order to do a baseline survey.' (Ravallion, 2003:8)*

However, even large-scale programmes which have not been developed under emergency conditions, typically do not gather baseline socio-economic data on participants or their households; neither the PSNP in Ethiopia, nor the CBPWP or EPWP in South Africa, nor the MASAF PWP in Malawi gathered baseline data from which the contribution of PWP wage income to household income could be empirically evaluated (McCord, 2009a). Devereux et al carried out a survey on a sample of PSNP participants (Devereux et al, 2006), and found that participation in the PWP resulted in a 57% increase in household income during the period of employment.[15] Interestingly however, despite the major increase in household income resulting from the programme and the many benefits associated with this, one of the key findings from their analysis was that 'PSNP transfers did not provide complete protection against hunger', with the transfers being either too small or too unpredictable to address this objective (Devereux et al, 2006). Similar findings are indicated by Chirwa et al with regard to Malawi's MASAF programme, and their data suggests that PWP participation added 68% to total household income, (including in-kind income from subsistence agricultural production), although this represented only 21% of the wage which would be required to enable households to close the household subsistence poverty gap (Chirwa et al, 2004). This once again indicates a PWP wage which contributes to reducing the poverty gap, but does not offer complete protection against hunger.

More detailed analysis of the impact of the PWP transfer on household income is possible in the two case study programmes. The contribution of gross PWP income as a percentage of the total household wage income in these programmes was 76% for the Zibambele, type B programme, and 68% for the Gundo Lashu type C programme (McCord, 2009a). These findings are set alongside the relevant figures for the PSNP in Ethiopia (Devereux et al, 2006), and the MASAF PWP in Malawi (based on my own calculations from Chirwa et al, 2004) in Table 4 below.

15 A gross transfer of US$103 was made to households with mean non PWP incomes of $181.

Table 4: Value of gross PWP wage as % of household income during employment period

Programme	% of Household Income
Gundo Lashu case study (Type C) South Africa	68%*
Zibambele case study (Type B) South Africa	76%*
PSNP Ethiopia	57%**
MASAF Malawi	68%***

*Excludes non wage income
** Not specified which components of household income are included
** Includes wage and monetary estimate of own production

The gross PWP wage represents a significant percentage of the total household income in each case. However, in the cases of Malawi and Ethiopia the transfer is not sufficient to meet household consumption needs (Chirwa et al, 2004, Devereux et al, 2006) and in South Arica it is not sufficient to close the poverty gap (McCord, 2009a).

The net value of the wage benefit

Notwithstanding problems with the identification of household income for PWP participants, an assessment of the impact of the PWP wage on total household income will vary depending on whether it is the gross or net value of the PWP wage which is considered. In the PWP evaluation literature the full value of the PWP wage is generally assumed to be equal to the cash value of the transfer to participants, and it is only in recent years that it has been acknowledged that the wage transfer may not be synonymous with the cash value of the transfer due to the opportunity costs of participation (see Van de Walle (1998)).

Where the issue has been explored empirically, in Asian and South American contexts, it has been found that the net income value of the PWP wage is significantly below the gross value, once opportunity costs are taken into account. It has been estimated on the basis of data from Asia that income forgone, (in terms of wage labour opportunities forgone), reduces the net value of the PWP wage, on average, to 50% of the gross PWP wage (Jalan and Ravallion, 2003). South American research suggests similar or lower gross returns according to del Ninno et al, who cite analysis from Argentina which suggests that the Jefes programme had a net value of 30-60% (Galasso and Ravallion, 2004), and Peru, indicating a net gain equal to only 24% of the gross transfer (Chacaltana, 2003) (del Ninno et al, 2009).

In the case of the South African case study programmes, detailed survey data was used to assess the extent of income forgone. Only 30% of respondents reported income forgone, and for this group the net value of the PWP wage was between 50% and 58% of the gross wage, resulting in a mean net PWP wage which was 89% of the gross wage across all survey households. It is interesting to note that this is significantly higher than in the Asian and South American studies cited above, but this may result from variations in terms of the percentage of workers reporting income forgone in each instance, rather than significant variations in the actual value of income forgone. Given the limited number of studies, it is not possible to argue that the findings are indicative of any generalisable regional trend.

The surveys illustrate that significant labour substitution is taking place as a result of PWP employment, even in programmes reaching segments of the population with extremely low formal

employment. The extent of this substitution and potential complementary intra-household labour reallocation, (not examined in the existing literature), will have a significant effect on the additional income which PWP employment provides. If significant intra-household labour reallocation were taking place to accommodate work forgone by the PWP participant, the extent of income forgone at a household level would be lower and the net value of the PWP wage higher.

The reality of income forgone by PWP employees is recognised by the World Bank:

> *'Since poor people can rarely afford to be totally idle, they often give up some form of income to join a workfare scheme.' (2001:156)*

In the light of this reality, which is particularly relevant in the contexts of chronic poverty and underemployment which characterise labour markets in many sub-Saharan African countries, it is clear that the real value of the PWP wage in terms of total household income may often be significantly less than the transfer anticipated by programme designers, unless income forgone is taken into account during programme design.

Net PWP wage as % of total household income

If the net PWP wage is calculated as percentage of total household income, the findings are significantly different from when the calculation is based on gross wage and household wage income. Total household income was calculated in the case study programmes by aggregating wage, the net PWP wage,16 state social grants and insurances, private transfers, remittances and community contributions (see a, 2009). The net PWP wage accounted for 44% and 35% of total household income compared to 76% and 67% when the gross wage and limited sources of household income were taken into account, see Table 5.

Table 5: PWP wage as % of household income under different assumptions

	Zibambele (Type B)	Gundo Lashu (Type C)
Gross wage as % of household wage income	76%	68%
Net wage as % of total household income	44%	35%

Source: Derived from McCord, 2009a.

Table 5 highlights the importance of selecting consistent methodological approaches when analysing programme impact, in order to ensure comparability and meaningful cross programme analysis. It also provides the important insight that the increase is greater in the programme offering a lower total monthly wage, but targeting a poorer segment of the population, due to the greater depth of poverty experienced by this group – i.e. a lower wage can have a greater impact in terms of increasing household income if it is targeted at a poorer section of the population.

16 The net PWP wage used here is based on reported PWP wage, less reported value of income forgone.

Opportunity costs in addition to income forgone

While the inclusion of income forgone in a calculation of the real value of the PWP wage is important, this represents only one of a significant number of potential monetary and non-monetary costs of PWP participation. Pellisery (2008) identified a range of costs relating to non-wage domestic and subsistence activity forgone, transportation, and the cost of securing selection in the context of a highly rationed resource, as a result of the rents demanded by those controlling access to PWP participation. Although frequently overlooked, such costs may be significant in terms of the social, developmental or livelihoods impact of reduced domestic (for example, childcare) or subsistence activities. The demand for bribes and payments in return for PWP selection is symptomatic of a discretionary approach to rationed PWP employment, typical in the type A and C programmes which typify most PWP in sub-Saharan Africa.[17] Together these considerations could potentially render the real cost of participation higher than generally accepted, and the net value of the transfer lower than suggested in the literature, even when income forgone is taken into account.

In the light of this, the question of the net wage and the assumed benefits thereof, remains open to debate. The largely unproblematised adoption of a PWP wage without taking these cost factors into consideration remains a significant weakness in the current evaluation literature.[18]

The Impact on Poverty

Having discussed the impact of the PWP wage on household income, the impact of PWP participation on income and non-income poverty is now reviewed using the two case study programmes.

The impact of PWPs on income poverty

The impact of the two case study PWPs on income poverty is illustrated Poverty Incidence Curves (PICs) for the two programmes following Ravallion (2003), and a review of total income in PWP households relative to the poverty line, using Foster-Greer-Thorbecke (FGT) indices to estimate the incidence and depth of poverty.

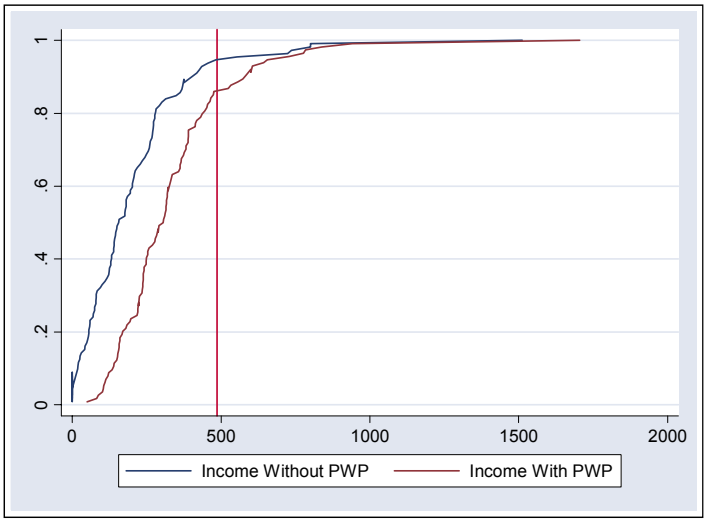
PICs are cumulative incidence graphs of monthly income of households participating in the PWP, which illustrate the impact of PWP income on headcount poverty. PICs for the two case study programmes are set out in Figures 19 and 20 below. The upper curve illustrates total monthly income per adult equivalent, including the PWP income; and the lower curve the 'estimated counter-factual PIC, after deducting the imputed income gains from the observed (post-intervention) incomes' (Ravallion, 2003:2). The vertical line represents the poverty line.[19] The shift of the curve to the right in both cases illustrates a positive impact in terms of poverty reduction of programme participation.

17 It is interesting to note however that even in Employment Guarantee Schemes (EGS) such as the Maharashtra Employment Guarantee Scheme, which are often rationed in reality, even if universal in intent, there is still space for the extraction of rents in return for programme inclusion (Pellisery, 2008).

18 If the impact of PWP on social protection is to be adequately assessed, the impact of the wage, in terms of its function within the household economy needs to be included in the appraisal framework, in addition to the net value of the wage. To assess the social protection impact of a PWP in line with this critique, significant additional contextual, programme performance and participant socio-economic data would be required, as well as post programme data to clarify cost, impact and incidence.

19 Several poverty lines are currently in use in South Africa, offering differing estimates of the proportion of the population living in poverty, and for this analysis, a version of the Household Subsistence Line (HSL) was selected with a value of R486 (US$).

Figure 19: Poverty impact of Gundo Lashu, Type C

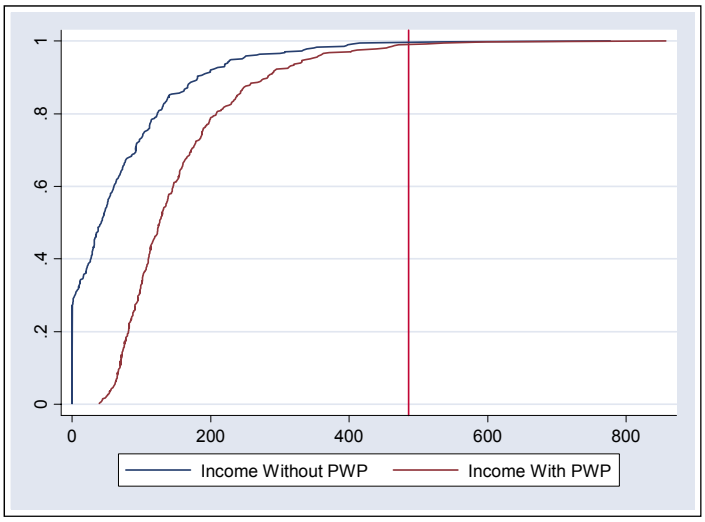


Source: Own calculations from PWP Survey 2003.

Figure 19 indicates that approximately 5% of the participants in the Gundo Lashu type C programme were brought out of poverty by participation in the programme, on the basis of the poverty line although this change in headcount poverty is not statistically significant.[20]

20 χ=1.86 at 0.05 significance level, with df =1.

Figure 20: Poverty impact of Zibambele, Type B



Source: Own calculations from PWP Survey 2003.

Figure 20 illustrates the Zibambele type B programme had no impact on headcount poverty. Notwithstanding the negligible effect of programme participation on headcount poverty, programme participation reduced the poverty gap in both instances, reducing the depth of income poverty experienced in PWP workers' households.

Using the Foster-Greer Thorbecke method to derive headcount estimates of poverty within the sample households confirmed the PIC story; even while participating in PWPs, 99% and 86% of households in the B and C programmes respectively remained below the poverty line in terms of total household income. Participation in the PWP did not move these households out of poverty, even during the period of programme participation. The headcount poverty findings overall make it clear that, with all sources of household income taken into account, PWP participation fails to bring the majority of workers' households in either programme above the poverty line. This highlights the fact that when examined empirically, even programmes generally considered to be 'successful' in terms of their overall perceived and evaluated impact may not move participants out of poverty, a critical insight in terms of tempering the sometimes exaggerated expectations surrounding PWP implementation.

Income poverty conclusion

A key insight from this research is that most participants in the two programmes were living below the poverty line, even while in receipt of the PWP wage. However, while participation in the PWP did not move these households out of poverty, it did reduce the depth of poverty experienced in workers' households.

This finding is consistent with the argument set out by Coll-Black and Devereux, with reference to social transfers in general;

> *'in the few cases where serious efforts have been made to quantify the poverty impacts of social transfers (e.g. by BRAC), the conclusion is that the severity of poverty has been reduced, but not necessarily that the prevalence of poverty has fallen: programme beneficiaries remain poor, but they are less poor than before.' (2007:65)*

The impact of PWPs on non-income indicators of poverty

The PWP literature tends to assess impact in terms of the value of the wage transferred. However, the case study PWPs offer evidence of positive impacts on other dimensions of poverty, including consumption, financial and material asset ownership, and human capital formation (education and nutrition) as well as reported impacts relating to psycho-social well-being and access to other available benefits, such as state grants as a result of programme participation (McCord, 2009a), despite the limited headcount poverty impact, corroborating findings by Devereux et al with regard to the PSNP (2006). These impacts were particularly notable in relation to human capital formation, in the form of regular school attendance by all children in PWP households, and improved nutrition, although the impact was only significant in the case of the type B programme which successfully targeted the poor (McCord, 2009).

Impact conclusion

There is very little data available on which to base rigorous assessments of the impact of PWP implementation on household poverty in the sub-Saharan Africa region. The limited research carried out to date suggests that PWP income supplements monthly household income by between 35 – 75%, depending on assumptions regarding income forgone and how household income is calculated.

While it is not possible to draw any regional conclusions on the basis of the available evidence, the case study data indicates that where programmes are successfully targeted to the poor, the impact on all aspects of poverty, monetary and non-monetary, is greater, even with a lower transfer value, than when the less poor are employed. The available research indicates that while PWP participation may not reduce headcount poverty, it may significantly reduce the depth of poverty in participating households. This is a critical insight, and should lead to a tempering of the sometimes excessive expectations associated with much PWP programming.

Improved data would greatly improve the potential for cross programme analysis and insights into impact.

Targeting Efficiency

The next section of the report addresses the question of the targeting efficiency of PWPs in the region. Again, as in the case of estimates of cost-effectiveness, the paucity of data inhibits comparison between PWPs, and with other forms of social protection, such as cash transfers.

Incidence data

Socio-economic data are critical if the targeting efficiency of a PWP is to be assessed. However, as noted above, for most PWPs, no socio-economic data are available on programme participants. The absence of incidence data renders analysis of targeting effectiveness impossible, as well as any robust empirical assessment of performance against objectives related to reaching a particular socio-economic group, rather than simply the promotion of aggregate employment.

In most cases, it is assumed that the work requirement and low wage provided in a PWP will be sufficient to ensure that those for whom the programme was intended, usually 'the poorest', are actually participating in the programme. There is however little evidence to suggest that this assumption is necessarily robust, and where tested post hoc, significant inclusion errors are found in many PWPs (see for example Barrett and Clay, 2003; Devereux and Solomon, 2006; Lembani and Mandala, 2006). The extent of exclusion errors is also a major and possibly more serious concern, and occurs in most instances, given the limited scale and duration of PWP employment in

relation to those in need of social protection among the working age poor, an issue which is discussed in the next section.

PWP access: targeting and rationing practices

In the context of mass unemployment and extremely low informal sector earnings, it is not evident that the principle of 'less eligibility' (the work requirement and low wage) will ensure that only the 'poorest' will access PWP employment. In the case of most PWPs in sub-Saharan Africa, access to PWP employment is strictly rationed, due to the large scale of the unemployment, and the relatively limited scale of PWP employment. An example of this is the programme developed under phase one of the Expanded Public Works Programme (EPWP) in South Africa (2004-2008), one of the larger PWPs in sub-Saharan Africa, absorbed less than 2% of unemployed workdays per annum. As a result of the demand for PWP employment exceeding the supply of PWP jobs, targeting and rationing mechanisms become critical determinants of the extent to which such programmes reach intended groups. This issue is particularly critical since in most SSA contexts PWPs represent the only significant policy response to the social protection needs of the working age poor. In the context of a highly rationed resource, it is important to know how effective targeting is, in terms of the proportion of the transfer which is reaching the poor, and whom among the poor are the beneficiaries, in terms of their relative poverty. This question of programme incidence is explored below, with reference to the two case study programmes.

Targeting evidence

While there is only limited data on targeting efficiency, some broadly consistent lessons emerge from the region. With reference to two components of the MASAF PWP, Devereux and Coll-Black conclude;

> *'An analyses of community-based targeting supported by CARE as compared with self targeting concluded that the method used by CARE was more effective at targeting the poor (World Bank 2006). An evaluation of the CARE pilot district reports that community-based targeting procedures were more effective in targeting the most vulnerable households than those that rely on self-targeting through the wage rate or "first come first serve" basis (Devereux and Coll-Black, 2007:126)*

This distinction between targeting outcomes when 'community' as opposed to 'wage based self targeting' are adopted is illustrated by data from the two South African case study programmes, one of which adopted the former (the type B programme) while the other adopted the wage-based self targeting more typical of type C programmes which have social protection objectives as well as aggregate employment goals.

The type C programme adopted a restricted wage as the primary mechanism to target the poor, setting the wage below the minimum wage, to deter all but the poorest from self-selecting into PWP employment, in line with the principle of 'less eligibility'. In addition the programme adopted additional demographic targeting criteria, using quotas for the employment of women, youth and the disabled. No explicit poverty criteria were adopted as it was assumed that poverty targeting would be satisfactorily achieved through the reduced wage level.

During the implementation of the type C programme, mobile labour from outside the immediate programme area complemented local labour supply at times when local labour supply was insufficient to meet construction demand, with participants being selected on the basis of availability, rather than other explicit targeting criteria. At other points in the construction cycle, when the local labour seeking employment exceeded PWP job availability, job rationing was required, and a lottery used to allocate employment opportunities, with exigency overriding the more complex 'official' participation criteria.

The implication of this finding is that the targeting nuances incorporated into the design of a type C programme may be compromised by the exigencies of differential labour demand throughout the construction process. Anecdotal evidence from around the region suggests that the labour scenario found in the case study is common in type C programmes, with excess demand for PWP employment typically resulting in a lottery-based allocation of jobs, on the assumption that the wage level itself will exclude the non-poor, and when demand for labour outstrips local labour availability, migrant labour tends to participate.

Hence, the degree of participation by particular target groups at any point in the implementation cycle was contingent on the size of the available labour supply in relation to demand, and also on the extent to which the private contractors adopted official targets. The lack of incentives for the private sector contractors executing a PWP to meet either explicit demographic or implicit poverty targets in their recruitment processes has been identified as an issue in both Asia and Africa (McCord, 2006a).

In the type B programme, poverty was explicitly used as the targeting criterion by community groups. Within the group identified as the 'poor', the poorest were targeted, using membership of female-headed households as a secondary criterion to reach this subset of the most disadvantaged. In this programme the wage was set at the minimum wage for the rural construction sector. As with the type C programme, excess demand for PWP jobs also led to rationing. In this case, each applicant was considered on the basis of strict poverty criteria (based on a combination of factors such as household labour availability, wage income and grant income) by community representatives. The extent of community participation in the selection process was feasible due to the long-term relationship between the community and government implementing agencies, as the institutions adopted for PWP selection were functioning prior to the implementation of the PWP (McCord, 2002).[21]

This insight highlights the critical importance of the institutional processes through which targeting takes place, and also the phasing and scale of labour demand in relation to labour supply in a given area, in determining effective poverty targeting.

The characteristics of PWP participants resulting from different targeting mechanisms

Survey analysis indicates that the different targeting and rationing approaches described above resulted in different incidence outcomes, with the two programmes attracting demographically different participants (McCord, 2009a).

The type B participants were older, and had a higher percentage of females than were found in the type C programme. Ninety two per cent of all type B programme participants were household heads or spouses of heads, compared to only 42% of their type C counterparts, who were more likely to be the children of household heads. This suggests that the two programmes were recruiting different household segments, participants of differing ages and positions within the household hierarchy, and consequently, it may be imputed, with different labour market functions and responsibilities within the household. These demographic findings are consistent with the type C practice of employing all comers seeking full-time work and randomly selecting participants through lotteries where there are excess applicants, and the type B programme practice of recruiting poor rural female household heads. By definition, the latter group would tend to be older, and comprise a group for whom full-time work, such as that offered in the type C programme, may

21 The extent of active governance of the programme by the community resulting from this institutional setting was illustrated by a report given by one focus group that one participant had been invited, by the community who had previously selected her for participation, to step down from the programme upon receipt of a pension by a household member, on the grounds that she no longer conformed to the poverty selection criterion, since her household now had access to an alternative form of income. This is indicative of the effective community ownership and commitment to the programme's purpose and the objective of selecting the poorest for participation.

have been unattractive due to competing domestic responsibilities; a factor which would not represent a constraint for younger household members without the same burden of domestic responsibility (McCord 2009a).

Propensity score matching to assess PWP incidence

A statistical analysis of incidence in the two programmes confirmed a significant difference in terms of the socio-economic profile of the participants. In the absence of baseline socio-economic data propensity score matching (PSM) techniques were used to compare incidence (McCord and Wilkinson, 2009).[22] Using PSM techniques survey households with employees in the two programmes were matched with Census households on the basis of a number of household characteristics excluding income.[23] The income distribution of the matched households was then compared to that of the other households in the survey areas in order to assess the income status of participating households. Other household characteristics were also compared across the two groups. In this way an income profile of PWP participants was constructed which was reviewed in the context of the income distribution of the population from which participating households are drawn, to gain an insight into the incidence of the two programmes in terms of the relative economic status of PWP workers.

The PSM analysis indicates that 35% of type C programme households and 57% of type B programme households fell in the bottom 40% and 45% of the income distribution respectively.[24] Caldes et al. (2004) cite work by Coady et al. (2002) who reviewed more than 100 social protection programmes and found that the 'median targeting performance was consistent with 50% of programme benefits accruing to the poorest 40% of the population' (Caldes et al., 2004:31). On this basis, the community targeted type B programme incidence would fall above this median targeting performance at 57%, and type C below, at 35%, with the poor receiving 1.27 times their population share in the case of the former programme, and 0.875 in the latter, representing a significant difference between the two programmes. This confirms that the type B programme was more effectively targeted at the poor than the type C programme.

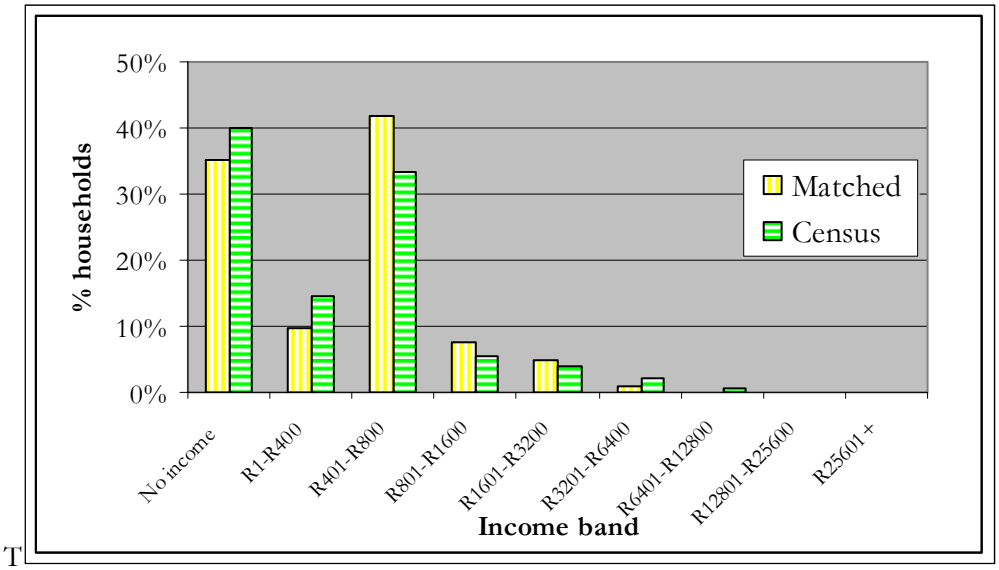
The income distributions for the PWP and population groups are shown graphically in Figures 21 and 22. The type C households appear generally to be better off across the distribution, having fewer households in the bottom two income groups and more households in the third fourth and fifth income groups. The type B households were generally poorer than the overall population, with almost 75% of the PWP group in the bottom two income groups.

22 For a full technical description see McCord and Wilkinson, 2009.

23 This approach follows Rosenbaum and Rubin (1983) PSM is typically used to evaluate programme impacts by identifying a 'control' group with similar characteristics to the 'treatment' group and comparing the outcomes of the groups on a particular variable, such as unemployment status. In this case, however, the aim was not to select a comparator group for purposes of impact evaluation, but rather to identify households similar to the PWP households in the Census, in order to ascertain their income status relative to the overall population, to provide an insight into incidence. The use of PSM in the analysis of characteristics of households taking part in PWPs is not typical, in that i) it is not being used for programme impact evaluation, and ii) PSM is most often used to match individuals with other individuals, rather than matching households as in this instance. However, the use of PSM in a non-evaluation method is not problematic, as the basic assumption, that the probability of selection into the treatment group is the same for participants and non-participants, is not broken. Also, many examples can be found in the literature where matching has been used for households (and other units of analysis), such as Mendola (2007) in Bangladesh; Arun et al. (2006) in India and Guarcello et al. (2003) in Guatemala.

24 The 45th percentile is adopted in place of 40th as it is the closest approximation possible given the banding approach adopted in the Census, rather than continuous variable, which a 40th specification would require).

Figure 21: Income distribution for matched and census households (type C)



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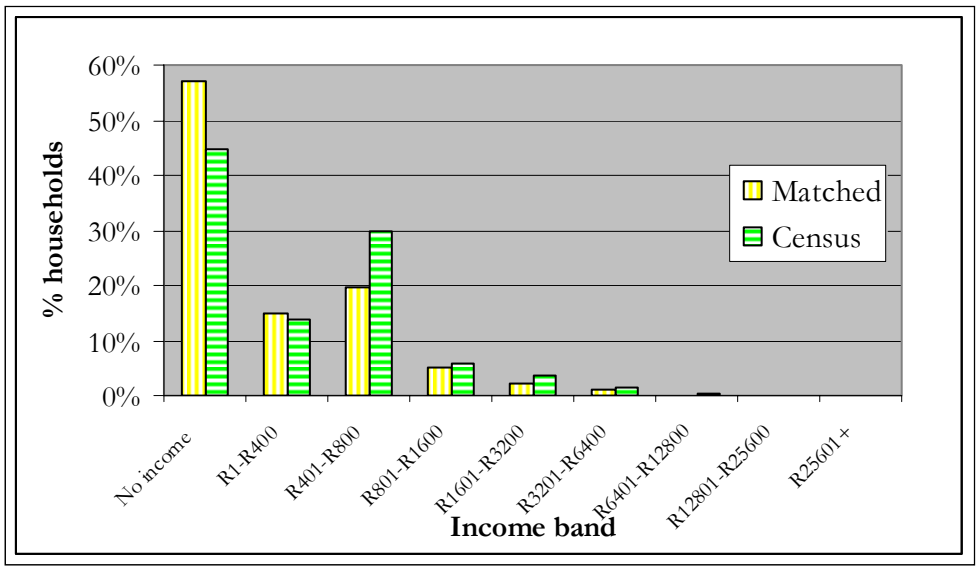
Source: McCord and Wilkinson (2009) using Census 2001.

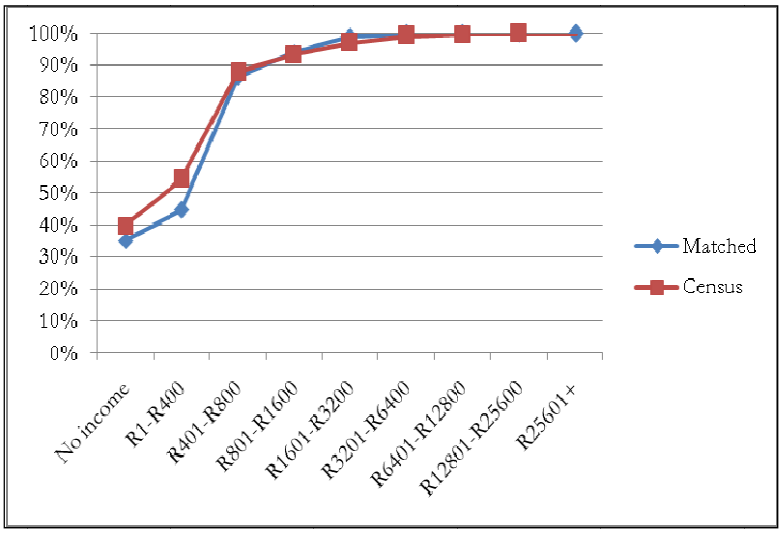
Figure 22: Income distribution for matched and census households (type B)



Source: McCord and Wilkinson (2009) using Census 2001.

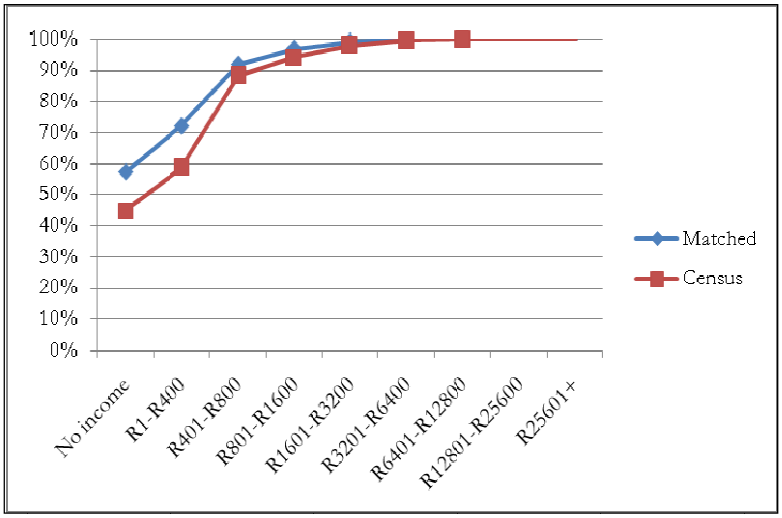
The income distributions of the PWP households were significantly different from the non-PWP households for both groups. The cumulative distribution of income in PWP households is compared to that of the overall populations in the PWP locales in Figures 23 and 24 below.

Figure 23: Cumulative distribution of census income & PWP matched income (type C)



Source: McCord and Wilkinson (2009) using Census 2001.

Figure 24: Cumulative distribution of census income & PWP matched income (type B)



Source: McCord and Wilkinson (2009) using Census 2001.

These figures illustrate that while the type C programme participants were marginally less poor than the overall population the type B participants were poorer than the overall population. In the type B programme participants were disproportionately drawn from among households with lower incomes, confirming the analysis above, i.e. the type B programme, offering long term employment in which members were selected by the community, resulted in superior poverty targeting, in terms of household income.

Logistic regression models confirmed this analysis across a range of socio-economic indicators. The main conclusions drawn by McCord and Wilkinson were that the type C households were on average, better off across both the income distribution and a range of other socio-economic indicators than the overall population from which they are drawn, while on the same basis, the type B households were significantly poorer than the overall population. Consistently, over a range of different indicators, the poverty incidence of the type B programme was significantly superior to that of the type C programme.

The conclusion which can be drawn from this case study is that significantly different demographic and socio-economic segments of the population participated in the two different case study programmes. In the type B programme explicit poverty targeting objectives were attained by utilising community selection techniques to ration access, and offering flexible employment to reduce potential exclusion errors. As a result of these design considerations the poor received 1.27 times their population share of the PWP employment. By contrast, in the type C programme, which relied on wage-based self-targeting and offered full-time non-flexible employment opportunities, the poor received only 0.88 of their population share of employment.

This analysis suggests that active poverty targeting, rather than reliance on the work conditionality and a low wage, may be required to promote the share of programme benefits transferred to the poor, and that by tasking community groups with selection, where community groups enjoy a degree of programme ownership in the context of a long-term relationship between local communities and implementing agencies, it is possible to promote the participation of the very poor, a relationship which, by definition, is more likely to be achieved in type B programmes. By contrast, in the context of the short-term case study programme (conforming to PWP types A and C) which was implemented by contractors without explicit poverty targets or incentives, the poverty incidence of participants was significantly lower, with the poorest being under-represented in the PWP participant group.

The effectiveness of the community-targeting mechanism in the type B case was contingent on significant investment in social development by the implementing agency over a period of years, which was possible because of the extended duration of the programme and hence, the sustained nature of the relationship between the workers, the programme, and the community institution managing the programme at the local level.[25] It is not clear whether such issues can be addressed in the context of short-term employment projects, particularly when they are implemented by the private sector, and when neither targets nor incentives for targeting the poor are in place, particularly given the additional expenditure on social development required. The limited poverty focus of the type C programme is illustrative of this problem, confirming research on the MEGS in India, which has also found evidence of the negative implications for successful poverty targeting of private sector implementation, due to the inherent tension between profit-based incentives and the costly investment in social processes required to ensure the inclusion of the poorest.[26]

Case Study Implications: Cost, Targeting and Impact on Household Income

While empirical conclusions for the region cannot be drawn from two case studies, nevertheless, the case study analysis can offer some insights into the relative incidence and impact performance of the two dominant PWP types in the region, in a context of chronic poverty and unemployment, and highlights issues relating to design aspects of each model. The fact that one of the programmes was a poverty targeted type B programme offering ongoing employment through labour intensive work, while the other was a type C programme, with the typical characteristics of the short term construction-based PWP which dominates the genre in sub-Saharan Africa, is significant in terms of the different cost-effectiveness, targeting effectiveness, and household income and poverty impacts of the two programmes.

The survey indicates that both programmes had negligible impact in terms of reducing headcount poverty, itself a key insight. However, both programmes contributed to reducing the depth of poverty experienced by participating households, and addressing other, non-monetary aspects of poverty. Despite the continued high levels of income poverty, participation in both programmes had a beneficial impact on all the dimensions of poverty examined; income, asset ownership,

25 A further indication of the community ownership of the programme was the social regulation of the distribution of the scarce resource of PWP employment within the community.
26 S Pellissery, Department of Social Policy and Social Work, Oxford University, 2004, pers. comm.

access to services, and the capabilities and psychosocial aspects of poverty. A critical difference however is that the initial situation of the poverty targeted type B PWP households was consistently found to be one of greater poverty than for the type C households, and consequently benefits which were, in many cases, marginal for type C households were significant among type B households (McCord, 2009a).

In the case of the type B programme PWP participation impacted significantly on factors which influence the reproduction of poverty, examples being the reduction in chronic under-nutrition and increased participation in education, despite the low absolute value of the monthly transfer in comparison with that of the less well targeted type C programme. Whether this is due to the ongoing nature of the programme, as well as the more effective poverty targeting remains an open question, but certainly the impacts were sustained for a longer period in the open ended type B programme, compared to the average 4-6 month duration of the wage transfers under the type C programme, which rendered any programme benefits short term in nature.

It is noteworthy that the type B case study, offering a lower total monthly wage, but higher hourly wage rate together with community based targeting mechanisms, and part time flexible working hours, had superior poverty targeting outcomes than the type C case study programme, which was implemented on the basis of more conventional wage targeting. This finding supports arguments set out by Barrett and Clay (2003) and Mujeri (2002) that it is not adequate to rely on the functioning of the market to ensure the participation of the poorest in PWPs, as the provision of a low wage can provide additional opportunities for cash income for surplus labour in less poor households, particularly in contexts of high unemployment, while failing to offer wages which match the marginal value of labour in the labour-constrained households which are often among the poorest. The challenge the case studies present is that conventionally designed PWPs may not necessarily be an effective tool for reaching poor, especially labour-constrained households, and that adopting a low wage may not result in effective poverty targeting.

Evidence Gaps

The foregoing discussion on cost-effectiveness and targeting efficiency in PWPs in sub-Saharan Africa has revealed major evidence gaps. There are fundamental gaps in the literature both in terms of impact at household level, as discussed above, and also in terms of incidence. Neither of these gaps however are adequately highlighted in the existing literature, despite their critical importance for assessing the efficacy of the PWPs' social protection function. While there is some research into these questions in the Asian context, there is little empirical evidence relating to the incidence of PWP participation in sub-Saharan Africa, in terms of the socio-economic profile of workers, due to the lack of baseline data gathered on PWP participants, and lack of subsequent survey work to rectify this initial omission.

The short-term nature of most programmes in the continent mitigates against the gathering of such data, which tends not to be included in monitoring schedules, as socio-economic data collection is often perceived as an additional cost burden, rather than an essential prerequisite for meaningful programme impact assessment. These data omissions undermine any attempt to assess the functioning of PWPs as instruments of social protection, and together with the lack of data on performance, render any assessment of the effectiveness of PWP impossible, since it is not possible to calculate either the impact or benefit incidence. In addition, the data on PWP cost are highly problematic. Inasmuch as the data exist, they imply that the cost per unit transferred may be greater than for the cash transfer alternatives, (see, for example, Smith (2001)) however whether such a (putative) premium is acceptable is contingent on the value of the assets created, another area which suffers from a critical data void. Together, these critical areas of data failure undermine the potential for evidence-based policy selection in relation to PWPs.

In many sub-Saharan African countries PWPs represent the intervention of choice to address the social protection needs of the working age poor who are not covered by alternative interventions

for specific vulnerable groups (such as children or the elderly). It is widely assumed, on the basis of the principle of 'less eligibility' that the work requirement and low wage lead to effective targeting to the intended group. However, the limited evidence available in the literature indicates that, in the context of highly rationed access to PWP employment resulting from low coverage, wage targeting and the work requirement are often not adequate to prevent significant inclusion and exclusion errors, and there is an urgent need to gather more data in order to better understand the targeting outcomes of programmes.

The value of assets created

The creation of assets is generally included as a key rationale for the selection of PWPs over alternative social protection assistance measures, as PWPs avoid the perceived trade-off between 'productive' investment in infrastructure, and 'consumption' expenditure on welfare by combining social assistance and productive asset creation in one intervention. As Smith argues with reference to Malawi:

> *'... as far as possible, safety nets in Malawi need to be productivity-enhancing (for example in the form of public works […], rather than pure transfers […] to maximize long-term income growth among the poor.' (2001:13)*

However, the beneficial economic and developmental value of the assets created through PWPs is frequently assumed rather than empirically established. In some instances, such as the flood- and drought-related assets created in Bangladesh and India which have a direct impact on mitigating future risk and promoting land productivity, the economic benefit of the infrastructure created is often readily apparent, in terms of a reduction in flooding and improved water harvesting opportunities. Where the assets created are intended to promote livelihoods and economic growth, however, rather than mitigate known environmental threats, the value of those assets may be less easily quantifiable and their impact on the livelihoods of PWP participants is frequently unobserved, with outcomes rarely being subject to evaluation. Under these conditions asset impact evaluation is critical, yet such evaluation is rarely carried out, as there is an assumption among policy makers that the production of assets is de facto synonymous with growth and poverty reduction, without any consideration of the nature or value of the assets created, or the distribution of asset benefits across the population. This results in an often implicit analytical conflation of the provision of assets with the achievement of poverty reduction, livelihoods promotion and social protection outcomes, or even more problematically, a conflation of spending on asset creation and social protection outcomes[27]. An example of the conflation of PWP asset construction with poverty alleviation is to be found in the document produced by the South African government to celebrate ten years of democratic rule, which justifies the claim of poverty alleviation by stating the number of assets constructed under the national PWP, and the funds spent on their construction, rather than assessing the impact of those assets on poverty:

> *'... these [public works] programmes have been successful in alleviating the asset poverty of communities. Over R6.5 billion of expenditure on infrastructure has provided 2,182 community assets.'(South Africa, PCAS, 2003:19)*

Such conceptual looseness in evaluating the asset impact of PWPs is typical within the literature, and is a major source of confusion in the current PWP discourse, as asset creation is not per se synonymous with any kind of poverty alleviation. The evaluation of the quality of assets created

27 A similar debate is currently underway in South Africa with regard to the provision of the 'social wage' (goods and services) for the poor, where the cost of provision has been equated with the value of the benefit experienced by the poor in some of the literature (PCAS, 2003) following the benefit incidence or cost apportionment method of estimating incidence of benefits (see for example, Demery (2000)), which is challenged elsewhere in the social protection discourse (Meth, 2008a).

under PWPs, and their value to local communities over time is a key area to address in future programme monitoring.

Programme impact over time

With respect to cost-effectiveness it is clear from the material reviewed in this section that although programmes may or may not be considered cost-effective in terms of indicators such as the proportion of programme budget spent on labour, the cost of the creation of a day's work or the extent to which they reach the poor, a critical open question remains largely unaddressed, namely the actual impact on participants and their families of participation in PWPs, in terms of depth of poverty over time.

Current monitoring and evaluation activities tend to focus on immediate short term outputs, such as the occurrence of the wage transfer or the construction of the asset, rather than the impacts of these outputs on participants, over time. The literature for sub-Saharan Africa is particularly limited in terms of examining the impact of participation in the medium term, after the period of employment has been completed, in terms of i) returns to assets created, ii) the impact of wage transfer, and the value of skills transfer and work experience. Current PWP programme design tends to include an implicit and sometimes explicit expectation, particularly on the part of donors, that PWP participation will have some transformative impact in terms of graduation out of poverty. However, given the lack of evidence on the impact of PWPs at household level, there is little no empirical basis for this expectation (McCord, 2009a). This is a critical area for future research.

Cost and Targeting Efficiency Conclusions

This section has offered an overview of the literature available on PWP cost and targeting efficiency in the region, and an exploration of the major issues arising. As with much of the much social protection debate, data on cost and targeting are poor and often inconsistent. In almost all cases the quality and impact of assets created through PWP was excluded from evaluation, and there is a need to extend the current approach to cost-effectiveness to take account of the quality, sustainability and usage of assets created. In the absence of such data, any assessment of cost-effectiveness only takes into account the immediate transfer benefits and excludes potential medium term benefits from the assets created.

However, the forgoing discussion suggests that if PWPs are to be retained as the principal instrument for delivering social protection to the working age poor, additional investment in explicit targeting mechanisms, such as the adoption of demographic or poverty criteria, possibly using community based selection mechanisms, is required, along with the creation of incentives for programme implementers to honour such targets during implementation, and improved monitoring of targeting outcomes. It is important to note however that effective and cost efficient community targeting may only be viable where longer term (type B) programmes are being developed. Where the duration of transfers into a community is limited to a few months, particularly where recruitment is taking place through a private sector contractor, (as in many type A and C programmes) it may not however, be feasible or cost-effective to adopt this approach.

Part Four: Public Works and the Current Social Protection Discourse

The final section of the report discusses the role of PWP within the broader policy context, from both a donor and government perspective,

Public Works in the African Discourse

Public works are a key instrument in social protection and safety nets programming in Africa. As well as being used for the purposes of relief during a temporary disruption of the labour market in countries subject to environmental disasters or conflict, they are also extremely widespread as components of social protection 'systems' in countries facing chronic poverty and elevated unemployment as an instrument to address poverty (del Ninno et al, 2009). Typically social protection systems in the region are somewhat fragmented, resulting in a highly inequitable and often somewhat arbitrary distribution of resources and low levels of coverage. Within this context, PWPs are the dominant instrument for addressing the needs of the working age poor.

Reasons for the popularity of PWPs in the region

Within this context, the role, function and design of PWPs is relatively consistent across the region. They are predominantly type A or C programmes, offering a short single episode of employment, and are the preferred means of transferring social protection or safety net resources to households with labour. There is a widespread reluctance among governments and donors to provide cash transfers to households with working age members, and for this reason PWPs dominate social protection provision for the working age poor. Households with available labour are typically excluded from cash transfer programmes currently popular among donors in the region (as for example in the high profile Zambia and Kenya cash transfer pilots). The assumption that such households should not be eligible for cash transfers, and should be supported primarily through PWP employment has become widely accepted in the African social protection discourse, as exemplified by the discourses in Kenya, Malawi and Zambia (see McCord, 2009b).[28]

PWPs are widely assumed to represent the appropriate instrument for this group within the dominant donor and government discourse, but in reality PWPs rarely employ more than a small fraction of poor households with access to labour at any one time. The low coverage of almost all programmes means that the extent of 'social protection' offered by PWPs is rarely commensurate with their 'political' role in the social protection discourse. The underlying problem is that PWP programming tends not to take account of the labour market reality in much of sub-Saharan Africa, in which labour availability *per se*, does not guarantee access to adequately remunerated employment, or any employment at all. Hence, those with labour, but facing no labour market demand, are in most cases excluded from social protection provision, other than PWPs. When PWPs are the *only* form of social protection for the working age poor in such contexts, low coverage represents a serious challenge in terms of equity and ethics.

The preference for PWPs as the instrument for the delivery of social protection to the working age poor is informed by a range of ideological and political preferences[29]. Donors and governments share concerns regarding the risks of dependency and labour market distortion if cash transfers are provided to households with available labour. From the donor perspective preferences are also shaped by the relative abundance of resources to fund support for households without labour due to HIV/AIDS (McCord, 2009b). From a government perspective the perception that expenditure on

28 With the notable exception of Namibia, which is currently piloting a cash grant for the working age poor (Haarman and Haarman, 2009).
29 For a detailed discussion of ideology and PWP selection see McCord 2008b.

PWPs represents investment rather than consumption expenditure, is also common (social cash transfer schemes are often perceived as representing consumption expenditure), leading to a preference to use scare resources for PWP programming rather than alternative forms of support for the working age poor. PWPs represent an approach to social protection which combines the provision of infrastructure as well as social protection, rendering PWP particularly attractive in post conflict situations where there has been significant destruction of infrastructure. Type A and C PWPs are popular, as they do not entail the ongoing fiscal liabilities implied by other forms of social protection, such as cash transfer programmes. In addition PWPs are perceived as a means to promote stability in contexts of potential unrest, for example in the case of AGETIP in Senegal (Karuri et al, 2007) and where there is a need for visible reintegration of ex-combatants or internally displaced populations (current examples being PWPs in Sierra Leone, Liberia and Somalia).

Limitations to PWP programming

However, there are two fundamental limitations to a PWP response to the provision of social protection for the working age poor in the region; i) the limited scale of programming, and ii) a frequent misalignment of programme type and programme objectives. The scale and coverage of most PWPs in Africa is minimal and rarely matches the extent of need among the poor working age under- and unemployed, for reasons of technical capacity and also cost (see annexe 8 for a comparison of the scale of sub-Saharan African and international PWP programming). Due to the small scale of most PWPs and the limited employment offered, in almost all cases where information is available, significant excess demand was reported, leading to a process of rationing access to PWP support. This concern was expressed by Devereux et al in relation to the PSNP in Ethiopia;

> *'More worrying is the high level of 'exclusion error' – among non-beneficiaries, 71% reported experiencing a food shortage but were excluded from the PSNP. This indicates that the coverage of the Productive Safety Net Programme is limited in relation to the level of need.' (Devereux et al 2006)*

The second fundamental limitation to PWP programming is the misalignment of programme type and programme objectives in contexts of chronic poverty. In such contexts there is no evidence that the provision of one episode of employment has a significant medium or long term social protection impact, in terms of improved livelihoods or 'graduation' out of poverty. In order to offer a social insurance function in such contexts programmes would need to offer repeated or ongoing employment opportunities, as in a type B programme. This argument has been presented repeatedly in the literature; Datt and Ravallion argue that:

> *'... failure to obtain this work [PWP employment] whenever needed will tend to undermine the social insurance function of public works schemes.' (1994a:1358)*

Subbarao et al. concur, suggesting that:

> *'... in countries where poverty-gap ratios are high, the need to run the programme [PWP] year-round (and thus raise transfer benefits to the poor) assumes greater importance.' (1997:84)*

However, notwithstanding these insights, most PWPs implemented in contexts of chronic poverty in sub-Saharan Africa do not offer any form of income insurance in the form of year round programmes or guaranteed access to employment annually, as in the Indian NREGA, and so their social protection impact is compromised.

Conclusion

This report has explored the available information on PWP activity in sub-Saharan Africa, highlighting the extensive scale and diversity of PWP programming, and the dearth of available data against which to assess the performance of these programmes. It has also highlighted the limited literature on programming in the region, and the inconsistencies in the approaches and methodologies adopted to assess programme output and impact, which undermine prospects for cross programme comparison, or comparison with other forms of social protection. In this context evidence based policy selection and programme design is difficult, and for this reason programme design has not, in many cases, been based on rigorous empirical or theoretical analysis, with the notable exception of rare initiatives such as the Zibambele programme.[30] In order to address this there is an urgent need for improved data on PWP programming, the development of a set of norms and conventions relating to programme reporting, and improved monitoring and evaluation practices which include an appraisal of assets created over time.

Notwithstanding the lack of evidence on programme efficacy PWP programming is vibrant, and PWPs remain an extremely popular policy option in the region in terms of both safety net provision and social protection provision (in addition to a range of other objectives). However, a range of issues related to PWP programming remain contested, including, most fundamentally the nature of PWP themselves. In the African development discourse PWPs are variously conceptualised as instruments to deliver social safety nets, and social protection, they are components of an active labour market strategy in terms of direct job creation, the promotion of aggregate employment and the 'activation' of the labour force, they are tools to promote the creation of assets, and they are drivers of both macroeconomic and social stability. These disparate ideas about the nature of PWPs have resulted in institutional conflicts and misunderstandings, as well as poor programme design with programmes often overloaded with disparate objectives (Karuri et al, 2007). Many programmes do not fall clearly into one or the other of these categories but have a range of objectives, often taking on aspects of several different PWP identities.

In the first section of the report, an attempt was made to recognise this diversity, and to impose some form of typology to break the monolithic 'PWP' nomenclature into more meaningful components in order to facilitate more informed debate, with particular reference to the provision of social protection. In the absence of an explicit recognition of the diverse form and objectives of PWPs, the debate has become confused and somewhat segmented, with different agencies adopting a common terminology for very different interventions. While the typology imposed may not be perfect, it is intended to promote reflection on the plurality of the PWP concept.

This review has highlighted some of the ways that the plurality of the PWP concept and the associated confusion has lead to programming inconsistencies and misalignments. Even within single PWPs there are often multiple objectives, and sometimes these can be in tension with each other. The identification of key components of good programme design, and lessons for successful implementation in this context is difficult, as appropriate programme design is contingent on a programme's objectives.

The most problematic misalignment identified relates to programmes with social protection objectives in situations of chronic poverty and unemployment. Most programmes in the region provide a single episode of employment. This is appropriate in contexts of acute labour market disruption, where short term consumption smoothing is required. However, in instances where unemployment is the norm and poverty chronic, a situation which characterises many countries in the region, a single episode of employment is not, in household economy terms, a substitute for alternative interventions which provide the security of regular ongoing cash transfer into a household. A unique episode of employment is not sufficient to provide the stabilisation benefits

30 The Zibambele programme was designed by the Provincial Department of Transport in KwaZulu Natal, in collaboration with the NGO CORD.

required cyclically in many countries in the region, but much PWP design does not accommodate this reality.

This concern is generally recognised in the South Asian context, and in particularly in the type B programmes implemented under NREGA in India, in which PWP work is guaranteed to all who seek it (for up to 100 days a year), and may be accessed repeatedly over time. In NREGA the role of the PWP transfer in the household economy is taken into account, and programme design reflects a concern to ensure that the programme has an insurance function, rather than offering once-off or *ad hoc* employment as in much of sub-Saharan Africa. While the type B NREGA and its predecessor, the Maharashtra Employment Guarantee Scheme (MEGS), are celebrated internationally, their core insights and related design features have not been incorporated into PWPs in sub-Saharan Africa, with a few notable exceptions, including the PSNP in Ethiopia,[31] and the Zibambele programme, both discussed in this report.

Short term PWP employment can play a vital role in promoting consumption smoothing in situations of acute labour market disruption. Where PWP are intended to perform either a short term safety net function, or promote aggregate employment, the type A and C programmes which are prevalent in the region are appropriate. However, neither type of programme is well suited to the provision of social protection for the poor in the labour market context predominant in sub-Saharan Africa, and as a consequence the social protection function of such PWPs is likely to be limited. Yet this type of programming is repeatedly supported by donors and governments, who fail to recognise the critical importance of income insurance for meaningful social protection provision in contexts of chronic poverty.

If PWP remain the preferred instrument for the provision of social protection for the working age poor in situations of chronic poverty then type B programming, offering South Asian style employment guarantee programmes, is appropriate, but this implies implementation on a mass scale and at significant cost, in terms of both financial and human resources. Whether such programmes are fiscally or administratively feasible in sub-Saharan Africa remains an open question.

Annex 1: PWP Database Data Entry Categories

1. Country
2. Title of programme/ project
3. Nature of scheme (Cash for Work, Food for Work etc)
4. Objectives of programme
5. Name of implementing agency/ies
6. Type of implementing agency/ies
7. Name of funding agency
8. Programme budget
9. Additional programme support
10. Start date
11. End date
12. Documentation available
13. Contact details for programme
14. Number of direct beneficiaries
15. Number of employees
16. Target group(s)
17. Targeting procedure
18. Geographic coverage
19. Consideration of HIV impact
20. Additional comments
21. Frequency of wage payment
22. Form of wage
23. Value of wage
24. Payment and the minimum wage
25. Hours worked per day
26. Days worked per week
27. Duration of employment
28. Gender of workers
29. Nature of assets created
30. Ratio of labour to total costs
31. Objectives of programme

Annex 2: Payment Modality by PWP Type

	CFW	FFW	FFT	Food (FFW + FFT)	IFW	Other	n
All	37%	46%	15%	61%	1%	1%	167
A	20%	55%	23%	78%	1	1	78
B	72%	14%	14%	28%	0	0	6
C	64%	31%	3%	34%	1	1	72

Annex 3: Major PWP Funder by PWP Type

	International Donors	International NGOs	Governments	n
All	82%	10%	6%	146
A	78%	15%	6%	69
B	67%	0	33%	3
C	85%	6%	6%	65

Annex 4: Relation to Minimum Wage

	< MW	**=MW**	**>MW**	**n**
All	39%	36%	25%	28
A	78%	11%	11%	9
B	50%	50%	0	2
C	18%	47%	35%	17

Annex 5: Payment Frequency

	Daily	Fortnightly	Monthly	Less Frequently	Unclear	n
All	11%	17%	57%	4%	11%	45
A	34%	13%	53%	0	0	15
B	0	0	75%	0	25%	4
C	0	23%	58%	8%	11%	26

Annex 6: Hours Worked Per Day

	3-5	**6-8**	**n**
All	63%	37%	27
A	57%	43%	7
B	n/a	n/a	n/a
C	63%	37%	19

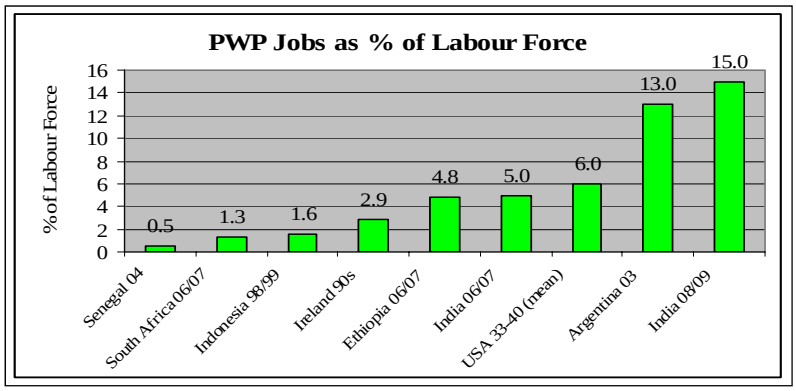
Annex 7: Days Worked Per Week

	<5	**5-6**	**n**
All	7%	93%	28
A	0	100%	5
B	100%	0	1
C	5%	95%	21

Annex 8: The Limited Scale of PWP Programming in Sub-Saharan Africa

The small scale of PWPs in sub-Saharan Africa is illustrated by an analysis of nine programmes internationally, which set three major (in terms of profile) African PWPs alongside Asian, European and Latin American counterparts, taken from McCord 2005. Given the inherent lack of meaning of comparing absolute programme size, given variations in population and national labour market size, and consistency problems in national approaches to estimating unemployment rates, the programme sizes are compared relative to the size of the labour force, in order to give broadly comparable data, taking the size of the programme in its year of peak performance. This clearly indicates the relatively small size of the South African EPWP, the Senegalese AGETIP and even the Ethiopian PSNP, when compared to the NREGA in India, the Jefes e Jefas programme in Argentina or the PWP implemented under the New Deal in the USA during the 1930s. This underlines concerns regarding exclusion error, and illustrates the relatively limited coverage of even 'flagship' African programmes, see Figure i.

Figure i: International Review of PWP Jobs as % of the Labour Force



Source: Karuri et al 2007.

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