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DISENTANGLING EXPANDED PUBLIC WORKS PROGRAMME'S PERFORMANCE:

Any Impact on Job Creation, Poverty and Skill Development in Free State?

by Oyeyinka Omoshoro-Jones



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Disentangling Expanded Public Works Programme's Performance: Any Impact on Job Creation, Poverty and Skill Development in Free State?

O.S. Omoshoro-Jones

Abstract

Evaluation studies of large scaled PWP's analogous to South Africa's public works programmes (EPWP) have confirmed the positive distributive impact of these programmes in some countries in the Asian, Latin American and Sub-Saharan Africa regions, where these programmes have successfully reduce high unemployment and poverty rate, unlike South Africa and the Free State province, where both direct stabilisation effect (social protection function), and indirect effects such as steady economic growth and creation of quality public assets remains elusive. Although, the impact of EPWP schemes in some provinces have enjoyed quality evaluation research, a formal study on Free State province is yet to materialised. In contrast to earlier studies that utilised 'the net work opportunities created' to evaluate EPWP's performance for a specific period, this study contribute to existing literature by constructing wide range of robust indicators to determine if, over the past decade (2004-2014) the implementation of the expanded public works programmes in South Africa as a multi-pronged government policy provides adequate *social protection function* (wage transfer, create valuable assets and skill development) and stabilisation effect to improve the livelihoods of the poor. This is the first empirical research to employ meta-data on EPWP schemes at the national level for cross-sectoral and provincial analysis, to benchmark the effectiveness of public works programmes in Free State. In addition, this study carried out a microscopic assessment on the performance of EPWP initiatives at sectoral (implementing provincial departments) and municipal levels. Empirical results shed light on the failure of EPWP initiatives to have significant impact, particularly in the Free State. First, evidence of pervasive low intensity of labour, short duration of projects which indirectly prevent skill development to self-employment or enhance beneficiaries' employability in the mainstream labour market are key co-operant factors responsible for the recurring poor performance of EPWP. Second, in both the short and long run, the inference of disproportionate and predominant implementation of EPWP projects in few municipalities (especially in Mangung) including high daily wage rate across municipalities can trigger excessive intra-provincial migration leading to over-population, fiscal stress, violent social unrest and crime rate due to few job opportunities and growing demand for service delivery. Third, there is a *sizeable dead weight loss* associated with many EPWP projects in the province. Free State will continue to grapple with chronically high unemployment and acute poverty rate, labour market distortion and rigidity problems linked to racial and skills levels if labour intensity of public works schemes and the widespread gross under-spending inherent to all public implementing bodies is not eradicated, an active private sector participation is not encouraged, and *Zimbabwe-type* programmes are not urgently initiated. For policy purpose, an immediate integration of the provincial flagship *Operation Hlasela* programme into EPWP road project is vital to improve job creation, training benefits and creation of valuable public assets.

JEL: J08,

Keywords: Public Works Programmes, EPWP, Zimbabwe, Free State, social protection function, dead weight loss, labour intensity

Contents

1. INTRODUCTION	1
1.1. What is the Socioeconomic Dynamics and Challenges in South Africa?	1
1.2. Research Overview	3
2. THEORETICAL BACKGROUND	6
2.1. Exploring the Linkages between Economic Growth, Poverty Incidence and Human Capital Development.	6
3. INTERNATIONAL PUBLIC WORKS PROGRAMMES: EXPLORATORY ANALYSIS OF CONCEPTUAL FRAMEWORK	9
3.1. Theoretical Underpinnings of Public Works Programmes	9
3.1.1. Implementing Public Work Programmes: How Relevant is Setting Objectives?..	11
3.1.2. Types of Remunerative Options in Public Works Programmes	13
3.2. Impacts of Public Works Programmes: What Does the Literature Say?	14
3.2.1. International Evidence	14
3.2.2. Can Public Works Programmes Be Erroneously Implemented?	16
3.2.3. Shortcomings of Public Work Programmes: International Empirical Critique	20
4. EXPANDED PUBLIC WORKS PROGRAMME: ARCHETYPE PUBLIC WORKS PROGRAMME IN SOUTH AFRICA.	22
4.1. Background on Expanded Public Works (EPWP)	22
4.1.1. Key Legislations Guiding the Implementation of EPWP Initiatives	24
4.2. Understanding the Scope of Expanded Public Work Programmes	25
4.2.1. Employment Creation Opportunities through Sectoral Programmes	1
4.2.2. Objectives of Expanded Public Works Programmes	2
4.2.3. Monitoring and Evaluation Strategies for EPWP.....	5
4.3. A Review of Existing Evidence on Expanded Public Works Programme	6
4.3.1. Shortcomings of EPWP: International Evidence From Cross-country Analysis	8
4.3.2. Regional Empirical Evidence: A Review of EPWP Case Studies.....	11
4.3.3. Has the National Government Respond to EPWP Challenges?	20
5. EMPIRICAL ANALYSIS OF EPWP PERFORMANCE AS A PUBLIC EMPLOYMENT PROGRAMME IN SOUTH AFRICA	22
5.1. Comparative Analysis: Benchmarking Sectoral and Provincial EPWP Performance of Free State.....	22
5.1.1. Constructing Performance Evaluation Indicators.....	23
5.1.2. Data Source.....	25
5.1.3. CROSS-PROVINCIAL ANALYSIS OF EPWP PERFROMANCE (NATIONAL). 25	
5.2. PERFORMANCE ANALYSIS OF EPWP PHASE 1: END OF 2004/05 FINANCIAL YEAR, 01 APRIL 2004 - 31 ST MARCH 2005	26

5.3. Performance Analysis of EPWP Phase 1: 2004/05 – April 2009/10 (5years).....	31
5.4. Performance Analysis of EPWP Phase 2: 2009/10 - April 2013/14 (5years).....	40
5.5. Cross Sectional Analysis of The Impact of Work Opportunities Generated In EPWP Phase 2 On Unemployment Rate By Province.....	49
6. Exploratory Analysis of EPWP Performance in Free State: Sectoral, Provincial and Municipalities.....	51
6.1. Geographical Overview of Free State Province.....	51
6.1. Performance Analysis of EPWP Phase 1: 2004/05 – April 2009/10 (5years).....	52
6.1.2. Analysis of EPWP Performance at Departmental Level (Implementing Bodies)...	52
6.1.3. Free State Metro, Municipal and Districts Analysis – EPWP Phase 1.....	56
6.1.4. Free State Metro, Municipal and Districts Analysis – EPWPPHASE 2.....	59
6.1.4.1. Analysis of EPWP Performance at Departmental Level (Implementing Bodies)	59
6.1.4.2. Free State Metro, Municipal and Districts Analysis – EPWP PHASE 2.....	63
6.2. Value for Money? Assessing Suitability of Labour Intensive Infrastructure Projects for Free State.....	70
6.2.1. Analyzing Components of EPWP Infrastructure Sector: Work Types	72
6.2.2. EPWP Infrastructure Projects by Province: Road Construction vs. Maintenance..	73
6.2.3. EPWP Road Network Projects by Province: Urban vs Rural Roads	74
6.2.4. Analysis of EPWP Road Network Projects by Provinces: Large vs. Small Projects	75
6.2.5. Analysis of EPWP Road Network Projects: Provincial vs. Municipal Roads Projects	76
7. A Summative Discourse of Findings.....	78
7.1. General Findings on EPWP Initiatives at National Level (Cross-Provincial Analysis)	78
7.2. Specific Findings on the Performance of EPWP Initiatives in Free State Province - Cross- Municipal and District Analysis	80
8. Policy Recommendations.....	84
9. Concluding Remarks.....	87
10. References	90
Appendix I.....	100
Appendix II: Econometrics Modelling	104
Appendix III: Summative Expanded Public Works Programmes Adopted in Free State	105

List of Tables

Table 1: An International Perspective- Broad Objectives of Public Works Programmes.....	12
Table 2: Implementation Phases of Expanded Public Works Programmes	1
Table 3: Summarised Objectives of Expanded Public Works Programme in South Africa	4
Table 4: Recommended Evaluation Techniques for Monitoring and Evaluation of the Performance of EPWP	6
Table 5: A Comparative Analysis of the Performance of Public Works Programmes	10
Table 6: Constructed Performance Indicators to Evaluate EPWP Initiatives: 2004 - 2014	24
Table 7: Unemployment and Labour Absorption Rate by Province, QLFS 2014	26
Table 8: EPWP Phase 1 Sectoral Analysis (National) 01April 2004 - 31st March 2005 (1 Year Review)	26
Table 9: EPWP Phase 1 Analysis of Sectoral Performance (Year 1): 01 April 2004 - 31st March 2005	28
Table 10: EPWP Phase 1, Cross-Provincial Performance Analysis: 01 April 2004 - 31st March 2005 (Year 1).....	29
Table 11: Cross-Provincial EPWP Performance, Cumulative data, 01 April 2004-31st March 2005 (Year 1).....	30
Table 12: Sectoral Analysis EPWP Phase 1 Performance, 01 April 2004 - 31st March 2009	32
Table 13: EPWP Phase 1: Cumulative Sectoral data for Year 5, 01 April 2008 - 31st March 2009	34
Table 14: EPWP Phase 1: Cumulative Sectoral data for Year 5, 01 April 2008 - 31 March 2009	35
Table 15: EPWP Phase 1, Cumulative Provincial data for the Period of 01 April to 31st March 2009(Year 5).....	37
Table 16: EPWP Phase 1, Cumulative Provincial data, 01 April 2008 - 31st March 2009 (Year 5) ...	38
Table 17: Breakdown of EPWP Phase 2 Targets by Sectors (Net Work Opportunities).....	40
Table 18: Sectoral Analysis EPWP Phase 2 Performance, 01 April 2009 - 31st March 2014	41
Table 19: EPWP Phase 2, Sectoral Analysis, Cumulative Performance data for period, 01 April 2013 to 31st March 2014 (Year 5).....	43
Table 20: EPWP Phase 2 Sectoral Analysis, Cumulative Performance data, 01 April to 31st March 2014 (Year 5).....	45
Table 21: EPWP Phase 2 Cross-Provincial Analysis, Cumulative Performance data, 01 April 2013 to 31st March 2014 (Year 5)	46
Table 22: EPWP Phase 2 Cross-Provincial Analysis, Cumulative Performance data, 01 April 2013 to 31st March 2014	47
Table 23: Cross-Provincial Analysis - Evaluating Jobs Created in EPWP Phase 2 on Unemployment Rate.....	49
Table 24: Breakdown of Targets for EPWP Phase 3 by Sectors (Full Time Equivalents)	50
Table 25: Free State Metro, Municipalities and Local Districts	52
Table 26: EPWP Phase 1, FS Provincial Departmental Performance Analysis, Cumulative data, 01 April 2008 - 31 March 2009 (Year 5).....	53
Table 27: EPWP Phase 1, FS Departmental Performance Analysis, Cumulative data, 01 April 2008- 31 March 2009	55
Table 28: EPWP Phase 1 Performance Analysis, Across Municipalities and Local Districts in Free State, 01 April 2008 - 31st March 2009 (Year 5)	57

Table 29: EPWP Phase 1 Performance Analysis Across Municipalities and Local Districts in Free State, 01 April 2008 - 31st March 2009	58
Table 30: EPWP Phase 2, FS Provincial Departmental Performance Analysis, Cumulative data, 01 April 2013 – 31st March 2014 (Year 5)	60
Table 31: EPWP Phase 2, FS Provincial Departmental Performance Analysis, Cumulative data, 01 April 2013 - 31st March 2014 (Year 5).....	61
Table 32: EPWP Phase 2 Performance Analysis Across Municipalities and Local Districts in Free State, 01 April 2013 - 31st March 2014 (Year 5)	66
Table 33: EPWP Phase 2 Performance Analysis Across Municipalities and Local Districts in Free State, 01 April 2013 - 31st March 2014 (Year 5)	67
Table 34: Estimated Fiscal Allocation for Infrastructure Investment and Maintenance as a Percentage of GDP (Average 2005 - 2015)	71
Table 35: Employment Generated Across Provinces by Various EPWP Road Works Projects (Infrastructure Sector): 2010/2011 Period.....	72
Table 36: Analytical Framework for Public Works Programmes	100
Table 37: Labour-Intensive Work Components of EPWP Infrastructure Sector (Work Types)	100
Table 38: Analysis of EPWP Road Networks Projects By Province: Construction vs. Maintenance	101
Table 39: Analysis of EPWP Road Network Projects by Provinces: Urban vs. Rural Roads.....	101
Table 40: Analysis of EPWP Road Network Projects by Provinces: Large vs Small Projects	102
Table 41: Analysis of EPWP Road Networks Project by Province: Provincial Roads vs. Municipal Roads.....	103
Table 42: FS (National Govt) EPWP Programmes Per Sectors And Provincial Departments	105
Table 43: EPWP Phase 2 Target for Mangaung Metropolitan.....	105

List of Figures

Figure 1: Geographical Location of South Africa Provinces.....	25
Figure 2. EPWP Phase 1 (Start), 2004-2005: Percentage Share of Employment Created per Sector..	27
Figure 3: Number of EPWP Employment Created By Provinces during EPWP Phase 1 (First Year)	29
Figure 4: Work Duration by Sector: Targets Achieved vs Adjusted Estimated Mean Work duration	33
Figure 5: EPWP Phase 1, Employment Created by Sector, 01 April 2008 – 31 March 2009 (Year 5)	35
Figure 6: EPWP Phase 1, Employment Created By Provinces, 01 April 2008 - 31st March 2009, Year 5	38
Figure 7: EPWP Phase 2, Employment Created per Sectors, 01 April 2013 - 31st March 2014 (Year 5)	44
Figure 8: EPWP Phase 2, Employment Created By Provinces, 01 April 2013 - 31st March 2014 (Year 5).....	46
Figure 9: Geographical Distribution of Municipalities and Local Districts in Free State.....	51
Figure 10: EPWP Jobs Created in Phase 1 By Provincial Departments in Free State.....	54
Figure 11: Employment Opportunities Created during EPWP Phase 1 by Free State Municipalities and Local Districts (percentage),01 April 2008-31st March 2009	58
Figure 12: Employment Opportunities Created during EPWP Phase 2 by FS Municipalities, 01 April 2013 - 31st March 2014	64
Figure 13: Employment Opportunities Created during EPWP Phase 2 by FS Local Districts, 01 April 2013 - 31st March 2014	65

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 Programme
CBO	Community Based Organisation
CBPWP	Community Based Public Works Programme
CDP	Contractor Development Programme
CETA	Construction Education and Training Authority
CoGTA	Cooperate Governance and Traditional Affairs;
DETEA	Department of Economic Development, Tourism and Economic Affairs
DPRT	Department of Police, Roads and Transport.
DoRA	Division of Revenue Acts
EC	Eastern Cape
EIIPs	Employment-Intensive Investment Programmes
EPWP	Expanded Public Works Programme
ERRA	Ethiopian Rural Roads Authority
FBO	Faith Based Organisation
FS	Free State
FTE	Full-Time Equivalent

GT	Gauteng
IFPRI	International Food Policy Research Institute
ILO	International Labour Organisation
IMF	International Monetary Fund
KRARP	Kenya's Rural Access Roads Programmes
KZN	KwaZulu-Natal
LI	Labour Intensity
LIM	Limpopo
MASAF	Malawi Social Action Fund
MEGS	Maharashtra Employment Guarantee Scheme
MIG	Municipal Infrastructure Grant
MP	Mpumalanga
NEDLAC	National Economic Development and Labour Council
NC	Northern Cape
NDPW	National Department of Public Works
NGO	Non-Governmental Organisation
NREGA	National Rural Employment Guarantee Acts
NREP	National Rural Employment Guarantee Programme
NT	National Treasury
NW	North West
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation and Development
PIG	Provincial Infrastructure Grant
PK	Padat Karya
PPPs	Public-Private Partnerships
PSNP	Productive Safety Nets Programme
PW	Public Works (provincial department)
PWP	Public Works Programme
SA	South Africa
SACR	(Department of) Sports, Arts, Culture and Recreation
SARB	South Africa Reserve Bank
SMME	Small and Medium Enterprises
SPWP	Special Public Works Programme
TASAF	Tanzania Social Action Fund
WB	World Bank
WC	Western Cape

Glossary

Code of Good Practice for Special Public Works Programmes: The Minister of Labour issued a Ministerial Determination and Gazetted a Code of Good Practice for Special Public Works Programmes in 2002. This allows for special conditions to facilitate greater employment on Public Works Programmes. The Code guides the EPWP and provides for a training entitlement of at least 2 days per month of service for workers in this programme. Gazette No 64, 25 January 2004

EPWP Incentive Grant: Incentive paid to public bodies to incentivise employment creation under the EPWP. The incentive is paid per quantum of employment created for EPWP target group and can be measured in persons-day of work or FTE.

EPWP Target group: Unemployed South Africans willing to work on EPWP projects and programmes for a wage rate between R50 and R100 a day.

Effectiveness: defined as whether the purpose or agreed objectives of the Programme are being achieved.

Efficiency: A measure of the extent to which a programme is achieving its objectives optimally and within budget and programme.

Feasibility: In relation to the EPWP is whether the practical conditions exist for implementation. It is measured ultimately in the capacity of the EPWP to achieve more with the existing resources and to scale up with additional resources.

Indicative Incentive Allocation: An indicative incentive allocation is the indicated incentive amount available for a specific public body to earn should the total Performance target be reached.

Minimum threshold: The minimum threshold is the number of Full Time Equivalent Jobs that need to be created from the budget available for EPWP (that should be utilised using EPWP principles and Guidelines) before any portion of the indicative incentive allocation can be paid. Every FTE above the minimum threshold will qualify for an incentive reward.

Person-days of work: The number of people who worked on a project multiplied by the number of days each person worked. This has to be distinguished from the concept of a job i.e. paid work undertaken for medium to longer term duration with full employment rights and benefits.

Person-years of employment created OR Full Time Equivalent (FTE): A person year is equivalent to 230 days of work (i.e. 365 days – 104 weekend days – 10 public holidays – 21 annual leave days) inclusive of paid sick leave. For task-rated workers, tasks completed should be used as a proxy for 40 hours of work completed per week or 8 hours per day

Person-Days of Training: EPWP training courses are generally conducted together with the Department of Labour. The number of Person-days of Training participants spent attending courses or modules of courses is captured and a distinction made between accredited and non-accredited training person-days. The content of the courses may relate to industrial, social or personal skills (such as life skills) training.

Performance targets: The targeted number of Full Time Equivalent Jobs that the public body should aim to create to qualify for the full indicative incentive allocation.

Performance FTE Factor: The targeted number of FTEs to be created per Rand million of the budget available for EPWP (that should be utilised using EPWP principles and Guidelines). Each portfolio has a different Performance FTE factor.

Sustainability: Defined here in terms of whether intended positive effects of the programme persist beyond cessation of the intervention.

Work Opportunity: A job opportunity is the paid work created for an individual on an EPWP project for any period of time. In the case of social sector projects, learnerships will also constitute job opportunities. The same individual can be employed on different projects and each period of employment will be counted as a job opportunity.

1. INTRODUCTION

1.1. What is the Socioeconomic Dynamics and Challenges in South Africa?

About 98 percent of the South Africa's (hereafter SA) economic growth performance between 2000 and 2005 is associated with globalisation (Kabundi and Loots, 2005). Policies reforms such as GEAR (1994) and RDP (1996) contributed positively to the rapid re-integration of SA into the world economy particularly, between 1994 and 2001. by stimulating economic growth trade openness which includes reduction of tariffs to promote a competitive outward-oriented economy, and the adoption of pro-poor fiscal policy to foster income distribution . Indeed, Arora, Bhundia, and Bagattini (2003) finds that the annual growth rate of real gross domestic product (GDP) in SA increased from 1 percent on average during 1980 - 1983 to 2^{3/4} percent in 1994–2001. Also, Casale, Muller and Posel (2005:7) confirmed that between October 1995 and March 2003, about 1.4 million jobs were created by the South African (SAn) government. Other studies provides strong evidence suggesting that government's proactive policies (related economic, trade and fiscal) introduced post-1994 improves domestic exports, import competition, and access to foreign technology (Jonsson and Subramanian, 2000; Rattsø and Stokke, 2008, Edwards, Cassim and van Seventer, 2009).

Nonetheless since 2005, economic growth slowdown markedly from 5.3 percent (2005) to 1.4 percent in 2014 (IMF, 2014). At the same time, unemployment rate and poverty incidence have risen substantially, even as the countries fiscal-debt to GDP ratio and current account balance deteriorates. The long term unemployment rate (as a percentage of total unemployment) stood at 32.9 percent compared to 28.1 percent recorded in 2001 (World Bank, 2013), while the current unemployment rate (by official definition) is 24.5 percent with labour absorption rate of about 42.8 and labour force participation rate of 57.1 percent (Stats SA, 2014b), as the country's fiscal deficits and debt-GDP ratio remains relatively high at 45.9 percent. In addition to this, the persistent large (income) inequality measured as Gini coefficient of 0.59, partly driven by labour market dynamics and acute poverty incidence have exert a considerable burden on fiscal allocation to meet social priorities in South Africa, even as the second economy in the world with large disparity in income distribution after Brazil (World Bank, 2014).

Measuring the severity of unemployment rate by the extent of unemployment spell (i.e. duration of unemployment rate) as prescribed by the ILO (2014), in this context, an increasing proportion of long-term unemployed is likely to reflect structural problems in the labour market, creating the risk that workers become less attached to labour markets and suffer from skills erosion and reduced employability, which in turn, can adversely affect the economy, by constraining aggregate demand as household consumption decline sharply in the short run, and reducing out productivity growth in the long run (Stats SA, 2014a). Labour statistics data released by Statistics South Africa (hereafter StatsSA) in October 2014, revealed that the large proportion of able-bodied working age population in long-term unemployment rose sharply from 2,6 million in 2008 to 3,4 million in 2014, within this group those who were looking for work for more than five years had the largest increment from about 1,0 million to 1,5 million between 2008 and 2014 (StatsSA, 2014a)¹. The synchronised economic downturn

¹ Although previously disadvantaged Black Africans account for 79.3 percent of working-age population, about 73 percent of are under-represented among the employed, with about 85.7 percent and 83.3 percent are over-represented among the unemployed and non-economically active population. The

that give rise to decline in global unemployment as a result of the 2008/09 recession contributed to the apparent rise in long-term unemployment incidence at both national and provincial levels in South Africa².

Currently, youth unemployment rate is increasing in SA evidenced by the large fall in the youth's employment share to a lower rate of about 40 – 45 percent (Stats SA, 2014a). In fact, across all province, the unemployment rate among youth is more than double that of adults. Over the period 2008– 2014, except in Limpopo and KwaZulu-Natal, the unemployment rate among both youth and adults increased. In 2014, Free State had the highest unemployment rate among both youth and adults rising by 13,3 percentage points and 8,1 percentage points respectively. while Limpopo province recorded the only decline in unemployment rate among both youth (by 14,9 percentage points) and adults (by 8,3 percentage points) . Furthermore, presently, among provinces, Free State has the highest rate of unemployment (34.6 percent) with a moderately low absorption rate of roughly 40.6 percent and slightly higher labour force participation rate of 62.1 percent.

Adding to the youth unemployment rate, also the growing unemployment amongst women place SA's labour market problems in a dire condition, indeed, across all province, women are disproportionately represented among the long-term unemployed compared with their share of total unemployment. Moreover, disaggregation by gender, shows that women are highly vulnerable to chronic unemployment in the local about market because about larger proportion of the unemployed experiencing long-term unemployment spell are women (52,5%) compared to men (47.5%). Nationally, youth accounted for one in every two of the working-age population in both 2008 and 2014; however, their share of employment was substantially lower at 40,0%–45,0%. in 2014, about Free State about, 51.2 percent of women are unemployed.

Although, a recent cross-country study of 12 developing economies³ by World Bank (2014) finds that the SAn government have effectively utilised its fiscal policy via a progressive tax system to redistribute income from the rich to the poor as a best performing country in the group to , lifting about 3.6 million people out of acute poverty with a sharp decline in extreme poverty evidenced by noticeable decline in Gini coefficient from 0.77 (in 1994) to 0.59 in 2013, yet, in the absence of sluggish economic growth and distorted (rigid) domestic labour market, the massive structural unemployment rate and poverty incidence in SA remains a critical socio-economic with great potential to undermine the gains of democracy including the adopted radical pro-poor policy reforms.

Therefore, in anticipation of an economic recovery, in the short run, SAn government at both national and provincial level could only improve general welfare and boost employment growth by raising the tax threshold within a progressive tax system and creation of

severity of unemployment rate amongst the African blacks worsened since about 87,4 percent those that are unemployed have been looking for work for one year or longer.

² For instance, in 2010, the long-term unemployment incidence had risen by 6,8 percentage points to 66,2 percent from 59,8 percent in 2008 (see StatsSA, 2014a).

³ Other eleven (11) middle-income countries are: Armenia, Brazil, Bolivia, Costa Rica, El Salvador, Ethiopia, Guatemala, Indonesia, Mexico, Peru, and Uruguay. In this report, World Bank employed Commitment to Equity (CEQ) methodology to a sample of twelve (12) middle-income countries including South Africa, to determine the effectiveness of fiscal policy in these countries, especially to identify how taxes and spending work to benefit the poor and alleviate inequality

transient jobs by expanding the expanded public works programme. The pros and cons of the fiscal portion outweighs the latter alternative because of the increased tax burden on the affluent household which can lead to rise in tax evasion or avoidance. Most importantly, World Bank (2014) emphasise the shrinking fiscal in the country's fiscal framework, that is, the fiscal flexibility to raise taxes as a source of revenue to fund social spending (transfers to poor households) is limited. As such, the only viable option is to channelled the available fiscal resources into the expansion of public works programmes with the capacity to generate large amount of temporary jobs, offers income relief and work experience (or training) to the unemployed poor (predominantly women, youth and the disabled) to facilitate their absorption into the job market.

Based on the status quo, from an operational perspective, the implementation of EPWP to reduce the high employment rate and poverty gap (by providing variety of training as a means of skill development) might be viewed as an unproductive policy exercise owing to several administrative and technical factors already cited in this paper, albeit, the limited accrued benefits of EPWP initiatives to the poorest of the poor cannot be ignored. Arguably, irrespective of the critique of EPWP schemes as an employment-generating and poverty-reducing public programme with the aim of offering sufficient social protection (i.e. income relief), create useful public assets and employability of the able-bodied working poor through skill development (training or work experience), still, the factual consequence is that the large proportion of the poor (which consists of large proportion of African Blacks) bears the brunt of EPWP's weak performance outcome associated with under-expenditure and slow service delivery.

In 2004, the South Africa government initiated the expanded public works programme (EPWP) with a budget of R21 Billion. However, several international evaluation studies of large scaled PWP's analogous to South Africa's EPWP by Chakwizira (2010), McCord and Farrington (2008a), McCord (2008b), McCord (2007b), Islam (2004), Subbarao (1999), and Lipton (1996) among others, all finds that public works programmes (hereafter PWP) in countries such as India, Bangladesh and Argentina including Kenya and Botswana are more effective in mitigating high unemployment rate and poverty incidence than EPWP initiatives in South Africa. Equally, some PWP's such as the Temporary Employment Programme in Mexico, Trabajar in Argentina, and the MEGS in India are considered to be successful in creating employment for poor people (World Bank, 2001, 2003).

Unlike the multiplicity of EPWP objectives, even though some of the best-practice large-scale public works programmes (e.g. India's NGREP) lack skill development components⁴, in most cases, the single objectives of these programmes, clear targeting criteria and subsequent integration of programmes objectives into other national government policies, which lead to distributive positive externalities (e.g. adequate social protection - income relief, job opportunity and reduce poverty gap) in the anticipation of economic growth.

1.2. Research Overview

While initiated EPWP schemes in KwaZulu-Natal, Limpopo and Mpumalanga have enjoyed thorough international and local studies, the public works programmes in Free State are yet to be formally evaluated. In this light, this study seeks to three policy relevant key questions: What is the performance of Free State province to create temporary jobs, promote skill

⁴ See McCord (2008b:37)

development and mitigate poverty incidence through EPWP initiatives in comparison to other provinces? Second, what is the extent of labour intensification of implemented projects in the province to offer both direct (create jobs, improve skills) and indirect benefits (stimulate economic growth and enhance asset creation)? Put differently, are EPWP projects in the province satisfying labour intensive requirements? Third, what are the underlying factors choking the positive externalities of an increasing fiscal allocation to EPWP initiatives without concomitant increase (temporary and full time) job creation and/or reduction in poverty incidence to improve the general livelihoods in the province? Fourth, what are the feasible and practical policy strategies to amplify the gains of EPWP initiatives in the province to enhance economic growth, reduce the prevailing unemployment and poverty rates?

Specifically, in view of the current high unemployment rate and sizeable poverty gap in the Free State province, especially in the rural areas located in the local municipalities/districts, over the years, fiscal allocation to upscale EPWP schemes have increased, yet, at both provincial and municipal levels, “how” to optimise the use of the available financial resources to enhance provincial economic growth, and also create an income-generating jobs with longer duration for the unemployed poor remains elusive. Hence, a relevant policy questions are: Based on the empirical and theoretical evidence that high investment in infrastructure stimulates economic growth and alleviates poverty, among the array of EPWP sectors, which sub-sectors should provincial government direct its infrastructure investments? Second, to revive provincial growth and ameliorate the persistent high poverty incidence, which geographical location should policy makers prioritise to effective policy outcome using EPWP schemes? Third, what type of best-practice EPWP initiatives can the provincial government emulate to absorb large amount of labour input? Put differently, which EPWP initiatives can increase labour intensity work method in Free State?

To the best of our knowledge, this is the first research programme to comprehensively evaluate EPWP initiatives since its inception in 2004 to 2014 by constructing several performance evaluation indicators unlike earlier studies that employed ‘network opportunities created’ to gauge the performance of EPWP projects. Meanwhile, the analytical appraisal of EPWP projects at the national level presents a robust comparative benchmark with the Free State province, while further microscopic analysis of meta-data on Free State province and local municipalities provides insight into the co-operant factors hampering the macroeconomic distributive impact of EPWP projects (especially within the Infrastructure sector) on socio-economic dynamics in the province.

This study contributes to the existing evaluating studies as follows: First, by quantitatively constructing several robust performance measuring indicators to assess the impact of EPWP initiatives. Secondly, unlike prior studies that used cross-sectional or longitudinal surveys and focused on one EPWP sector or implemented project(s) in a particular region at a time, this study extracts meta-data to investigate the performance trend of EPWP initiatives implemented at the national, provincial and municipal levels from the inception of this programme in South Africa (i.e. April 2004) to the recently completed second phase of the EPWP cycle (i.e. March 2014) covering a ten (10) year period.

Thirdly, although, the quantitative techniques of Meth (2011), McCutcheon and Parkins (2009) and NDPW(2012a) are closely related to the analytical approach of employed in this study, nonetheless, while the analysis of are limited to particular phase of EPWP or financial year, to the best of our knowledge, this study is the first evaluation study to analysed different phases

of EPWP initiatives and provide cross-provincial comparative analysis. Fourthly, this is the first study to narrow its analysis to a specific province including implementing public bodies (provincial departments) and municipal districts. Finally, besides, filling the research gap in existing literature, where robust EPWP performance at provincial and municipal levels are under-researched, this study extends the methodological approach by employing a simple multivariate econometric technique to ascertain the distributive effect of growing fiscal allocation on an archetype local economy.

Results from meta-data analysis, consistent with international evidence, there is a limited evidence to substantiate the general view that EPWP is generating transient or full time job opportunities in Free State due low labour intensity and short duration of implemented projects that prevent adequate skill development to enhance the employability of beneficiaries or become self-employed after existing the programme. By implication, the short duration of implemented projects and severely low labour intensity supported the limited evidence that EPWP projects in the province have not improved livelihood of beneficiaries, create socially valuable assets and offered sufficient income relief to the unemployed poor to graduate from acute poverty state. Free State government will continue to face high unemployment and poverty rate, labour market distortion and rigidity problems linked to racial and skills levels, if labour intensity of EPWP projects and the widespread gross under-spending across implementing bodies are not eradicated, as well as, if private sectors participation in active job creation is not encouraged.

Lessons from successful international large-scaled PWP similar to EPWP provides concrete support to incorporate these programmes into other parallel poverty reducing and job creation policy programmes or other public initiatives, where training and retraining components are linked to skills demanded in different sectors in the mainstream labour market, in this light, the Free State government needs to integrate its provincial flagship infrastructure programme, that is, the *Operation Hlasela* into EPWP road work projects, to accelerate creation of more temporary jobs, provide basic skills for the unemployed poor to seek for employment in the local labour market, reduce sale of assets and poverty incidence due to access to regular stream of income.

Besides, by relying on irrefutable large body of evidence in line with international findings, Free State government will continue to face high unemployment and poverty rate, labour market distortion and rigidity problems linked to racial and skills levels, if labour intensity of EPWP projects and the widespread gross under-spending across implementing bodies are not eradicated, also, if private sectors participation in active job creation is not encouraged through public-private-partnerships (PPP).

As a caveat, the results in this study should be viewed with caution due to data quality, still the derived inferences provides insight into the extent of performance of EPWP projects and the implementing bodies in Free State. Equally, to augment the documented empirical results in this study, specifically for policy design purposes, we strongly recommend an in-depth cross-sectional and longitudinal surveys, and poverty incidence analysis to adequately assess the impact of EPWP initiatives on existing and former beneficiaries for policy design purposes. It is worth mentioning that, in spite of the extensive review of international and regional literature to identify the shortcomings of EPWP initiatives, the intention of this study is not to criticise, but to identify possible corrective measures through which the benefits of EPWP could be magnified, especially at provincial level, such as Free State.

The rest of this study is structured as follows. Next section provides an exploratory analysis of public works programmes from an international perspective highlighting theoretical underpinnings. Section 3 discusses the operational framework and typology of public works programmes, as well as, discusses empirical evidence in support of and against public works programmes as an employment-generating and poverty-reducing initiatives. Section review the objectives, scope and operational framework of expanded public works as an archetype of public works programmes in South Africa. Following this, section 5 document international evidence via cross-country comparative analysis to benchmark EPWP performance against best practice PWP elsewhere. This section, also, document positive spin-offs and shortcomings of the expanded public works. Section 5 focuses on the evaluation of EPWP performance at national level (i.e. across provinces with a special focus on the performance of Free State) using constructed performance indicators for this study, the following section explores the performance of EPWP projects at provincial (departmental), municipal and district levels in Free State using our constructed performance indicators. Also, the multivariate econometric model to examine the link between rising fiscal allocation for EPWP programmes and real macroeconomic variables is presented in this section. Whilst section 7 provides a concise discourse on the observed findings, section 8 offers useful policy recommendation, particularly for policy makers in Free State. The final section concludes.

2. THEORETICAL BACKGROUND

2.1. Exploring the Linkages between Economic Growth, Poverty Incidence and Human Capital Development.

In theory, the link between economic growth, poverty incidence and unemployment rate can be examined through three distinct channels, namely: (i) direct and indirect (see Holmes, et.al., 2013) (ii) macro (i.e. the real aggregative economy)-, and micro (industry structure) - levels (see, e.g., McCord and Seventer, 2004a; Islam, 2004), and (iii) supply and demand channel (Islam, 2004).

First, economic growth exert an indirect influence on poverty, if total factor productivity generated as a result of high economic growth raise output productivity, which in turn stimulates increase in aggregate demand for labour. In response to high production of goods due to an increase in aggregate demand, firms demand for labour input rises, thereby creating employment opportunities for the unemployed to work and earn income or wages. Eventually, the combined effect of a increase in job demand by firms to offset high production and the resultant rise in household income or wages of the working force reduces poverty incidence indirectly. In this way, employment creation becomes a significant channel promoting socioeconomic stability (i.e. mitigate social disruptions via protests), stimulate economic activities and employment growth (for example, see Holmes, et al. 2013; Islam, 2004; World Bank, 2011 amongst others).

In support of this theory, the studies of Ravallion (1993), and Dollar et al. (2001) concur that an increasing economic growth reduces poverty incidence, by implications, poverty rate tends to be lower in countries with a growing economy. In contrast, Islam (2004) argued that evidence of from studies exploring the economic growth-poverty nexus are technically flawed as the role of employment creation is often excluded from their analysis.

The second transmission channel through which an increase in economic growth reduces poverty depends on the extent of employment creation at micro (sectoral) and macro (aggregate economy) levels. For example, evidence from the studies of Leibbrandt and Woolard (2001) and Essama-Nssah and Bassole (2010) shows that employment creation raised income and decrease poverty in low-income countries at both micro and macro levels for South Africa and Cameroon respectively. Particularly, at macro-level, a sustained economic growth is associated with high factor productivity of the active labour force and income generation through real wages and earnings from self-employment. Indeed, high rates of economic growth indirectly boost output productivity, the subsequent increase in labour absorption rate which allows both the unemployed and underemployed to participate in the expanding economic activities can leads a decline in poverty gap.

Conversely, at micro-level, an increase in household income (wages or earnings) as a result of engaging in productive work activities enables the working labour force to spend more on education and skill formation of their children, in effect, improving the productive capacity of the future workforce, and creating necessary conditions for achieving higher levels of economic growth. In this way, the linkage between economic growth, poverty reduction and employment creation becomes a virtuous circle of economic growth leading to poverty reduction via growth of employment with rising productivity, and reduced poverty creating the possibility of further increases in productivity and higher rates of economic growth that benefits the poor.⁵

Also, at both macro and micro-levels, in developing countries unemployment rate and level of education are inversely related (for South Africa, see StatsSA, 2014b)⁶, even as, poverty and education are inversely correlated⁷. This implies that an intensified investment in human capital (training and skill development) may be another key channel for high economic growth to benefit the unemployed and/or working age poor. For instance, the unemployment rate in SA remains chronically high and structural due to lack of appropriate skills and employment opportunities (see McCutcheon, 2014, Meth, 2011; Triegaardt, 2009; McCord et al., 2004a amongst others).

Meanwhile, some studies have argued that, access to employment *per se* is not the only determinant factor to alleviate the severity of high poverty incidence and inequality in developing countries at micro or macro levels, but the quality of employment in terms of the type of job, the sector in which it is located, duration, wage levels and terms of employment, the scale of employment, its spatial distribution, and its allocation across the income distribution, are significant factors in determining the extent to which employment contributes to poverty reduction (e.g. Holmes et al., 2013, De Vries and Specker 2009, ILO;2003). For example, for Sub-Saharan Africa countries, Yogo (2008) finds a strong evidence that high unemployment problems is associated with quality of jobs created rather than quantity. This argument is supported by ILO (2003) policy prescription for an inclusive economic development in developing countries that macroeconomic policy and labour market interventions by government will only be effective in reducing poverty and inequality on the pre-condition that '*decent work*' is created for the poor.

⁵ See Islam (2004) for detailed conceptual analysis of virtuous employment growth-high factor productivity-poverty reduction cycle.

⁶In South Africa, higher unemployment rates are associated with levels of education below matric, irrespective of gender

⁷ Islam (*ibid*)

The Third channel to assess the economic growth-poverty reduction nexus is based on the linkage between economic growth, employment and poverty in a demand-supply framework. On the demand side, high growth in employment, shifts labour supply to high productive and technological sectors, whereby creation of assets for the poor influence their income. Whereas, on the supply side, the ability of the poor to access the available jobs due to economic growth remains a critical factor. Conversely, the levels of education and skills of the work force determines the employability of the work force. Put differently, regardless of abundant supply of labour and rise in economic growth, the level of skill acquired through extensive work experience and education plays a major role in gaining employment in a highly competitive labour market.

Interestingly, a growing strand of literature investigating the economic growth-poverty reduction and employment creation nexus reiterate that a high and sustainable all inclusive economic growth alone is not sufficient to reduce poverty incidence. For example, in a cross-country study of seven developing countries with similar growth rates and poverty levels between 1970 and 2001⁸, Islam (2004) finds that the poverty reducing effect of growth depends on other factors such as the pattern of output growth, degree of inequality in the distribution of income, the extent of employment-growth intensity and the ability of the poor to access jobs created. A review of other studies provides additional factors that can augment high economic growth to reduce poverty incidence, these are:

- Productive use of labour input and asset creation for the poor (see, e.g., Squire, 1993),
- Availability of 'decent work' that generates adequate income, provides social protection via equal gender employment, security and human dignity (see, e.g., ILO, 2003),
- Increasing public sector infrastructure investment (see, e.g., Aschaeur, 1989a; Munnell, 1990a; World Bank, 1994; Lau and Sin, 1997; Calderon and Serven, 2004; Romp and de Haan, 2005; Fourie, 2006; Senevirante and Sun, 2013 and so on);
- An improved infrastructure quality and quantity (see, e.g., Calderón and Chong, 2001; Roja, 2003; Briceño-Garmendia et.al, 2008)⁹;
- Implementation of labour-intensive work method through implementation of public works programmes (see, e.g., Lipton and Ravallion, 1995; McKay, 1997; DFID, 1997; World Bank, 2001, 2014),
- Easy access to capital/credit and productive assets to encourage self employment and participate in SMME activity (see, e.g., Mothapo, 2013; Moyo, 2013, Thwala, 2008, World Bank, 2005, ILO, 2003, McCord, 2002)

More importantly, due to the policy imperativeness for the working age poor to benefit from an inclusive economic growth, many influential cross-country studies have ardently recommend the necessity the implementation of workfare programmes (i.e. public work

⁸ The countries are: Bangladesh, Bolivia, Ethiopia, India, Indonesia, Uganda, and Vietnam

⁹ For example, Ramirez and Esfahani (2000) argued that infrastructure quantity and quality are key determinants of growth in developing and transition economies. For South Africa, Fedderke, Perkins and Luiz (2006) and (Fedderke and Bogetic 2006) finds that both infrastructure quantity and quality positively and significantly affects economic growth, improves labour productivity and raise marginal productivity of capital. See Omoshoro-Jones (2013) for a survey of empirical studies that explores the impact of public infrastructure investment on economic growth, poverty, human capital development and income inequality.

programmes, PWP) to serve as a fundamental component of government economic policies and active labour market interventions to create employment, particularly in developing countries (see ILO, 2009; World Bank, 2001, 2004, 2011). In fact, a recent extensive cross-country review of literature assessing the impact of employment creation poverty reduction and stability low-and middle-income countries (categorized as fragile states) confirmed that from a theoretical perspective, income relief through temporary employment is appropriate where the problem of poverty and/or unemployment is determined by some external shock, such as civil conflict, drought, floods, economic crisis or recession – which disrupts the labour market¹⁰. Evidently, employment creation could affect social stability indirectly by reducing incentives to participate in conflict, this in turn, lead to uninterrupted productivity that promotes vibrant economic activity and employment growth (ILO 2009, World Bank 2011).

Against this backdrop, the public works programmes (hereafter, PWP) have gained sizeable popularity in the national governments of developing economies, and equally amongst international donors, owing to the ease of using PWPs as a short-term or long-term policy measures to generate employment opportunities, improve education - skill and create assets for the unemployed and/or working age poor (Bokolo, 2013; McCord and Farrington, 2008). For instance, developing countries such as India and Bangladesh have successfully implemented public works programmes that have significantly reduced poverty and ameliorated unemployment (see Del Nino et al., 2009)

3. INTERNATIONAL PUBLIC WORKS PROGRAMMES: EXPLORATORY ANALYSIS OF CONCEPTUAL FRAMEWORK

3.1. Theoretical Underpinnings of Public Works Programmes

Intrinsically, the common consensus in international literature indicate that PWPs are employed as either a short term policy measure to respond to acute or transient stochastic shocks generated from a once-off event (e.g. drought or flooding) or a long-term macroeconomic measures to counteract cyclical crisis (e.g. shortage of employment in agriculture sector during off-season prevalent in Asian countries). Practically, public works programmes are typically perceived as counter-cyclical labour market intervention created to mitigate the effect of labour market failures or cyclical unemployment emanating from economic crisis, natural disasters, deep and sudden collapse in national output and increase in income poverty (World Bank, 2001). By and large, in both the developing and developed countries, PWPs are usually created to achieve two main objectives, namely: (a) increase the absorption rate of (unskilled) labour to provide *income relief* through wage payment, in effect, alleviating household poverty incidence and promotes creation of assets, and (b) address supply side labour constraints by promoting skills transfers to achieve political goals such as social stability by reducing inequality gap.¹¹

¹⁰ Refer to the study of Holmes et al. (2013). Countries categorized as fragile states are: Afghanistan, Bangladesh, Burma, Burundi, Cameroon, Central Africa Republic, Chad, Democratic Republic of Congo, Congo Republic, Côte d'Ivoire, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Kenya, Kyrgyzstan, Liberia, Nepal., Niger, Nigeria, Pakistan, Sierra-Leone, Somalia, Sudan, Tajikistan, Timor-Leste, Uganda, Uzbekistan, Yemen, Zimbabwe (see Holmes et.al., 2013:12)

¹¹ See McCord, 2002:24

Furthermore, to allow positive externalities from PWP to reach beneficiaries, these programmes can be designed as a universal or targeted initiatives with conditionalities based on the objective of the programme, political / socio-economic goals to be achieved, severity of labour shortages, types of prevailing unemployment, spatial distribution and available resources in terms of fiscal budget. For example, universal PWP are explicitly available to all unemployed or working-age poor seeking employment (for example, the US New Deal, Argentina's Jefes programme, the Ethiopian Productive Safety Nets Programmes, the Indian Maharashtra Employment Guarantee Scheme and National Rural Employment Guarantee Acts, NREGA)¹². Meanwhile, targeted PWP is strictly based on job rationing based on specific criteria such as severity of poverty incidence per gender or household (e.g. NREGA, the Jefes, Zibambele programme in Kwa-Zulu Natal) or per beneficiary (e.g. Gundo-Lashu programme in Limpopo)¹³

Equally, as poverty-reduction policy tools, PWP are useful counter-cyclical instrument to explicitly attract the poor into temporary productive employment by paying low wage rate (see World Bank, 2001:155; Subbarao, 2001:2). In this context, PWP programmes enhance labour quality of previously unskilled beneficiaries (i.e. unemployed and working-age poor) to access future skilled work opportunities due to a pro-poor economic growth, whilst, the wage component of PWP offers a *risk insurance function*, responding to acute or transient shocks resulting from a single (covariate) or cyclical crisis, and encourage asset accumulation or prevent selling of assets, in effect reduce the community exposure to future stochastic shocks¹⁴ (see, e.g. Del Nino et al., 2009; McCord and Farrington, 2008; McCord et al., 2004a). For instance, Gilligan and Hoddinot (2006) finds that Ethiopian PWP provides substantial income relief (via wage transfer) to beneficiaries at least 18 months after exiting the programme, this reduced loss of assets due to distress selling during crisis period, after exiting the PWP programme. In addition, the wage transfer component of PWP enhance its wide-spread preference as labour market intervention amongst national governments and funding agencies because (i) payment of wages requires actual and/or active labour supply from participants deflecting the criticism against offering the unemployed 'hand-outs' as cash transfers (i.e. social grants), which potentially discourage people to work, and (ii) self-targeting wages to attract only the poor is cost-effective preventing high expense on more complex targeting methods based on income or expenditure thresholds¹⁵.

Apart from the employment generating capacity of PWP, in its simplest form, the cost and impact of PWP on beneficiaries is further amplified by offering income relief to smoothen consumption and ease the stress selling of household assets during crisis periods, labour market disruption, and restricted access to income (see McCord, 2008b:7). Some studies

¹² See McCord (2007b), McCord et al. (2008b) and Dev (1995).

¹³ For detailed comparative analysis on the two most widely researched EPWP initiatives in SA, and perceived as best practice PWP at international level, namely Zibambele and Gundo-Lashu programmes established in KZN and Limpopo respectively, see McCord and Van Seventer, 2004; ESAU, 2004; McCord and Wilkinson, 2009; McCutcheon and Parkins, 2009; NDPW, 2012a)

¹⁴ Devereux (2000) and World Bank (2001) maintained that given the job creation, skill development (i.e. training or work experience) and wage transfers objectives embedded in PWP, these programmes have strong poverty-reduction effect to allow participant to accumulate assets in a positive scenario (i.e. allowing participants to be able to meet their daily needs by buying, clothing, sending their children to school) or prevent disinvestment of assets in a negative scenario. See Subbarao (1997) for detailed discussion.

¹⁵ For international comparative studies (see World Bank, 2001; McCord, 2007b; McCord and Farrington, 2008b; McCord, 2008a; Chakwizira, 2010)

argued that consumption-smoothing is the primary benefit of short-term employment in response to acute or chronic crisis (see Holmes, et al., 2013:21; McCord and Farrington, 2008a). In this way, PWP offers basic 'risk coping' or 'risk mitigation' or 'protective' social protection measure in response to transient or acute shocks, simply functioning as a social safety net to support the unemployed and/or working-age poor by creating employment opportunities that directly stimulate demand for unskilled labour (McCord, 2007b:13, McCord, 2002:24, World Bank, 2004)¹⁶.

On the contrary, McCord and Farrington (2008a) assessing the cost-effectiveness and immediate impact of wage transfer on household consumption considering an archetype short-term (in South Africa) and long-term PWP (in India), they finds that the effect of wage transfer as a *social protection benefit* of both short-term and long-term PWPs are limited to wage transfer and consumption smoothing rather than income accumulation, skill development or accumulation of asset created¹⁷. Also, they argued that PWP may not be cost effective due to high costs to create productive assets (e.g. technical design, supervision, materials and equipment), the threat of elite capture is pervasive and high cost per unit of marginal employment.

Moreover, PWPs are generally implemented as labour-intensive programmes in economic sectors with high productivity (e.g. infrastructure, manufacturing and non-farm) with the expectation of lifting poor households from poverty and/or reduce poverty gap.¹⁸ Nonetheless, the poverty-reducing goal of PWPs is dependent on the extent of access to funds, markets and distribution of assets.

[Insert Table 1 in Appendix I here]

3.1.1. Implementing Public Work Programmes: How Relevant is Setting Objectives?

In extant literature, public work programmes are susceptible to fail, when they constitutes unclear and/or multiples objectives. In support of this, Adato et al. (1999) and McCord et al. (2008b) finds that the community based public works programmes (CBPWP) and expanded public works programmes (EPWP) created in SA failed to have an significant impact on the livelihood of beneficiaries as a result of unclear and multiple objectives. Equally, Curtin (1999) reported similar finding for Indonesia's Padat Karya (PK) programmes.

In spite of the multiplicity if PWP objectives, it is expected that these programmes satisfy three main conditions (see ESAU,2004). First, PWPs must effectively target beneficiaries without implicitly excluding the unemployed and/or working-age poor from participation owing to

¹⁶ Cited in Holmes, et al.(2013:21), Keddeman (1998), Subbarao (2003) and McCord (2009) emphasised that PWPs will only affect immediate consumption of beneficiaries, if only prevailing wage is sufficient. Although, PWP are characterised by setting low-wage rate below market wages to explicitly attract the unemployed poor (World Bank, 2001:155), but, the study of Datt and Ravallion (1994) on Maharashtra Employment Guarantee Scheme (in India) shows that high wage rate for unskilled undermines the effectiveness of poverty targeting with severe unintended consequences such increased job rationing and attraction of non-poor (see McCord, 2002:32). Subbarao (1997) reported similar findings for short-term PWPs implemented in developing countries such as Tanzania, Bostwana, and Kenya.

¹⁷ Similar findings was observed in the analysis of the most popular short-term PWPs in SA, i.e. Zibambele and Gundo-Lashu by ESAU(2004).

¹⁸ See McCord et al.(2002, 2008b), McCutcheon and Parkins (2009) and McCutcheon (2014).

job substitution, steady wage payment and work guarantee. On this basis, the strategy of setting wages by relying on self-targeting, as well as, administrative selection and job rationing becomes critical. Because, in reality, higher wages create excess demand for work opportunities, distort labour market and allow the non-poor or unemployed workers in casual jobs with relatively lower and unsteady wages to actively compete with the unemployed poor by participating in PWP initiatives. In this case, the poor can only benefit from created job opportunities applying job rationing.

Table 1: An International Perspective- Broad Objectives of Public Works Programmes

PWP OBJECTIVES	INTENDED PURPOSE
Employment	<ul style="list-style-type: none"> • Reduce unemployment rate through creation of short-term work employment opportunities in anticipation of economic growth • Minimize the impact of frictional unemployment via skill development (i.e. re-training and work experience) to ensure the employability of those exiting PWPs to take up existing vacant work opportunities • Simultaneously, increase aggregate demand for labour through labour intensification • Enhance small business enterprise development in high productivity sectors such as construction, manufacturing and non-farm in order to change structure of labour demand and facilitate greater labour intensification (instrumental) • Increased fiscal spending on long-term employment programmes such as Government Employment Schemes (GES)
Skills Development	<ul style="list-style-type: none"> • Foster skills training and work experience to improve the employability of beneficiaries and earn income after exiting PWP (instrumental, directly contributes to increase in aggregate demand)
Poverty Alleviation (Social Protection)	<ul style="list-style-type: none"> • Provides income relief through temporary employment or an ongoing/repeated employment • Effectively, improve livelihoods of beneficiaries after exiting PWP
Macroeconomic Stimulation	<ul style="list-style-type: none"> • Encourage expansionary fiscal policy to stimulate demand on a regional or national level
Physical and Social Infrastructure Provision	<ul style="list-style-type: none"> • Enhance the provision of basic physical infrastructure and service delivery (e.g. building-, upgrade-, and maintenance- of roads, construction of schools, hospitals, dams etc.) • Improve social infrastructure through service delivery (e.g. Home Based Care (HBC), pre-school facilities)
Political Stabilization	<ul style="list-style-type: none"> • Facilitate good public governance, transparency, accountability and proactive response to unemployment and/or poverty crisis.

Adapted from McCord, 2008:16

The second aim of PWP schemes entails that sustainable and beneficial projects are implemented. In this case, community (local) participation during the selection process of projects is vital to encourage community participation in creation of beneficial assets and to take ownership of selected projects. On the other hand, a recurrent budget allocations by government to cover constant upgrading /maintenance costs is essential for sustainability of projects implemented. While, the third goal of PWP initiatives entails cost-effectiveness in constructing/maintaining assets and/or channels for distributing targeted welfare benefits. To achieve this requires the use of labour intensive work approach efficiently more than capital-based technology in completion of projects without compromising on quality of projects.

In the light of this, following an extensive review of internationally implemented PWP¹⁹, McCord (2008b) provides six (6) main objectives of PWPs as presented in Table 1, for appropriate implementation and beneficial impact. Noticeably, the highlighted PWP objectives indicates both direct and indirect impact of PWPs. In most cases, the primary aim of PWP are often to alleviate poverty incidence, but, the inter-connectedness of the remaining five objectives are instrumental to amplify the positive impact of PWP that offer social protection. For instance, variety of other policy concerns can be addressed directly in PWPs such as: raise labour absorption rate, remove supply-side constraints through skills development, work experience, boost the economy, ensure political stability and eradicate participation in social conflict, particularly in fragile states or developing countries (see, e.g., Wade, 2004; Collier et al., 2009; and Arai, Cissé and Sock, 2010)

3.1.2. Types of Remunerative Options in Public Works Programmes

From extant international literature on public employment schemes such as PWPs adopted in these developing countries (i.e. low-and middle-income economies) can be designed as employment creation opportunities that entail the payment of a wage either in cash or food in return for labour input, established either by the state, an international funding agency, an agent acting on behalf of the state such non-government-organizations (NGOs)²⁰. Nevertheless, evidence from analytical studies of Devereux(2002), Sphere (2004) and McCord and Farrington (2008a) accentuate that the use of food as remunerative measure for labour supplied is less desirable cash, when adequate food supplies are available, since consumption needs of the poor significantly precedes asset accumulation. Besides, the widely used cash-for-work (CFW), other alternative mode of payment for labour supplied inherent to public work programmes are, viz:

- Food-for-work (FFW) supported by agencies as World Food Programme (WFP) and USAID offer food to participants as payment²¹;
- Inputs-for-work (IFW), where wages are paid in the form of agricultural inputs (fertilizers and seeds) as in the Malawian Government's Inputs for Assets (IFA) programme (e.g. in United Kingdom, see DFID 2004);
- Inputs-for-work (IFW); food-for-training (FFT) and food-for-assets (FFA), where an incentive is offered to communities to build public assets (initiative utilized by World Food Programme).

In contrast, labour-intensive PWPs focusing on building infrastructure assets in both the public and rural areas (e.g. road construction, upgrades and maintenance of road networks,

¹⁹ Refer to McCord (2002, 2007b) for detailed cross-country review of public works programmes.

²⁰ For example, for studies on cash-for-work and food-for-work programmes funded by Oxfam created in Afghanistan (see Jones 2004) and Niger (see Oxfam, 2006). For studies on cash -for-works programme in Somalia funded by an Action Contre le Faim (see Mattinen and Ogden 2006), and an International Committee for the Red Cross (ICRC) cash -and food- for work programme in Somalia (see Montani and Majid 2002). For studies on food-for-work programme Ethiopia (see Gedamu 2006; Gilligan and Hoddinot 2006)

²¹ Food-for-work employment schemes are effective in countries with food scarcity, high cost of food or war ravaged countries with no food security, irrespective of the quality or value of the asset created (Basu, 1996, McCord 2005a). Also, cited in ESAU(2004), food-for-work programmes are typically implemented to assist in relief and rehabilitation after disasters, or to undertake longer-term programmes of (generally) rural development.

alien plants prevention, terracing) usually offers cash-for-work (CFW) means of payment for labour supplied (see ESAU, 2004:4).

3.2. Impacts of Public Works Programmes: What Does the Literature Say?

3.2.1. International Evidence

International literature on PWPs and cross-country experience provides concrete evidence for wide implementation of these programmes ranging from large-scaled initiatives with multiple objectives to respond to acute or sustained levels of unemployment and/or small project-based or spatially limited interventions in response to transient labour market failure, weak economic growth, high poverty incidence and inequality in order to improve livelihoods of poor households, offer employment opportunities and provide infrastructural assets. From international surveys, the common examples of large-scaled PWPs are: (i) the ongoing Maharashtra Employment Guarantee Scheme in India (MEGS), (ii) Argentina's Jefe's programme, (iii) Ethiopian Productive Safety Net Programmes (PSNP), and (iv) the New Deal programme during the Great Depression in the USA.

Whereas, short-term PWPs are commonly implemented in developing countries such as the Padat Karya (PK) programme in Indonesia, the Expanded Public Works programmes (EPWP) in South Africa, Kenya Rural Access Roads Programmes (KRARP) in Kenya, Malawi Social Action Fund (MASAF) in Malawi and Tanzania Social Action Fund (TASAF) in Tanzania.²²

Large body of evaluation studies reported that PWPs either has a short-term or long-term intervention measures implemented in the rural or urban areas, in most cases, produce positive externalities that improves the livelihood of beneficiaries through wage payment, asset provision and education-based trainings to enhance skill development through work experience. For instance, Teklu and Asefa (1999) studied implemented PWP in sub-Saharan Africa (i.e. Botswana and Kenya), Asia and Latin America, their results suggests that PWP initiatives only reduces poverty intensity (poverty gap) rather than poverty incidence. This finding is in line with the inference of Del Nino et al., (2000) from examining PWPs in Bangladesh and India, where poverty incidence and unemployment reduction was significant.

Focusing on PWPs established in Southern Africa, McCord and Meth (2011), McCord and Wilkinson (2009a), McCutcheon et al. (2009), Ndoto and Macun (2005), and McCord et al. (2004a), finds that even though, the implementation of EPWP in SA generates temporary employment and offers income relief, albeit, EPWP initiatives has limited impact on employability, poverty incidence and inequality due to short duration of the programme, lack of adequate training linked to work experience created and unclear multiple objectives of the programmes.²³ These problems can be attributed to erroneous design and application of

²² For detailed international survey on types of PWPs, see the works of McCord (2008a), and McCord (2007b).

²³ In their empirical study, Woolard, Leibbrandt and McEwen (2009) and Leibbrandt and Finn (2011) finds that poverty rate in SA has a racial dimension (prevalent in African Blacks than other races), gender (pervasive amongst Africa females than males) including spatial, in contrast to Apartheid era, on aggregate there is a reduction in poverty level due to increase in fiscal allocations (cash transfers), yet, poverty incidence remains high, whilst there is no change in inequality which mainly driven by labour market dynamics. They suggest that only employment growth and/or reduced wage

EPWP as a short-term measure typically used in response to transient shocks to address persistent structural unemployment problem (which is the proximate cause of high poverty incidence) emanating from lack of demand for the prevailing massive unskilled labour in the main stream economy and general low level of education / training to ensure skill development (i.e. a labour market supply side constraint problem) for employability (see Trieggardt, 2009:6; McCord and Meth, 2007).

Furthermore, it is well documented that, public employment scheme implemented in the US during the Great Depression of 1930s absorbed between 30-50 percent unemployed and improves consumption (see Rifkin, 1996; Harvey, 2007b). For India, as a universal scheme, the MEGS programme absorbed at least 75 percent of available person days in the rural Maharashtra State, reduces rural unemployment by 35 percent and improve labour force participation by 20 percent between 1975 and 2005 (see, e.g., McCord, 2002:24; Chakwizira, 2010:245).

Evidence from cross-country evaluation of PWP's undertaken by Subbarao (1997) and Lipton (1998) supported the positive impact these programmes on beneficiaries in terms of work opportunities provided and social protection (income relief through wage transfer) on beneficiaries. For instance, PWP's established in developing countries such as: in Kenya created employment opportunities of at least, 1 million per annum between 1992 and 1993 to increase labour force participation rate by 0.6 percent; in Botswana about 74,000 unemployed workers benefitted from an increment in gross income of 20 - 35 percent from 1985 to 1986,²⁴ meanwhile, in Honduras approximately 8.9 million persons day work opportunities was generated from 1990 to 1993 to achieve 5 percent increase in participation rate. In Bolivia, on average, 30,000 working age poor were employed (equivalent to an additional 3 percent increase in labour force) in government employment schemes, in effect, raising average income by 45 percent. Similar programmes in Tunisia and Mauritius have been reported to increase labour market absorption rate between 20 and 40 percent (see McCord, 2002). According to Thwala (2008), an upscaled employment creation scheme in Tunisia (referred to as Worksites to Combat Underdevelopment) generated, on average, 20.7 days persons day work opportunities per participants.

Taking into account, variant types of PWP's created to produce infrastructure assets using labour-intensive work approach, McCutcheon and Parkins (2009) observed that construction projects in Botswana and Kenya create significant number of employment as a result of achieving over 50 percent labour intensity rates. Specifically, at the peak of Kenya's Rural Access Roads programme, at least 10,000 and 5,000 labour intensive employment opportunities were created for the working age poor through road construction and

inequality-reduction policies can significantly affect the level of inequality (pp.98). World Bank (2014) finds similar evidence for SA that increase in fiscal spending on grants and transfers via taxation, have considerably reduce extreme poverty from 34.4 percent to 16.5 percent (i.e. 3.6 million people were lifted out of poverty trap measured as \$2.60 per day). Nevertheless, only quality infrastructure investment, skill development of low-paid workers and sustainable pro-poor economic growth can significantly shrink poverty and inequality level due to limited space within the fiscal system to facilitate more income redistribution as a result of high fiscal deficit and external debts. This evidence confirms the argument of Van der berg (2005:22) that an increase in social grants as a poverty-reducing strategy is nearing the boundaries of its effective use owing to fiscal constraints.

²⁴ McCutcheon (1995) observed that Botswana's national PWP in the form of labour-intensive road construction projects created over 3,000 jobs for working unemployed.

maintenance respectively using low wage rate. Similar projects are been replicated in Malawi and Lesotho.

Furthermore, in a methodical review of about 154 studies assessing the positive effect of poverty-reducing and stability impact of job creation on low-and middle-income countries based using large-scale or short-term small scale public works programmes, undertaken by Holmes et al.(2013), results from the commonly used household surveys on beneficiaries confirmed that, short-term or long-term PWP, in the short-run increases consumption (and consumption growth), offer income relief to stem sale of assets, foster creation of infrastructure assets, limit migration from rural to urban areas, increased agricultural productivity, stimulate domestic economic growth and increased horizontal distribution. For instance, for Ethiopia, Gedamu (2006) survey on 200 households beneficiaries of food-for-work (FFW) programme revealed an increase in consumption and nutrition levels of participants. In a separate study for Ethiopia, using difference-in-difference (DID) and propensity score matching (PSM) method to analysed longitudinal household survey on FFW participants after 18 months of exiting PWP programme, Gilligan and Hoddinot (2006) finds evidence supporting significant increase in consumption and food security, encourage household savings, and reduction in perceived risk to stochastic shocks. Whereas, Jones (2004) examined the impact of CFW programme initiated by Oxfam in Afghanistan, in response to transient (drought) and cyclical crisis (in the agriculture sector), he finds evidence of decline in seasonal migration, sale of assets, soil erosion and water scarcity, asset provision and temporary income relief. In related evaluation study by Oxfam (2006) to assessed the impact of an Oxfam PWP designed as cash-for-work (CFW) in Niger rural areas, from the survey of 16 focus group discussions and semi-structure interview of participants randomly selected (out of 48 projects), results from this study provide evidence supporting general improvement in livelihoods of participants to about 54 percent, low seasonal migration, increased horizontal distribution, reduced disinvestment of asset and improved quality of food intake, and limited household savings (only 13 percent could afford to save).²⁵ Ofem and Ajayi (2008) analysed the effects of Youth Employment Scheme, an employment creation initiative in Nigeria. Using ordered probit regression model based on multi-stage sampling to analyse the survey response of 200 youths from 10 communities, they found positive but limited impact on the short-term job creation and wage transfer. Similarly, the result of separate survey studies assessing the impact of CFW/FFW programmes in Somalia by Montani and Ogden (2002) and Mattien and Ogden (2006), indicate a positive impact on beneficiaries derived from asset creation, income relief to prevent selling of assets and reliance on grants, improved productivity in agricultural sector due to earnings received in form of cash or agricultural products (e.g. seeds, fertilizers, tools etc), and improvement in consumption²⁶. The combined effect of these programmes in Somalia act as catalyst to indirectly stimulate domestic economic growth and trade.

3.2.2. Can Public Works Programmes Be Erroneously Implemented?

Recently, growing body of studies evaluating the poverty-reducing, job creation and asset output impacts of PWP in developing countries (especially countries in the SSA region with large population and high poverty incidence) concurred that the proliferation of implementation PWPs are based on priori hypothesis that as either a short-term or long-term

²⁵ At least, 30% of household still use debt to improve consumption.

²⁶ The survey of Mattien, et al. (2006) covered 400 beneficiaries using a semi-structure focus group discussion and interview.

measures, and public works programmes has positive effect on livelihoods and graduation out of chronic poverty²⁷.

A thorough survey of extant international literature and PWP initiatives shows that due to prolific implementation of PWP, there are scenarios where a specific type of PWP (e.g. short-term PWPs offering temporary employment) are implemented in response to variety of transient and cyclical shocks without recognizing that these programmes will only achieve limited set of objectives, as well as, function effectively in certain labour market (McCord, 2008b:36). In this light, Subbarao (1997:168) cautioned that PWPs are merely provides temporary safety net, as such, these programmes cannot be utilized as a permanent escape route from poverty. For instance, in South Africa, it is well documented that an archetype of PWP implemented as Expanded Public Works Programme (EPWP) creates employment for the working age poor, as a result, alleviate poverty (for example, see NDPW, 2014b; Henderson, 2013; Dicks et al., 2011 and NDPW, 2009a)²⁸.

Nevertheless other emerging studies concludes that the implementation of this programme is insufficient to alleviate the ongoing chronic poverty problems, high unemployment rate and lack of skill (e.g. Phillips, 2004:2)²⁹. In this context, successful implementation and/or effectiveness of PWPs to benefit participants is depends on setting clear objectives and priorities. Additionally, ranking outlined objectives can affect the design and social protection outcome on such programmes (McCord, 2008b:16), as failure to set clear objectives with adequate rigour often lead to tensions and contradictions pre-set objectives, which in turn, negatively affect programme outcome as the case of many programmes in SSA and Asia countries (see Curtain 1999; Adato, et.al., 1999; McCord, 2007).

Moreover, McCord (2008b) notes that current literature on both short-term and long-term PWP at international level, failed to distinctly categorised various types of PWPs to avoid conceptual misconceptions associated with inappropriate policy choice, programme design errors, and inapt expectations on the outcome of these programmes by implementers due to

²⁷ According to McCord et al. (2008a:2), this pre-supposition is based on the positive distributional impact of PWP operating through three channels; the wage payment, improved labour market performance (as a result of both workplace experience and training) and benefits accruing from the assets created (McCord, 2005).

²⁷McCord (2004b:3) cited in Mtapuri (2014) argued that unemployment in South Africa is chronically structural in nature due to lack of demand for (unskilled) labour in the formal sector since the 1970, declining primary sector activity, technological change, and entry into global economy'. These factors have led to significant impact on both total employment rates and the composition of labour demand, leading to slow employment growth and rising unemployment among the low and unskilled during the 1990s and early 2000s (see McCord and Wilkinson, 2009; McCord and Borhat, 2003 for discussion) a situation described by Kingdon and Knight in 2000 as 'catastrophic' (2000: 13). Consequently, the number of new labour market entrants exceeds the new jobs created

²⁸ See President Zuma's speech at the launch of Phase 3 of EPWP, 03 October, 2014 at <http://www.gov.za/address-president-zuma-launch-expanded-public-works-programme-phase-3-keiskammahoek-eastern-cape>. Also see the transcript of National Department of Public Works (NDPW) report to the EPWP Committee on the performance evaluation of Phase 2, 18 June 2013 at <http://www.pmg.org.za/report/20140305-phase-3-expanded-public-works-programme-epwp-briefing-deputy-minister-and-department> and the presentation on Phase 3 of EPWP by NDPW to Portfolio committee on public works, 05 March 2014, at https://www.environment.gov.za/sites/default/files/docs/greenjobsdialogue_epwp_phase3.pdf

²⁹ Similar deduction have been emphasised by McCord and Meth (2007), Thwala (2008), Nzimakwe (2008), Triegaardt (2009), McCord and Wilkinson (2009a), Chakwizira (2010), Meth (2011), Crosswell and McCutcheon (2011), Ashton (2012), Mtapuri (2014).

erroneous classification of different types of PWP as a generic 'blanketed programme' without recognizing the unique heterogeneity inherent to these programmes (Phillips, 2004:6; McCord, 2008b:4).³⁰ To fill this research gap, the influential work of McCord (2008b) after reviewing 200 types of public works programmes, classified PWP into four distinct categories denoted as type A, B, C and D in terms of individual suitability to achieve successful outcome and adequate response to either temporary stochastic or cyclical shocks caused by combination of economic recession, financial crisis, labour market failures and natural disasters.

For the purpose of our analysis in this paper, the typology of PWPs based on international experience are briefly discussed here (see McCord, 2008b for detailed discussion).

The first category of PWPs referred to as 'Type A' are mainly used in response to transient labour market, cyclical shocks and economic crisis by offering a once-off short term employment which provides income relief (either as cash/food) to beneficiaries to smoothen consumption, accumulate asset, encourage savings and meet basic needs. Characteristically, type A programmes offers a risk coping, temporary safety net, income insurance as a protective form of social protection. By design, these programmes focused on generating employment opportunities by initiating massive infrastructure projects using self-targeting wage to attract only the poor. In these programmes, social protection objectives is considered more important than asset-creation objectives, usually derived from make-work' opportunity given the primary aim of reducing poverty through wage transfer to increase household income³¹. Strikingly, type A programmes have been erroneously implemented in some SSA countries with chronic poverty (e.g. South Africa, Malawi, and Tanzania) where labour market problems are of a structural nature due to acutely low labour demand and shortage of skilled workers and not a once-off disruption. For example, EPWP programmes in SA, MASAF in Malawi and TASAF in Tanzania. Bangladesh have successfully an archetype of type A programme to reduce poverty gap³². Other example of this programme is Indonesia's Padat Karya programmes to tackle unintended consequences of climatic shocks (see Vadiya and Abedin, 2007).

The second type of PWP programmes is the Type B employment creating schemes. These programmes are usually created as government employment schemes (GES) or employment guarantee programmes (EGP). Type B initiatives are usually large-scale government programmes employed as intervention measures to address persistent levels of high unemployment, where, the State becomes the '*employer of the last resort*' by increasing government spending, as part of ongoing fiscal allocation, to create employment for the able-bodied population to enhance labour market absorption rate, promote macroeconomic development (raise aggregate employment and stimulate the economy) and offers social

³⁰ Subbarao (2001:2) also notes the confusion about the meaning and scope of public works programs (i.e. workfare programmes). McCord (2008) emphasised that in existing PWP literature and policy discourses contain poorly conceptualised usage of the term PWPs and its variants.

³¹ In contrast to popular perception in many developing countries using type A programmes as a measure to tackle developmental and/or emergency crisis resulting from structural economy, type A programmes as a short-term measure are incapable to break poverty cycle -i.e. '*graduation from poverty*' or address household migration, but, these programmes can only reduce poverty by enabling household consumption smoothing, reducing vulnerability to stochastic shocks, and diminishing the size of the poverty gap, because even when transfer benefits are limited, temporary access to regular income can prevent acute distress of disinvestment of assets and poverty incidence (see McCord, 2002:5-6).

³² Refer to the works of Islam, *ibid*; Del Nino et al., *ibid*.)

protection³³. Examples of type B programmes offers income insurance as social protection. Typical example of Type B initiatives includes: US New Deal programme, Jefes programmes in Argentina, Ethiopia's Productive Safety Nets Programmes (PSNP) created in 2006, and the Maharashtra Employment Guarantee Scheme (MEGS) and up-scaled National Rural Employment Guarantee Programme (NREP) supported by the National Rural Employment Guarantee Act (NREGA) in India. Particularly, NREGA provides guaranteed work opportunities of 100 days to job-seekers within 15 working days of application or daily payment of unemployment allowance to participants in the absence of job placement within 15 days (Mehrotra and Hirway, 2007).³⁴

The Type C PWP programmes are public work schemes that focused on promoting massive public sector infrastructure investments to generate high labour intensity. These initiatives are exclusively initiated within the infrastructure sector, and, explicitly encourage the use of unskilled labour in greater proportion than capital-intensive technology (machineries) to create (public) assets, this in turn, would raise labour-intensity. Examples of Type C programmes includes: EPWP in SA (e.g. Zibambele construction programme in rural areas of KwaZulu-Natal); Kenya's Rural Access Roads Programmes (KRARP); 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). In type C programmes, social protection benefits are mainly derived from an increase in aggregate levels of employment generated from creation of assets, therefore, beneficiaries receive dual benefit as wage payment for labour supplied and productive use of asset created. Furthermore, these programmes offers short-term 'risk coping' and protective social protection benefits. Programmes encourage self-employment by training small contractors through contractor development programmes on how to effectively use labour-intensive work method to create work opportunities for the working age poor, as well as, equipped these contractors with skills to adequately manage ongoing infrastructure, building and construction projects³⁵.

The fourth type of PWP programmes are Type D schemes, which main aim is to promotes employability of unemployed workers (enhance skills) to participate in the mainstream economy through re-training of skills and/or work experience. These programmes are initiated to address supply-side employment constraints as an active labour market policy

³³ See Meth (2011) for critique evaluation of South Africa's PWP widely known as Expanded Public Works Programmes (EPWP). He argued that, as active labour market intervention (ALMP) initiative of the national government, EPWP design, multiple and unclear objectives and targets as a transient policy response to persistent structural unemployment problem, are inadequate to alleviate poverty incidence in SA, even in the most positive economic growth scenario due to lack of emphasis on skill development/trainings, short duration of formal training offered to workers (8-12days), and host of problems relating to data paucity, institutional and political constraints.

³⁴ In India, employment is a constitutional right, thus, the State is expected to provide 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. Additionally, India's NREGP focused on reducing poverty and unemployment in rural areas (only accessible by unemployed in rural areas) and offers include food provision for the poorest of the poor as a form of social insurance whilst minimizing rural-urban migration

³⁵ For discussion of Type C PWP programmes related to infrastructure construction projects in South Africa, see the studies of McCutcheon (2014), Cromwell and McCutcheon (2011), McCord and Meth (2007) and Thwala (2008).

(ALMP). The underlying theoretical assumption these programmes is based on the hypothesis that unemployment or under-employment issues occurs due to skill shortage in the labour market in spite of robust economic growth. Type D programmes are mainly used in developed countries e.g. workfare programmes in U.K in the 90'S and OECD countries experiencing fictional unemployment. These PWPs are mainly designed to improve employability and offer incentives for re-entry into employment (through work experience).

The success of such programmes depends on their ability to: (a) adequately transfer skills to beneficiaries and (b) identify skills on the supply side which match skills in demand in the economy. Notably, type D programmes are suitable to tackle frictional and not structural unemployment problems

3.2.3. Shortcomings of Public Work Programmes: International Empirical Critique

Drawing on international reviews of different types of public works programmes implemented by national governments, internal donors and agencies, ineffectiveness of many PWPs are due to inappropriate design, ambiguous and multiplicity of objectives, cognitive dissonance between (expected) programme's outcome, prevailing socioeconomic problems and targeted beneficiaries. Fundamentally, social protection function of PWP remains is widely perceived as the key component to induce positive externalities on beneficiaries through (i) wage transfers (cash, food or inputs), (ii) asset created, (iii) skill development (i.e. trainings or work experience provided).

There is *priori* assumption that, either as a short-term and long-term measures, public work programmes improves the livelihood of participants by setting low wages to only attract the unemployed poor, create productive assets and provide income to promote accumulation of assets (i.e. for the participants to be able to buy food, clothes, improve food in-take and send their children to school), in effect, promote participants out of 'poverty trap'³⁶. These assumptions in conjunction with the ease of implementation are the primary basis for prolific implementation of PWPs in many developing countries such as South Africa (EPWP), Malawi (MASAF) and Tanzania (TASAF).³⁷

However, some emerging analytical studies have disputed the effectiveness of PWPs to lift the poor out of poverty trap through wage transfer, assets created and skill development (see Martin and Grubb, 2001; Betcherman et al., 2004; McCord, 2004a, 2007a, and Pellisery, 2008). Intuitively, since wage transfer (offering income relief) is limited to the duration of beneficiaries participation in short-term public work programmes (type A PWPs), due to *short duration of training* (or work experience) inherent to these programme, as well as, the pervasive lack of appropriate exit strategy to enhance the employability of participants in the mainstream labour market, usually compel beneficiaries to return back to the unemployment pool and poverty status, in effect, making them worse-off since during their participation in these programmes, increase in household income may cause beneficiaries to accumulate assets to improve their livelihood (see Ndoto and Macun,2005; Sultan and Slater 2005; McCord, 2008b).

³⁶ Evidence from the analysis of Siyantentela programme in Mpumalanga (a South Africa Province) by Mashiri et.al., (2009) affirmed that beneficiaries use income earned to buy food, household goods, finance children's education and participate in saving clubs (see Chakwizira, 2010:247).

³⁷ See the works of McCord (2005, 2007b, 2008b) and McCord et al.(2008a) for analysis on of both short-term and long-term PWPs.

This findings was reported by ESAU (2004) for the two most widely-researched PWPs at international level, which are archetype of infrastructure-based PWPs initiated in rural area with chronic poverty and persistence unemployment rate issues in South Africa (i.e. Zibambele and Gundo-Lashu programmes in KwaZulu-Natal and Limpopo province respectively). Even during the participation of in these programmes, beneficiaries of these programmes remained poor and in deep poverty, even with higher wage transfer in the Zibambele programme (see ESAU, 2004:3).

Additionally, drawing from the comparative analysis of both short-term and long-term PWPs, McCord and Farrington (2008a) found limited evidence that created assets has poverty-reducing effect on households in countries experiencing ongoing or chronic poverty. Specifically, they emphasised that the short duration of public works programmes prolifically implemented in developing countries (especially in Southern Africa countries where unemployment problems are structural owed to acute skill shortage and chronic poverty) undermines its social protection function to promote '*graduation out of poverty*' and provide adequate skill needed to gain employment in the labour market with demand for skilled labour³⁸.

Evidence on asset created and cost effectiveness of PWPs supports the view that main benefit of PWPs is consumption smoothing rather than productive assets created, whereas, similar outcome could be achieved using alternative means such as cash transfers to provide income-relief, the evidence of high cost associated with creation of productive assets in long-term PWPs is not convincingly valid in terms of cost-effectiveness rationale central to adoption of PWPs³⁹. Equally, there is limited evidence support the widely-accepted view that created productive assets whether in long-term or short-term PWPs improve participants livelihoods, observations from Southern Africa (e.g. EPWP in SA) and India (NGREP) revealed that created assets has insignificant and unsustainable influence on the livelihoods of beneficiaries.

Conversely, even where long-term PWP are suitably implemented in response to supply-side constraints in response to frictional unemployment (skill mismatch) rather than structural, it is usually doubtful whether these programmes will enhance skill development. For example, India's NGREP, even though, this initiative is well implemented to address chronic unemployment emanating from cyclical shocks (e.g. agriculture off-season) with an explicit focus on rural communities, yet, NGREP lacks skill development component despite the theoretical assumption and international evidence that employability of the working age poor is contingent on skill development (education / training).⁴⁰

On wage setting, the self-targeting strategy prescribed by World Bank⁴¹ for PWPs is doubtful to exclusively attract the poor. In most cases, financial stability and security offered by public

³⁸According to Hulme et al., (2001), chronic poverty is a situation where large number of the population lives in poverty from one period and the next, due to inability to accumulate productive assets required to exit poverty. Based on this definition, it is evident that large proportion of the population in several SSA countries are living in chronic poverty.

³⁹ Refer to McCord et al.(2008a)

⁴⁰ McCutcheon et al.(2009)

⁴¹The World Bank (2001) report indicates that typically, PWP programmes are self-targeted under the principle of 'less eligibility', whereby wages are often set *below minimum wage rate (or at market wage)* in order to make these programme the only attractive option the poor unemployed. By implication, preventing, labour market distortion where workers are drawn out of other forms of low income employment.

works programmes have the propensity increase the dependability of beneficiaries, as well as, attract workers from casual labour (i.e. job substitution, especially during agricultural-off season). For example, Hough and Prozesky (2014) finds that beneficiaries become financially dependent on EPWP's working-for-water project (WfW) in Cape Town, unwilling to exit the programme evidenced by many beneficiaries still participating in the programmes after the expiration of the allocated participation periods, whilst those employed in casual labour with irregular wages are drawn into these programmes, in effect, excluding the targeted working-age poor and causing labour market disruption.

Likewise, ESAU(2004) reported evidence of significant job substitution and dead weight loss owed to higher wage rate relative to remuneration for casual labour and stable employment offer in the Zibambele programme in South Africa⁴². In a separate study, Subbarao (1997) reported similar findings of higher wage rate for PWPs in Philippines, Kenya, Botswana and Tanzania. These inferences convincingly corroborates the conclusion of Datt et.al (1994) that payment of high wage above the market wage in India's Maharashtra Employment Guarantee Scheme, increased demand for public works employment, job rationing, an erosion of the 'guarantee' element of the programme, in effect, causing a reduction in the effectiveness of poverty targeting. Then again, the adherence to the 'less eligibility' principle in rural areas could result in negative moral and humanitarian implications because prevailing wages are already low (Chirwa et.al., 2004 cited in McCord and Seventer, 2004: 9).

4. EXPANDED PUBLIC WORKS PROGRAMME: ARCHETYPE PUBLIC WORKS PROGRAMME IN SOUTH AFRICA.

4.1. Background on Expanded Public Works (EPWP)

In the advent of post-Apartheid era, the democratic government inherited a fragmented economy with high unemployment rate, acute poverty incidence and income inequality along the racial dimension due to strict apartheid laws imposed on the minority (which constitutes large proportion of the African blacks), labour market failure with predominantly unskilled or semi-skilled labour that are in excess supply, yet, less demanded in the mainstream economy given the ongoing integration of the country in the world market through rapid trade liberalization process, as well as, the economic shift from primary sectors (e.g. agriculture and mining sectors) into tertiary sectors (e.g. manufacturing, chemical and construction - sectors) to speed up economic development and growth. Obviously, the current unemployment problem in SA is massive and acutely structural (i.e. shortage of skills), surprisingly, McCord (2002) finds that large proportion of unemployed do not have prior work experience, this in turn, deepens poverty incidence owed to strong correlation between unemployment and poverty rate.

Therefore, the persistent level of unemployment rate, poverty incidence and inequality in addition to the disparity between first economy (made up of minority highly skilled White workers and relatively few Coloured/Asians) and the second economy (consist of largely unskilled Africa blacks) obligated the democratic government to proposed the adoption of Expanded Public Works Programme (EPWP) following the 2003 Growth Development Summit (GDS), which was

⁴² Theoretically, dead weight loss occurred as a result of wage subsidy or incentives. In this case, there is no difference between the outcome (e.g. in terms of job creation) of public work programmes and what would have happened in the absence of these programmes. For instance, wage incentives provides employment opportunity for the unemployed poor in a public infrastructure project which would have hired the unemployed poor in the absence of subsidy.

subsequently launched in 2004 in Giyani, Limpopo by former President Thabo Mbeki (NDPW, 2009a; ILO,2009).

The centrality of the initial conceptual design this archetype of PWP in South Africa focused on massive implementation of infrastructure projects (i.e. construction and maintenance) to increase labour market absorption rate through using labour-intensive work approach which is reinforced by the findings of a cross-country World Bank's study that massive infrastructure investment has a positive effect on economic growth, poverty incidence and environmental sustainability (World Bank,1994:2).⁴³ The adoption and implementation of EPWP in SA was based on World Bank's findings.

The underlying purpose for the implementation of EPWP is solely to attract the large share of the population with unskilled and/or semi-skilled and unemployed into productive work, where they can acquire useful skills and earn income to graduate from pool of the marginalised (second) economy. This supposition is reiterated in the national government's public statement as a political priority and agenda as:

"To respond to the plight of the poor who do not qualify for social assistance, government has set up Public Works Programmes to draw the unemployed into productive and gainful employment while also delivering training to increase the capacity of participants to earn an income once they leave the programme." (ANC, 2007, pg.4)

Although, EPWP is one of the many government initiatives, as an archetype PWP, a general consensus in existing literature is that that EPWP is incapable of eradicating poverty incidence and unemployment in SA (e.g. Phillips, 2004; EPWP LogFrame, 2004:13), yet, it has the potential to make modest contribution to employment creation, reduce poverty and improve the skills of its participants (Phillips, 2004:14).

⁴³ The result of Aschauer (1989a,1989b) influential work suggesting that economic growth and private sector productivity growth are directly linked to public infrastructure spending for the U.S. economy led to flurry of studies to validate this evidence. Gramlich (1994), Munnell (1990,1994), Holtz-Eakin(1988,1994), Eberts (1986,1990) findings corroborate Ashaeur's findings. Following this, several empirical studies have explored other benefits of infrastructure investment (direct or indirect. For instance, World Bank (1994) and Romp and de Haan (2007) observed that increase in infrastructure spending /investment raises factor productivity growth, this in turn, stimulate economic growth and income per capita indirectly. On the other hand, studies of Chong and Calderón (2001); Calderón and Servén (2004) and Seneviratne and Sun (2013) deduced that intensification of infrastructure construction have poverty-reducing and positive income distribution effects,even though, the size of the positive externalities differs across countries/regions due to prevailing political policy and governance. Studies of Jalan and Ravallion (2003), Galiani, et.al., (2002) Leipziger, Fays and Yepes (2002); Lee et. al. (1997) and Lavy et al., (1996) on developing countries suggest that an increase in provision of physical infrastructure providing access to water and sanitation effectively reduces child mortality in poor households. By implication accumulation of infrastructure assets in developing countries can lead to significant positive effect on the health, education, income and welfare of the poor, for example better transportation system and a safer road network help raise school attendance. For quantitative studies on South Africa, refer to the works of Kumo (2012); Ngadu et.al (2010); Fourie (2006); Kulatrane(2006); Fedderke and Bogetic (2005) and DBSA (1998) cited in Omosoro-Jones (2013) The findings of these studies affirmed that provision of high quality and large quantity (measured as volume) of infrastructure assets plus re-current increase in infrastructure expenditure have positive effect on economic growth, income per capita and factor productivity. For literature survey documenting the linkages between infrastructure investment, economic and total factor productivity growth refer to Pereira and Andraz (2013), Fedderke and Garlick, (2008) and Romp and de Haan (2005).

By design, EPWP is a cross-cutting national government flagship programme to be implemented by all spheres government (i.e. national, provincial and municipality) and state owned entities. As widely supported programme, from the national revenue, fiscal allocations are allocated to implementing public bodies in the national budget for implementation of labour intensive projects to create employment opportunities, improve skills (through trainings and work experience), allow wage transfers and encourage self-employment.

4.1.1. Key Legislations Guiding the Implementation of EPWP Initiatives

The SAn government proactively enforce and promote the EPWP initiatives across all spheres of government by setting clear guidelines to support the use of labour-intensive work methods using three key enacted legislations. First, the enacted Division of Revenue Act (DoRA) of 2004, which publicly document infrastructure-related fiscal allocations transferred to sub-national government (i.e. provinces and municipalities) as public infrastructure grants (PIG) municipal infrastructure grants (MIG). In addition, the DoRA informs the implementing public bodies about the agreed-upon guidelines in respect to adherence to the use of labour-intensive work methods between the national department of public works (NDPW), National Treasury (NT) and South Africa ocal Government Association (SALGA). Second, to prevent exploitation of EPWP beneficiaries, all necessary conditions for working conditions are outlined in the Basic Conditions of Employment Act (BCE) of 1997 (amended in 2011), which entails, e.g., number of: working hours, leaves, meal breaks, and so on. The BCE, also incorporate the Code of Good Practice for Employment Condition of Works for Special Public Works programmes (SPWPs). Third, the most important legislation guiding the implementation of EPWP is the Code of Good Practice for Employment Condition of Works for Special Public Works programme (including related Ministerial Determination) formally gazetted by the Department of Labour (DoL) in 2002 after discussions at NEDLAC⁴⁴.

In addition, the Code of Good practice (hereafter the Code) for SPWPs constitutes work conditionalities outlined in the BCE Act, 1997 (Act No 75 of 1997 amended in 2011) and the Leadership Determination for Unemployed Learners, to form a comprehensive framework for EPWP initiatives to; create employment opportunities, transfer wages (income relief or insurance) and enhance skill development (through trainings and/or work experience) in response to transient or acute cyclical issues in SA. Then again, this framework present a specific criteria to ensure the effectiveness and efficiency of EPWP initiatives in response to poverty-reduction, job creation and asset provision. Some of these criteria are: selection of beneficiaries in terms of targeted gender (women, youth and the disable), special conditions for workers employed by contractors in labour intensive projects, frequency of wage payment (fortnightly or monthly), setting wage relative to the market wage rate, duration of participation by beneficiaries on projects, types of trainings provided to promote skill development (e.g. on-the job training or formal training), conditions to employ contract workers, project selection, appointment of consultants and engineers, and so on.

By and large, the Code makes provision for training entitlement to EPWP beneficiaries of at least 2 days per month of employment, in order to enforce the need for adequate skill development through education and trainings, specifically, to enhance participant's opportunity for future employment in the mainstream labour market and/or engage in entrepreneurial activities through self employment. Put differently, in the long run, EPWP initiatives enables beneficiaries to '*graduate out*' of poverty and unemployment pool.

⁴⁴ National Economic Development and Labour Council

Other relevant augmenting public document guiding the implementation of EPWP in South Africa in terms of objectives, expected outputs (numbers of job created, skill development etc), monitoring and evaluation, institutional funding, collaborating NGOs, and so on, for example includes: (i) Guideline for implementation of Labour-intensive Infrastructure projects under EPWP (2005a), (ii) Consolidated Programme Overview and Logical Framework (e.g., NDPW, 2006; NDPW, 2009c) and (iii) EPWP Training Framework (e.g., NDPW,2012b) (iv) Implementation Manual for EPWP Incentive Grants to Provinces and Municipalities (e.g., NDPW, 2011a), and (v) EPWP Monitoring and Evaluation Framework (e.g., NDPW, 2005b). These documents are often reviewed by National Department of Public Works (NDPW) prior to the beginning of each EPWP phases that runs for five years.

4.2. Understanding the Scope of Expanded Public Work Programmes

In South African, EPWP is a direct government intervention to respond to the triple socioeconomic problems in the country, that is, high unemployment rate, chronic poverty incidence and income inequality along racial lines driven by significant change in economic structure and labour market failure to provide sufficient employment. In other words, the unremitting high demand for skilled labour, together with extremely low demand for semi-skilled and/or unskilled labour in SA, requires an active labour market and social protection intervention to reverse the exclusion of the unemployed and able-bodied working age poor from the labour market. According to Nattrass et al.(2005), the likelihood of reducing inequality in South Africa in the absence of policies that promote the growth of low wage jobs for the unskilled unemployed and facilitate an effective re-orientation of public spending on education or training.

As reflected in Table 2, to ensure a tangible measurable performance of EPWP initiatives, from the onset, overall implementation the programme was sub-divided into phases (i.e. each phase runs for a five year period) with different scope of targets, improved objectives based past performance experience and recommendations from survey reports and selection criteria of beneficiaries to curtail the rising gender driven unemployment (among African women and youths) and inequality to includes the marginalised proportion of the population (i.e. people with disability

Table 2: Implementation Phases of Expanded Public Works Programmes

EPWP Phase	Duration	Purpose	Targeted work opportunities	Targeted gender (%): Women, Youth and Disable
Phase 1	2004-2009	<ul style="list-style-type: none"> Consolidate the role of public works programmes 	1 million	40% (W), 30% (Y), 2% (D)
Phase 2	2009-2014	<ul style="list-style-type: none"> Steady Expansion (upscale EPWP) wage by introducing wage incentives, improve mobilisation across all spheres of government and public bodies and ensure adherence to labour-intensive work method 	4.5 million	55% (W), 40% (Y), 2% (D)
Phase 3	2014-2019	<ul style="list-style-type: none"> Based on recommendation from two key policy documents, viz National Development Plan (NDP) and National Growth Path (NGP) for EPWP to reduce unemployment and provides social protection. EPWP implementers focuses on improving overall framework of the programmes (i.e. project design, beneficiary targeting, geographical targeting, support strategies and expansion strategies) and for adequate monitoring and evaluation by setting up an institutional Presidential Public Employment Coordinating Commission. Build common brand across all spheres of government, to boost contribution to socioeconomic development 	6 million	55% (W), 55% (Y), 2% (D)

Sources: Liew-Kie-Song (2009), NDPW (2009c) and NDPW (2014b)

4.2.1. Employment Creation Opportunities through Sectoral Programmes⁴⁵

EPWP currently generate employment opportunities through four sectors, which are: (i) Infrastructure sector, (ii) Environment and Culture sector (hereafter E&C sector), (iii) Social sector and (iv) Non-State sector.

First, the infrastructure sector entails projects led by DPW and EPWP designated departments at the provincial and municipal level. But, at the national level, Department of Transport, Provincial and Local Government, Water Affairs and Forestry, Minerals and Energy, and Sport and Recreation departments make up the public bodies mandated to create employment opportunities through labour intensive projects such as road construction and maintenance, pipelines repair, storm water drains, sidewalks etcetera.

Second, the Social sector is tasked with the responsibility of creation work opportunities in public social programmes such as Early Childhood Development (ECD), Community and

⁴⁵ Refer to EPWP five year report, DPW (2009) and EPWP Phase 2: Consolidated Programme Overview (2009)

Home Based Care (CHBC), and Community Health Workers (CHW). Meanwhile, the Environment and Culture sector focused on job creation through, for example, removal of alien plants, coastline rehabilitation, working-for water (WfW), working on Fire (WfF) and working for wetlands.

The fourth sector, which is the Non-State sector, which was introduced in 2009, at the beginning of second phase of EPWP to encourage participation of public sectors in public works programmes, as well as, use their project-management expertise to stimulate an all inclusive job creation, increase efficiency and effectiveness of EPWP initiatives. As part of government efforts to significantly upscale EPWP to have a broad impact on poverty and , unemployment issues This sector replaced the prior Economic sector created in the beginning of EPWP in 2004, and subsequently phased out after the first phase of the programme in 2009⁴⁶.

It is worth mentioning that the Non-State sector consist of two set of programmes, these are: (i) institutional based programmes, and (ii) area based programmes. Specifically, public bodies such as the NGOs, CBO and FBOs are responsible for the development and/or implementation of *institutional programmes* that has large income-generating effects through socially constructive activities with a partial funding for wages and costs to be provided by the government. Whereas, *area-based programmes* involves local organizations to support employment-creation initiatives that build public or community level goods and services. This category consist of a new initiative referred to as Community Works Programme (CWP) that is currently being piloted in four areas in the country generating an employment opportunities to about 1,000 people in each area on a part-time basis.

The main objective of the CWP is to supplement the output of EPWP, and provide an employment safety net through regular (rather than full-time) employment to beneficiaries, with a predictable number of days of work provided per month. The government has elucidate that given the positive effect of the CWP on its beneficiaries based on current results, this programme could be up-scaled to 180 sites to create jobs for about 180 000 people by 2014 (NDPW, 2009c:10)⁴⁷.

4.2.2. Objectives of Expanded Public Works Programmes

Since the inception of EPWP initiatives in 2004, the ineffectiveness and inefficiency of the programmes as a transient employment generating programmes have been associated with the problem of multiple objectives that lacks clarity⁴⁸. One of the main issue that contributes to the ineffectiveness of this initiative is documentation of other public sector projects as EPWP projects, and failure to distinguish between EPWP and non-EPWP projects. (NDPW 2009c:6, McCord and Meth, 2007:7, Meth, 2010:16;) or labelling projects as labour-intensive, where capital-based technology is utilised (McCutcheon and Parkins, 2009:206). This erroneous reporting of expanded public work programmes adversely affect quality of data on projects, transparency, efficiency and cost effectiveness of this initiatives to have considerable impact on beneficiaries.

⁴⁶ The phased out Economic sector is tasked with income-generating projects and programmes to enhance self-employment by supporting small enterprise learnership and/or incubation programmes.

⁴⁷ Drawing from the analysis of McCord and Meth (2009), given the success of CWP at community level, the expansion of this initiative to the national level can produce a considerable dent in unemployment and poverty. In this way, the CWP would become an employment guarantee scheme (EGS).

⁴⁸ *Ibid*

Therefore, EPWP projects are classified based on four criteria are as follows:⁴⁹

- Implemented EPWP projects must be highly labour intensive. By definition, Labour-intensive refers to methods of construction involving a mix of machines and labour, where labour, using hand tools and light plant and equipment, is preferred to the use of heavy machines, where economically and technically feasible (EPWP Guidelines, 2005). On this basis, Labour-intensive infrastructure projects under the EPWP include: (a) using labour intensive construction methods to create employment opportunities to local unemployed people; (b) providing training and skills development to workers employed locally, and, (c) building cost-effective and quality assets.
- EPWP projects must attract only the poor unemployed within the targeted beneficiary group (women, youth and the disable).
- Wage transfers to EPWP beneficiary group should range between R50 and R100 per day.
- All target group are employed under the Special Public Works Programme work conditions.

Notably, even though, the main objective of EPWP is to attract the unemployed into productive and gainful employment while also delivering training to increase the capacity of participants to earn an income once they leave the programme. Nonetheless, there are other reference elsewhere to the wide-ranging aim of these programmes, which made EPWP as archetype of PWP to unique from internationally implemented programmes. For example, according to DPW (2005a):

“EPWP programme is...part of an active labour market policy to promote economic participation amongst marginalized work seekers”. (DPW, 2005a:10)

Then again, it was reiterated in the EPWP Phase 2 programme overview:

“Expanded public works programmes can provide poverty and income relief through temporary work for the unemployed to carry out socially useful activities. These EPWP will be designed to equip participants with a modicum of training and work experience, which should enhance their ability to earn a living in the future.” (NDPW, 2009c:4)

From the above excerpts, it is clear that objectives of EPWP as a short-term public works programme to acute unemployment, chronic poverty incidence and inequality is quite complex in comparison to other PWP schemes elsewhere, as such, different sub-programmes have differing objectives coexisting within a single programme, leading to confusion over programme purpose, making the selection of implementation modalities more difficult, and adversely affect programme performance when measured against core objectives (see McCord, 2007b:4-5). Often, typical common mistake of implemented PWP at international level, by overloading of these programmes with many objectives tends to cause failure and underperformance see (Phillips, 2004:6).

Following a comparative international analysis of six (6) historic and current large scale PWPs with EPWP, McCord(2007b) indicates two main objectives of the programmes , i.e. to increase

⁴⁹ See EPWP Phase 2:Consolidated Programme Overview (2009)

aggregate employment via labour intensification and small scale direct government employment, and (ii) improve the future 'employability' of beneficiaries in the current labour market and foster future employability⁵⁰. This is in line with the highlighted assertions documented in NDPW (2005a) and NDPW (2009c). Indeed, McCord (2007b) observed that within the highlighted two objectives, EPWP has a wide range of short and long term employment and social protection objectives. In the same vein, the employment creation aim of the programme, in turn, contributes to the government's social protection mandate⁵¹. The encompassing objectives and sub-objectives of EPWP are highlighted in Table 3.

Table 3: Summarised Objectives of Expanded Public Works Programme in South Africa

Objectives of EPWP	Detailed sub-objectives
Generate employment opportunities	<ul style="list-style-type: none"> • Reduce unemployment by creating short-term work opportunities (i.e. temporary jobs) • Raise aggregate demand for unskilled/semi-skilled labour through labour intensification and increased in government spending. • Increase capacity of beneficiaries exiting the programme to take up existing work opportunities (reduce frictional unemployment) • Encourage self employment through SMME development (thus changing labour market structure)
Poverty Alleviation	<ul style="list-style-type: none"> • Provides income relief (wage transfers) through transient employment (short-term benefit) • Increase capacity to earn a living after existing the programme (from long term to short term)
Skill Development	<ul style="list-style-type: none"> • Enhance beneficiaries skills through work experience and trainings with the aim of earning income after exiting EPWP
Service Provision	<ul style="list-style-type: none"> • Improve service delivery by creating assets that are sustainable and have real value to the public or communities.

Source: McCord, 2007:20

In general, drawing from the extensive analysis of Hemson (2007) on EPWP initiatives in SA, the two core objectives of EPWP can be achieved by:

- Creating productive employment opportunities by:
 - Increasing the labour intensity of public-funded infrastructure projects
 - Creating work opportunities in both public environmental programmes (e.g. Working for Water), and public social programmes (e.g. community health workers)
 - Utilising general government expenditure on goods and services to provide the work experience component of small enterprise learnership / incubation programmes

⁵⁰ These PWP's are: USA's New Deal programmes of the 1930s, the current Argentinian Jefes programme (initiated in 2002), Indonesia's Padat Karya programme (PK) (1998 to 2001), India's National Rural Employment Guarantee Programme launched in 2006 (NREGP), Ethiopia's Productive Safety Nets Programme (PSNP), initiated in 2005, Senegal's seminal AGETIP (Agence d'Exécution des Travaux d'Intérêt Public, initiated in 1989), and Ireland's Community Employment Programme (initiated in 1994).

⁵¹ See McCord (2007b) for detailed discussion and comparative analysis

- Enhance the ability of workers to earn an income, either through the labour market or through entrepreneurial activity by:
 - Providing unemployed people with work experience,
 - Providing education and skills development programmes to the workers.

To remedy the labour market dictionary effect and exclusion of unemployed poor from participating in public works programmes, selection criteria for participants have been stipulated in the plans for EPWP Phase 3 (i.e. 2014-2019). The selection criteria are:

- Application of two (2) sets of recruitment/ selection criteria, which are (a) EPWP criteria (base criteria), and (b) Project specific criteria (additional elimination criteria).
- In terms of expanding work for the EPWP target group: (a) an EPWP project must provide work to a large number of EPWP beneficiaries; defined as: (i) the poor and unemployed, willing and able to take up the offered work at the offered pay, and (ii) local labour (living close to the project area).

4.2.3. Monitoring and Evaluation Strategies for EPWP.

Given, the dynamic nature of socioeconomic conditions in SA, public works programmes performance are being revised and amended at the beginning of each separate phase of implementation for improvement purposes and the inclusion of other socioeconomic changes such as demographics, poverty incidence, structure of unemployment, labour market rigidities, and so on, hence, the development of monitoring and evaluation (M&E) framework.

In practice, the development of the M&E Programme for the EPWP is guided by three co-operand factors: (i) international best practice in the evaluation of PWP, (ii) the areas to be evaluated, and (iii) the cost associated with different evaluation techniques. A balance between these three methods would ultimately yield an effective and affordable M&E.

Hitherto, in SA, the performance of EPWP relative to pre-set target outcomes, and the impact of the programme on beneficiaries are assessed in line with international standard via, cross-sectional survey, longitudinal survey, case studies and poverty impact analysis. Additionally, to undertake economic-wide impact analysis of EPWP at both macro-,and micro-levels (e.g. aggregate demand, net jobs created, income redistribution and inflation), the use of a computable general equilibrium (CGE) model are useful. Albeit, apart from the work of McCord et al. (2004), no other study have utilised CGE model to analyse the distributional impact of EPWP initiatives on the aggregate economy and households in SA.

For an effectiveness, according to stipulation by NDPW, as documented in Table 4, surveys must be conducted in years one, three and five, and at the end of project cycles. Specifically, cross-sectional surveys are to be conducted in years 1,3 and 5, while longitudinal surveys are to be undertaken in years 1,3 and 5. Whereas, case studies and completion assessing the quality of assets, services and quality of infrastructure against accepted benchmarks, to be carried in years 1 to 5, whilst both the poverty impact analysis and aggregate impact analysis are to be conducted in years 3 and 5 (e.g., see NDPW, 2009a,c).

Table 4: Recommended Evaluation Techniques for Monitoring and Evaluation of the Performance of EPWP

Technique	Implementation	Areas Measured
<i>Cross-sectional Surveys</i>	Surveys of contractors/ implementing agents, beneficiaries, communities and government departments	Profile of beneficiaries and their households; impact of income transfers; impact of assets created; relevance and quality of training; role of contractor (targeting, training etc.); community perceptions of the benefit of the project; efficacy of design & implementation
<i>Longitudinal Surveys</i>	Surveys of beneficiaries 6 months after exiting the EPWP and six months after exit.	Whether employment or self-employment occurs after exiting the EPWP; longer-term impact of income transfers & training; offsetting effects (displacement and substitution)
<i>Case Studies</i>	In-depth studies of 8 projects by senior researchers, spread across sectors and provinces	All measurement areas, excluding employment prospects of beneficiaries after exiting the EPWP
<i>Poverty Impact Analysis</i>	Secondary data and data derived from surveys utilised	Impact of income, assets and services transferred to poor households on poverty levels of the household

Source: NDPW (2009c) and NDPW (2005a)

4.3. A Review of Existing Evidence on Expanded Public Works Programme

Given the strong empirical evidence, if adequately supported with recurrent fiscal allocation, an increase in public infrastructure investments has income generating effect, reduces unemployment rate, improves general welfare (health, education, nutrition intake), stimulate economic growth and provides infrastructure assets to ensure service delivery especially in SSA countries (e.g. World Bank, 2001; Romp et al., 2005; Agénor and Moreno-Dodson, 2006; Fedderke et al., 2008; Pereira et al., 2013). The adoption of EPWP as multi-pronged government intervention to deal with prevailing labour market failure, high unemployment rate and improve the livelihood of the unemployed poor, have gained prominent discourse in political arena, as well as, attracts the attention of academics and policy researchers over the years.

In SA, the importance of EPWP as short-term public works programmes is evident in the growing reference to this employment-generating schemes in two key national government policy-related documents driving all economic decisions, fiscal allocations and social developments in the country. These documents are the National Development Plan (NDP, 2012) and New Growth Path (NGP, 2010). These strategic national policy documents pin point the importance of a public sector programme such as the EPWP to amplify its employment generating capability in order to reduce the existing higher rate of unemployment and offer social protection to the large proportion of the population which comprises of the unemployed or working-age poor. For instance, following a comprehensive assessment of socioeconomic conditions in SA, NDP recommends the intensification of infrastructures investments, and social capital as remedial action to raise labour intensity, reduce rural-urban unemployment and create jobs that has both public and social impact⁵².

⁵² The NDP document specific strategies denotes as job-drivers that can ameliorate the social and economic conditions in SA. In particular, job drivers 1 suggests substantial public investment in infrastructure both to create employment directly, in construction, operation and maintenance as well as the production of inputs, and indirectly by improving efficiency across the economy (foster high labour

In addition, based on the over-achievements EPWP during the first phase (i.e. from 2004/5 to 2009/10) to meet the targets of generating over 1 million temporary jobs, NDP maintained that EPWP can significantly reduce the current unemployment rate and poverty incidence in SA by creating 2 million work opportunities per annum (see NDP, 2012:153-154)⁵³. Nonetheless, this achievement is dependent on government focus on targeting rural development, gender-based inequality and poverty incidence through implementation of community based services and intensify infrastructure investment in the social sectors. This is possible by augmenting EPWP with a social-inclusive programme such as the Community Work Programme (CWP), which was introduced in the second phase of EPWP. The findings of McCord and Meth (2011) corroborates the supposition that an up-scaled CWP can make a considerable dent in unemployment and poverty due to short/ transient participatory duration (maximum 2 years per beneficiaries as per The Code) and income relief inherent to EPWP programmes.

Besides, the strand of studies focusing on assessing the impact of EPWP initiatives using surveys, another budding branch of quantitative approach, attempt to measure the cost-effectiveness of this initiatives in terms of total expenditure transferred to beneficiaries as wages (to improve their livelihood and ensure graduation out of poverty) by estimating the ration of labour intensity (LI) of implemented projects at sectoral levels in comparison to the reported targeted objectives and outcomes based on indicators such as numbers of person years per job crated, number of persons days/full time equivalent job created, average wage payment per sector etc. This is done to determine the real extent of social protection, income relief and skill development transferred to beneficiaries during each phase of EPWP initiatives.

Concrete evidence validates the use of this quantitative approach to measure performance of EPWP projects, since the centrality of offering a sustainable social protection benefits of the poor unemployed is contingent on (i) increasing the labour market demand of unskilled/ semi-skilled labour, which can only be achieved by mass implementation of several labour intensive projects in construction, upgrading and maintenance of assets, (ii) the employability of beneficiaries in the mainstream labour market based on the duration of education received (as training or work-experience) during participation in these programmes, with the expectation to secure employment in the current labour market or in the future and/or become self-employed. For example, the conclusion of the 2012 DPW report on enhancing labour intensity in EPWP infrastructure (roads) projects concludes that:

“...As a major shift from current practice, it is suggested that the employment generation of the EPWP is monitored using labour intensity and Full Time Equivalent (FTEs) as the main indicators as opposed to the current practice of relying on work opportunities. As shown in the data analysis, the duration of the work opportunities vary significantly and for this reason, it is not an exact indicator. Still, it would be useful to monitor the number of work opportunities as it indicates the

intensity) . Whereas, job drivers 4, recommends leveraging of social capital in the social economy and the public services (expansion of public works initiatives).

⁵³ EPWP created about 1.6 million work opportunities in the first phase. In a publicly release statement by National Department of Public Works circulated in the media, in its second phase (2009/10 to 2013/14), work opportunities create in the programme nationwide was 4 069 640 slightly exceeding the 4 million target. E.g. browse: <http://www.gov.za/speeches/view.php?sid=46225> or <http://www.sanews.gov.za/southafrica/next-phase-epwp-create-6m-jobs>

number of beneficiaries in the programme and duration of the jobs offered, however these figures should be treated as secondary output indicators.” (NDPW, 2012a:17)

Hitherto, to the best of our knowledge, only the works of McCutcheon and Parkins (2009), Meth (2011) and DPW(2012) have explored this analytical approach at national level. This is the first paper to applied this quantitative technique on EPWP initiatives at both national and provincial level (i.e. with specific focus on programmes implemented in the Free State Province from 2004 - 2014). The third common strands of studies on EPWP often assess the operational designed frame work of EPWP to identify best applicable practice relative to international evidence PWP programmes. For example see the evaluation studies of Mtapuri (2014), Heradien (2013), Ghiassi-Razzvi (2012), McCord (2007b), and Hemson (2007) amongst others.

4.3.1. Shortcomings of EPWP: International Evidence From Cross-country Analysis

In existing literature, only three analytical studies attempt to compare EPWP objectives with either historic and current PWP initiatives by taking into account, EPWP’s aim to: (i) reduce unemployment by creating jobs for the working age poor, (ii) improve skill development by providing training or work experience to enhance employability of beneficiaries; (iii) social protection - offering income relief, and (iv) assets created. For instance, McCord (2007) compare EPWP to six PWPs from the U.S, Indonesia, India, Argentina, Ethiopia and Ireland⁵⁴, whilst McCord (2008) in another study evaluated the EPWP framework and objectives with other PWPs at international level. On the other hand, Chazwikira (*ibid*) examine the impact of EPWP on beneficiaries living in the rural areas, in respect to India’s NGREP, a large scale public employment scheme with similar focus and aim.

In a separate but related studies by McCord (2007b, 2008b) finds that short-term employment creating schemes are suitable to mitigate once-off stochastic shocks (e.g. Indonesia’s PK programme and Ethiopia’s PSNP are implemented to address drought) causing a short disruption in the labour market. **In this context, EPWP is erroneously implemented as unemployment rate massive, persistent and acutely structural in nature (i.e. shortage of skilled labour), a similar problem of World Bank funded PWPs in Malawi (MASAF) and Tanzania (TASAF)⁵⁵.** By implication, the short duration of EPWP initiatives severely undermines its job creation capacity and social protection function. Since wage transfer is limited to the duration of projects, EPWP only offers consumption smoothing function and temporary income relief insufficient to improve the livelihoods of its beneficiaries.

⁵⁴ The PWPs utilised by McCord(2007) in the comparative analysis, in respect to EPWP are: U.S (the New Deal programme of 1930), Indonesia’s Padat Karya programme (PK) (1998 to 2001), India’s National Rural Employment Guarantee Programme (NGREP, initiated in 2006), the current Argentinean Jefes programme (initiated in 2002),Ethiopia’s Productive Safety Nets Programme (PSNP) started in 2005, Senegal’s AGETIP (Agence d’Exécution des Travaux d’Intérêt Public, initiated in 1989), and Ireland’s Community Employment Programme (initiated in 1994).

⁵⁵ Paradoxically, World Bank have mistakenly created short-term PWPs in countries experiencing chronic poverty and structural labour market such as Malawi and Tanzania (see Subbarao et al.,1997; McCord, 2008b:8). McCord argued that the assumption of adoption transient PWP initiatives in response to poverty and unemployment problems, in anticipation of economic recovery is irrelevant in many contexts where the labour market problem is structural rather than cyclical, particularly in sub-Saharan Africa. (*ibid*, 2008b:28)

Secondly, there is a limited evidence supporting the capacity of EPWP as an active labour market programmes (ALMP) to alleviate poverty by improving employability of its participants in the current labour market or in future due to inadequate skill development components (i.e. trainings and work experience). For example, in similar challenges of mass unemployment and chronic poverty such as India, under the National Rural Employment Guarantee Act (NREGA), the short-term employment opportunities are guaranteed, offered to beneficiaries for a longer period (i.e.100 days) and with compensation in the absence of employment opportunities within 15 days. In this way, the employment guarantee and income relief offered to the working age poor will impact on poverty incidence in contrast to EPWP, where no employment guarantee is available for the unemployed, and participation in projects are short-term as projects could only last between four to six months. paradoxically

Thirdly, given EPWP objective to raise aggregate demand for unskilled or semi-skilled labour by increasing government expenditure on infrastructure investment (similar to US New Deal programmes), intensify the use of labour intensive work method in infrastructure projects (e.g. ILO Employment Intensive Programmes (EIP) found in many Sub-Saharan countries) and promotes self employment by developing small contractors with labour-intensive technical knowhow, in effect, encouraging SMME. However, lack of buy-in by service providers to use labour-intensive work method in construction sectors, perception about poor quality of labour intensive method in comparison to the use of capital-based technology, have resulted in marginal impact on aggregate employment and SMMEs creation.

Fourthly, based on their review of international public works programmes aim improving employability of beneficiaries through trainings, Martin and Grubb(2001) enthused that these programmes it should be kept small in scale, and 'well targeted to the specific needs of both job seekers and local employers. This is not the case in EPWP initiatives, where training offered are in contrast to the skills shortages identified the labour market such as semi-skilled, artisanal and skilled workers. According to the Code guiding EPWP initiatives, workers are only entitled to two days of training out of every 22 days worked, this is contrast to the significant capacity of Jefes and New Deal programmes that exhibits higher training and retraining components for a longer period, whereas, the Ethiopian PSNP that ameliorate the issue of limited trainings offered by creating a complementary training programmes such as agricultural livelihood-promotion activities and small business training⁵⁶. Although there is some evidence that a small proportion of EPWP trainees may be accessing further employment, the current approach to training and "exit strategies" is has been found to have a limited net impact on aggregate employment (Hemson, *ibid*, pg.110)

Fifth, the limited coverage of EPWP is due its limited scale, lack of institutional and fiscal factors because successful large-scale PWP (e.g. NGREP and Jefes) have large injections of fiscal allocations and effective oversight to reach large number of unemployed poor. For instance, in 2007/08 financial year, about 0.7% of total GDP plus 2.4% of government expenditure to create work opportunities in EPWP initiatives in South Africa, this is a large fiscal allocation but insufficient to achieve the targeted objectives of the programme (see, e.g., Liew-Kie-Song, 2009:12). But, in comparison, in India, a total of 1% of GDP was scheduled for

⁵⁶ Meth (2011) argued that since short-term job opportunities in longest in the infrastructure sector of about four to six months, thus, EPWP beneficiaries could only receive between eight to twelve days of formal training (*ibid*, 17). In sum, there is a little evidence that training periods of short duration, offered to people performing mainly routine tasks, enhance employability of EPWP participants (NDPW, 2004:9; McCord, 2007a)

employment creation in the financial year 2008/9 for the NGREP initiated in 2006 (Mehrotra, 2005), whereas, 0.9% of GDP was allocated for employment creation in the Argentinian Jefes employment programme initiated in 2003 (Harvey, 2007), while about 2% of GDP is allocated to the PSNP in Ethiopia, and almost 4% of GDP was allocated for direct employment creation in the U.S. New Deal programme.

Table 5: A Comparative Analysis of the Performance of Public Works Programmes

Country	Date	Employment (Persons / Days of work)	Percentage of Labour force	Impact
Bolivia	Mid-1987	30,000 workers	3	Avg. earnings raised by 45%
Honduras	1990-93	8.9 million person days	5	20% cut in open unemployment - direct effect only
Botswana	1985-86	74,000 workers (3mil persons days)	20-25	Also in relief in drought context
Kenya	1992-93	1 million persons days per annum.	0.6	20-35% of total income
India National Rural Employment programme	1980-89	320 persons day p.a		Not all additional employment
JRY (including expanded NREP)	1989-90	370 persons days per yr		
India - intensified JRY	1993-94	> 1 billion persons-days		
India, all major employment schemes including EGS	Mid 1990 still expanding	2.2 mil FTE working years	> 2% of rural labour force	
Maharashtra State Employment Guarantee Scheme	1975/76 -2005		1986 Peak: 15% state budget, 10-14% since	Reduces rural unemployment by 10-35%. In survey villages about 50% participants wage employment from EGS

Adapted from Subbarao (1997), Lipton (1998) and Chazkwizira (2009)

Finally, in the comparative studies of McCord (2007b, 2008b), she observed that the multiplicity of EPWP objectives relative to other PWP creates conceptual confusion, which limit its effectiveness and efficiency. Similar findings have been reported for countries such as Indonesia's PK, as similar finding of Curtain (1999). Other analytical studies⁵⁷ reported that the US New Deal programme absorbed between 30 and 50 percent unemployed and improves consumption, whilst in India, the MEGS absorbed at least 75 percent of available person days in the rural Maharashtra State, reducing rural unemployment by 35 percent and improve

⁵⁷ *Ibid.*

labour force participation by 20 percent between 1975 and 2005. In contrast to the declining low intensity rate from 26 percent (2004) to 11 percent (3rd quarter of 2008/9 financial year) together with rising government expenditure observed in EPWP initiatives, McCutcheon et al.(2009:204) observed that construction projects in Botswana and Kenya create significant number of employment as a result of achieving over 50 percent of labour intensity rates using low wages.

4.3.2. Regional Empirical Evidence: A Review of EPWP Case Studies

Whilst few case studies on specific districts/municipalities exists on EPWP initiatives in KwaZulu-Natal (Zibambele), Limpopo (Gundo Lashu), Mpumalanga (Siyantetela), Western Cape (Working-for-Water), North West (Modimola Integrated EPWP), Gauteng (road infrastructure), a quantitative or qualitative assessment of EPWP programmes is yet to be conducted in Free State province. To fill this research gap, this paper is the first research study that comprehensively evaluate EPWP initiatives since its inception in 2004 to 2014 taking into account factor intensity of labour, cost effectiveness and extent of employment created to alleviate poverty incidence and unemployment, as well as, the first empirical work to utilise meta-data on FS province's expanded public works programmes.

In the current literature, in spite of EPWP project's data paucity problem, three strands of studies examining the impact of these programmes exists. First, majority of the few studies on EPWP utilised qualitative methodology for evaluation, for example, surveys of selected EPWP projects, focus groups discussion, semi-structure questionnaires) and secondary data for statistical analysis. The second strand of research programme is relatively new, and entails quantitative evaluation of EPWP performance in terms of cost effectiveness, efficiency and distributive impact of this initiatives on beneficiaries. On this strand of studies, it is has been argued that research into factor intensity is key to assessing the feasibility and cost of the EPWP programmes, and, this ought to be done prior the beginning of each phase of EPWP (see NDPW, 2012a:48). Only the works of McCutcheon et al. (2009), Meth (2011) and NDPW(2012a) followed this analytical approach. The third strand of literature on EPWP focused on the analysis of EPWP's conceptual underpinnings, theoretical framework and objectives in comparison to best practice PWP initiatives (see, e.g., Mtapuri, 2014; Heradien, 2013 and Ghiassi-Razzavi, 2012)⁵⁸.

Drawing from the evidence of some survey that attempts to examine the distributional effect EPWP on poverty alleviation and economic growth poor rural areas, subsequent analysis shows that large proportion of beneficiaries do not find work after exiting the EPWP programme due to short duration of infrastructure projects, also, trainings provided are rudimentary (e.g. plastering, brick layering), not accredited, and not congruent to skilled labour demanded in the mainstream economy. Even if training are provided to enhance skill development of beneficiaries to be employable, the short duration of many projects hinder quality transfer of skill through training. For example, Mfusi and Govender (2014), attempt to evaluate the impact of EPWP on participants by taking into account selected indicators such targeted objectives, number of jobs created, level of community participation in project selection process and perception of beneficiaries about these programmes in four districts located in Kwazulu-Natal (KZN), namely eThekweni, Midlands, North-coast and Southern

⁵⁸ Noticeably, only the second strand of evaluation studies in the literature is relevant in assessing the quantitative analysis carried out in this study.

region⁵⁹. These authors selected mix of expanded public work initiatives in a survey sample comprising of 80 beneficiaries randomly selected from two construction projects per districts. A mixed findings was reported, that is, across the four surveyed districts, inadequate in site visits to supervise implemented infrastructure projects is prevalent, which in turn, adversely affect service delivery. Furthermore, inadequate funding, lack of proper skill development associated with lack of training, consultation and approved exit strategy severely erode the positive impact of EPWP projects on beneficiaries. For instance, about 66 percent of respondents had no training or acquire any accredited qualifications to improve their employability in the mainstream labour market. Adding to this, there is concrete evidence of nepotism and 'exploitation' of beneficiaries due to sale of work equipment caused by insufficient supply of tools, no medical aid or provident fund, and safety of participants were not taken seriously owing to lack of protective clothings. This is in contravention to EPWP's Guidelines for implementing labour intensive projects and BCE. In contrast, about 90 percent of the respondents have the perception that to some extent, poverty incidence was alleviated because wage transfer to women-headed household beneficiaries increased consumption, provides education opportunity for participant's children, and reduces crime rate as the youths in the community become engaged in small entrepreneurial activities. Moreover, taking into account the impact of assets created on the public, during the EPWP schemes, approximately 90 percent of the respondents accentuate the positive impact EPWP projects on rural development owing to construction of clinics, schools, hospitals and roads, this in turn, enables children attend schools nearer to their residential area and study in proper classrooms, with water and electricity.

In addition, Mfusi et al.(2014), finds trivial awareness of EPWP initiatives among beneficiaries, for example, about 28.2 percent of the respondents do not grasp the efficacy of EPWP initiatives. Taking into account targeted beneficiaries, about 75 percent of the sample are males, with 40.3 percent for youths but none of the beneficiaries was identified as a disable, this contradicts the targeted proportion of less disadvantaged people stipulated in the EPWP framework.

Meanwhile, in an attempt to assess the anecdotal conjecture that EPWP initiatives offers skill development (i.e. training and/or work experience) that promotes employability of participants, Moyo (2013) investigated the impact of Modimolla Integrated EPWP on employability of current and past beneficiaries relative to casual labour.⁶⁰ Results shows that in spite of labour intensification of Modimolla integrated projects and sizeable expenditure of R25 million, this EPWP is critically deficient of skill development component, as a result failed to increase employability of participants. For instance, during the implementation of this programmes, about 44 percent of respondent did not receive any training and 61 percent of those who received training did not obtain training certificates, violating the specified conditions for trainings (skill development) in the BCE and the Code. Additional evidence confirmed that trainings provided in EPWP schemes are not skills-oriented, instead, basic skills to execute simple tasks (e.g. grass cutting, gravelling, and irrigation). are provided by

⁵⁹ Projects selected are: for eThekweni (Gcinifumdo school, Prince Mshiyeni Hospital); Midlands (Mzila Schools and Dundee); North-coast (Ngwelazane and NPA hospitals) and Southern region (Margate Middle school and Sisonke District)

⁶⁰ This assessment is crucial given SAn government's argument for EPWP framework that skill development provided to the unemployed or working-age poor, considerably improve their opportunity to secure (future) employment in the labour market or become self-employed after exiting the programme, thereby, reducing aggregate poverty incidence (NDPW, 2005a:31).

contractors This finding is consistent with Martin and Grubbs (2001), McCord (2002, 2008b) and Hemson (2008).

Also, in this case study, about 97 percent of past participants are unemployed after exiting the EPWP programme for five years owing to limited work opportunities attributable to inadequate skills gained. This finding implies that majority of public works programme participants often return to the unemployment pool, and their poverty status become worsened (see McCord, 2008b; McCord, 2007b; Ndoto et al., 2005). On the other hand, Moyo reported that some contractors are able to bid for construction contracts in the private sector based on this training and work experience acquired after the closure of the Modimolla Integrated programme due to their acquired NQF Level 2 construction learnership certificate. Interestingly, majority of beneficiaries finds training provided during the programme useful and satisfactory, yet, their employability in the mainstream labour market is severely constrained. The author concludes that EPWP training strategy is conceptually poor and needs to be redefined.

Mkhize (2012) investigates the effect of EPWP programme implemented in eThekweni Municipality (Kwazulu-Natal province) on participants. With about 80 percent respondents to the designed questionnaires, in a survey sample consist of 50 percent of EPWP officials, 12.5 percent of both community members and contractors respectively. Observed inferences confirmed the short duration of implemented projects, and limited access to adequate trainings to enhance the skill of participants. Specifically, about 62.5 percent of participants gained worked opportunities in a project that lasted between one to three months, while, roughly 40 percent of respondents gained employment after exiting the programme, only 16.7 percent of the respondents gained employment opportunities for about 18 months after the completion of the EPWP projects, and remain jobless thereafter. The author observed that about 60 percent of beneficiaries working in the infrastructure projects are not satisfied with trainings received.

Mothapo (2012) examined the poverty-reduction and employment generation impact of the expanded public work programmes on participants in Bushbuckridge municipality (in Mpumalanga province), and finds mixed evidence.⁶¹ Results from this study provides strong evidence supporting social protection via wage transfer to provide income-relief (income ranges between R1 400 and R2 400), sustainable projects that enhances self-employment especially among women due to longer project period of about two to four years. Still, additional results revealed that EPWP induces an insignificant impact on youth unemployment and poverty incidence. However, poor communication, awareness and mobilisation of EPWP in the surveyed villages diminished the positive effects of EPWP initiatives, even as, high level of illiteracy (lack of education) remains a contributing factor. The author concludes that benefits of EPWP initiatives will only materialise, if these projects are implemented in rural areas and greater community participation is encouraged to take ownership of projects. In addition, to tackle the prevailing acute poverty rate at the grass root level, preference of implementing infrastructure projects should be given to poverty-stricken municipalities, in conjunction with annual assessment of poverty incidence across SA. Ideally, the operational design and framework of expanded public works programme should be revised.

⁶¹ Surveys focused on two rural villages, namely Croquet Lawn and Calcutta in Bushbuckridge district.

Finally, Khanyile (2008) surveyed five local districts⁶² in Zululand municipality in KZN from a sample of 347 respondents out of 450 beneficiaries⁶², he finds that most EPWP projects were less than six months (90.58%) , while only 9.42 percent of participants have uninterrupted work opportunities for at least twelve months. Even though, the selection criteria of EPWP beneficiaries is targeted towards alleviating chronic poverty rate prevalent amongst women or female-headed households, the youths and disable individuals, Khanyile finds high participation rate of men (55.2%) than women (44.8%) in the implemented programmes, this is sheer contradiction to set objectives in EPWP framework, but he pointed out that the strength and hard work that labour-intensive projects demanded could explain the high participation rate of men than women since the EPWP project implemented is within the infrastructure sectors (building, road construction, water and sanitation projects). This finding is quite striking, as it draws government's attention to create and/or upscale social programmes (e.g. CWP, ECD, CHBC and CHW). The author concludes that regardless of the attractiveness of EPWP to unemployed poor in the rural area, the programmes' distributive impact on skill development, income inequality and disparity in wage transfers constrain the sustainability of the EPWP initiatives and actively do not contribute to employability of participants.

Considering a different perspective, Hough and Prozesky (2013) studied the impact of an EPWP programme by examining four Working for Water (WfW) projects in the Western Cape Province,⁶³ in particular, to examine the extent of social protection (financial stability) and employment creation in EPWP schemes on labour market disruption that excludes the unemployed poor without any work experience or training, and alternative source of income.⁶⁴ Obtained results validate the notion that given the prevailing acute poverty incidence, high unemployment rate and inequality, beneficiaries are increasingly more dependent on EPWP projects, as some participants remain employed in these projects longer than expected owing to financial stability. This is akin to the problem of cash transfer. Second, results support the evidence of a higher job substitution that implicitly excludes the participation of the unemployed poor in EPWP programmes because workers in casual jobs are competitively vying for the limited available work opportunities from EPWP projects. For example, in a survey sample of 92 respondents, results show that at least 83 percent had casual jobs prior to joining the WfW programme, out of which, about 52 percent were farm workers in the Western Cape. Strikingly, about 51 percent of respondents earning income from casual jobs voluntarily substitute their temporary jobs for WfW work opportunities due to regular wage payment, and the general perception about exploitative working conditions prevalent in the farming areas in the Western Cape.

Hough et al. (2013) noted that the dependency on WfW projects is further reinforced by explicit unwillingness demonstrated by WfW beneficiaries to search for alternative jobs after the end of these archetypal EPWP initiatives. Particularly, about 57 percent of respondents

⁶² The districts surveyed in this study are: eDumbe, Uphongolo, Nongoma, Ulundi and aBaquluse

⁶³ Projects selected by Hough et al., (*ibid*) are: Hottentots Holland Nature Reserve WfW Project, Riviersonderend Mountain Catchment Area WfW Project, Marloth Nature Reserve WfW Project and De Hoop Nature Reserve WfW Project.

⁶⁴ Earlier studies of Datts and Ravallion (1992) for MEGS in India; Subbarao (1997) for PWP in Philippines, Kenya, Botswana and Tanzania; and ESAU (*ibid*) for Zibambele EPWP programme in SA find that higher wage rate above the going market wage results in deadweight loss, adversely diminishing the poverty-reduction effect on targeted beneficiaries as the unemployed poor are excluded from participation due to workers in less predictable paying (casual) jobs are attracted to public works infrastructure projects. This in effect, erodes the effectiveness of the programme and increases job rationing due to excess demand for available work opportunities.

failed to search for an alternative work opportunity or earn income, instead, they prefer to wait for establishment of new WfW projects, in fact, statistical result shows that almost 96 percent of the 92 respondents had experience some 'waiting periods' for WfW projects. Equally, these authors reported that many participants have worked in WfW projects more than the stipulated duration of participation (in most cases more than 2 years), for example, a particular beneficiary have been working for nine (9) years on WfW projects, this is in contraction to the stipulation in the Code of Good Practice, where beneficiaries could not participate in EPWP schemes for a maximum period of 2 years within a project cycle of 5 years. On perception of beneficiaries about EPWP project of WfW, approximately 85 percent of the previously employed respondents maintained that WfW projects are useful, even though, the labour-intensive work method entails physically demanding tasks which are fairly hard, yet, the generous wage payment offset the toughness of the tasks.

Conversely, to evaluate the performance of EPWP in its first phase, the national Department of Public Works commissioned both cross-sectional and longitudinal surveys reported in a five-year report (see NDPW,2009a). Evidence from the cross-sectional survey of 180 projects indicates higher participation rate for women (58%) than men (42%). Further evidence confirmed positive spin-offs of EPWP projects on beneficiaries such as income relief through adequate wage transfer that indirectly fosters savings. For example, income per household prior working on average ranges between R500 to R900, this is in contrast, to the increment in average household income of beneficiaries that ranges between R900 and R2 000 (at the peak of implemented projects). This rise in income led to an increase in percentage of participating household's savings from 14.5 to 22.8 percent. In sum, about 80 percent of respondent experienced an improvement in their livelihoods during the six months prior to the longitudinal study. In the same vein, the inference from the longitudinal survey with a sample of 768 beneficiaries revealed that only 25 percent of beneficiaries had received training during the last six months of implemented EPWP projects, and without gaining work opportunity elsewhere. Whilst about 45 percent of respondents have exited the these programmes, 55 percent were still working on EPWP projects. Noticeably, a significant large number of respondent that had exited the programme remains unemployed (about 73%) in spite of training or working experience received, with only 27 percent of past beneficiaries re-gained employment in other EPWP projects. Even so, 50 percent re-absorbed beneficiaries are working on a full-time basis, whilst 50% are in temporary part-time jobs. These findings clearly confirmed the limited impact of trainings and/or work experience received by participants on employability, graduation out of poverty trap and unemployment pool after the completion of EPWP projects. Equally, it is evident that the exit strategy implemented by NDPW is poor and needs critical re-assessment for EPWP initiatives to benefit participants.

Nevertheless, Meth(2010) critically assessed the reported findings in the five-year report, and asserts that the contribution of trainings to employability of EPWP participants is vague, since the analysis of the longitudinal survey made no distinction between types of trainings offered (e.g. on-the-job or formal training) to beneficiaries who are employed, also there is no anecdotal evidence to verify whether those beneficiaries that had received trainings becomes more skilled. Particularly, Heradien (2013:79) provides evidence showing that about 86 percent of participants remain unemployed after exiting the programme owing to low accredited training provided in the largest component of the programme, i.e. the infrastructure sector⁶⁵. This observation is crucial because, most of the training offered under

⁶⁵ Findings similar to Mkhize (2012), Moyo (2013) and Ghiassi-Razzavi (2013) from case studies amongst others

the EPWP is incongruent to assuage the problem of acute skills shortages (structural unemployment) identified in SA, by implication, EPWP initiatives fail to provide beneficiaries the skills currently in short supply in the economy.

In another case study, Ghiassi-Razavi (2013) employed random sampling method and statistical analysis to investigate the the impact of EPWP on poverty alleviation and job creation using indicators such as wage rate, wage payment agreement, skill and labour intensity, exit policies, microfinance and asset/infrastructure created. This survey focused on three infrastructure projects in Gauteng, which are: City power electrification project in Bryanston, Johannesburg Roads Agency (JRA) stormwater upgrade and erosion protection project in both Craighovan and Killarney Country Club Golf Course. Analogous to other studies, he finds that poor planning and co-ordination of these labour intensive project, caused considerable delay in starting these projects, in effect, further limits the duration of participation of expected by beneficiaries, meanwhile, poor exit strategies including lack of information on work opportunities elsewhere, caused about 80 percent of participants not to gain employment exiting these EPWP initiatives. The author concludes that the design elements in infrastructure sector of EPWP appeared inappropriate and insufficient to absorb the large population of the unemployed poor in SA.

On the other hand, McCord and Farrington (2008) evaluate the two most prominent EPWPs in SA commonly highlighted in international literature as one of the best practice initiatives, namely Gundo Lashu programme launched by Limpopo province in collaboration with ILO and DFID⁶⁶, and Zibambele programme created in 1999 in Kwazulu-Natal province, and modelled after Kenyan's Road Access programme. They explored the extent of positive externalities channelled to beneficiaries owing to sustainability of projects, effect of trainings offered on participants employability, income effect and the local economy⁶⁷. Using the 2003 data conducted on Capricon District in Limpopo and various district in KZN, and a samples consisting of current and past participants of 1700 (Limpopo) and 13,900 (in KZN) in addition interviewing 676 households member (which comprises of 4800 household members), McCord et al. (2008) finds that participants in Zibambele enjoyed long work opportunities than those in Gundo Lashu owing to the programmes selection criteria that focused on a impoverished single women-headed household, who are trained as small contractors instead of rationing. Evidence shows that steady wage payments leads to financial stability, job substitution, extended period of participation and exclusivity of the poor, in this case, low wage is not self-targeting. For instance, 33 percent (in Limpopo) and 28 percent (in KZN) of respondents leave their casual jobs to be gain employment in these programmes, in so doing, raised their income by 33% and 52% respectively.

⁶⁶ The Gundo Lashu programme was launched in 2001 as a joint effort between Limpopo provincial government (department of Road Agency) in partnership with international labour organization (ILO) and British department of International Development (DFID) in response to two major challenges in Limpopo, namely unemployment and poor road infrastructure (see ILO,2009; DPW,2012). The Zibambele programme was first piloted in KwaZulu-Natal province in 1999 by Department of Transport (DoT) by awarding 2,700 routine maintenance contracts to selected households (DPW,2012:6). See the 12th ILO seminal final report (2007) and DPW (2012) for detailed discussion these EPWP programmes

⁶⁷ Note that both Zibambele and Gundo Lashu EPWP initiatives are designed as labour intensive EPWP initiatives via implementation of infrastructure projects in rural areas, these programmes differs in their operational designs, selection criteria and infrastructure component (see box ? in the appendix).

Although, unemployment rate was slightly reduced in KZN and Limpopo due to EPWP programmes, this has a limited impact on the large proportion of unemployed poor due to the short-term nature of jobs created, inadequate trainings provided and lack of access to capital. On income relief, using an ex-ante head count poverty rate (poverty in international comparison of living \$2/day (in international prices) equivalent is R280. Results shows that mean income in Limpopo beneficiaries was R292 (fairly above the \$2 per day), and KZN was R145 (well below), a clear indicative that majority of participants remain poor before, during and even-worse off after exiting these programmes, with some remaining in deep in poverty and back to unemployment despite higher wages offered in the Zibambele infrastructure projects. Nonetheless, the authors reported that wages received by beneficiaries raise average monthly income per adult both provinces (i.e. in Limpopo and KZN by R120 and R73 respectively). On the other hand, evidence suggest a general improvement in the livelihood of participants, for example, survey results revealed that higher expenditure on household goods such as clothing, agricultural tools, and on transport, education, debt repayment or financial assets during the period of one-household member participation⁶⁸.

Further evidence from this study revealed that the impact of both Gundo Lashu and Zibambele on the economic growth is insignificant owing to persistent high unemployment among former participants is due to high excess labour supply of unskilled and semi-skilled labour including poor local information about employment opportunities. Due to multiplier effect, temporary higher income per household increase consumption of local producers of goods and services limited to the duration of implemented projects in Limpopo (i.e. most beneficiaries by snacks from vendor), in contrast, due to long term nature of Zibambele projects in KZN together with high wages and increased mobility, participants spend their income in neighbouring towns rather than villages where the project is located. This findings substantiates the results of Mashiri and Mahapa (2002) study on Tshitwe road-upgrading project (?), suggests that money earned by workers did not circulate within the community. In both programmes, construction, upgrade and maintenance of roads provides sustainable benefit to the public and community from asset created, this is partially attributable to community participation in the selection process of beneficiaries especially in KZN. This is in contrast to Mashiri et.al (2002) result on Tshitwe road-upgrading project, where the anticipated improvement in road passengers services failed to materialised, thereby, limiting access to market and/or other amenities in the urban areas (cited in Chikiwira,2009:247).

The findings of McCord and Farrington (2008) is similar to the reported evidence on Gundo Lashu in a prior study of McCord and van Seventer (2004). Nonetheless, the work of McCord and van seventer (*ibid*) applied social accounting matrix (SAM) to examine the effect of shifting to labour intensive work approach *vis-a-vis* the use of capital-based technology on both micro (households) and macro (aggregate economy) levels. Specifically, these author proposed an increased government expenditure of R3 million to facilitate intensification of infrastructure projects. At macro level, empirical results shows that switching from capital

⁶⁸ In KZN where participants are more mature and older, over 80 percent of beneficiaries spend money on education and clothing, two-third invested as savings and half spent on transport and debt repayment. In Limpopo (young and better educated), participants spend more of their transitory income on home improvements, consumer durable goods, burial society contributions. This is contradictory to assumption that people save more during transitory income, and consume more when income is permanent. The authors concludes that, due to high poverty incidence and unemployment in KZN, beneficiaries perceived that they are more vulnerable against future shocks and disability for reasons of prior income level.

technology to labour-intensive work approach has a relatively small effect on government revenue which is mainly driven by commodity and import taxes. Whilst labour intensification tends to favour as beverages, trade and electricity, others industries (e.g. petroleum, machineries, iron and steel and non-metallic mineral) are adversely affected. On aggregate, the shift from capital to labour work approach exert an insignificant impact, only raised national employment by 1percent, translating into 80,000 persons year equivalents out of about 8 million workers currently employed in SA at the time of this study. This raise the question of the real economic value of adopting labour intensive work approach to resolve the structural unemployment problem in SA⁶⁹.

Whereas, at micro level, evidence suggests that a successful work opportunities explicitly targeted towards the *poorest of the poor* raised household income by 20 percent, and increase income of the poor by 2percent. This income effect is driven by direct effect rather than multiplier effect. On the other hand, if job created is provided for unskilled workers (not the poor unemployed or the impoverish household), impact on economic growth (GDP) is negligible but with wider benefit to the low and middle class household.

To assess the dissimilarity in EPWP structure of Gundo Lashu and Zibambele programmes, and the prescribed "less eligibility criteria" of using low wages to explicitly attract unemployed poor into PWP schemes. McCord and Wilkinson (2009a) applied propensity score matching (PSM) approach to the 2003 survey data on both programmes to empirically assess the impact of both Gundo Lashu and Zibambele as EPWP programmes offering social protection to the poor. The rationale for this analysis stems from the restricted access to employment opportunities by using created by EPWP schemes utilising rationing selection method owing to acute shortage of skill labour (i.e. structural unemployment) and the short term work opportunity typically provided by public works programme. Empirical analysis of McCord and Wilkinson (2009a) finds that both programmes have impact on beneficiaries despite their differing design and modalities. By identifying the typology of both programmes in terms of PWP classification proposed by McCord (2008b), evidence shows that Gundo Lashu (a type A/C) as short-term instrument responding to multiple objectives (i.e.

⁶⁹ Although, McCutcheon (2001) finds lack of competitiveness in the cost of implementing labour intensive projects relative to the use of capital based technology. However, they argued that employment creation during the use and maintenance of roads is more than offset the high cost incurred during the construction process. Another hypothesis is the possibility of trade-off high labour intensity and the ability of PWPs to generate indirect or medium-term benefits through assets created (Quene et al., 2006 cited in Ghaizzi, 2012:16). For instance, at the beginning of Maharastra Programme (EGS), 90% of project cost was absorbed by wage expenditure on unskilled labour, and 10% directed to skilled labour including materials. Thereafter, this ratio shifted to 60:40 of unskilled and skilled labour (Pellissery, 2008). In the case of SA, McCutcheon (2011) proposed that an increase in expenditure by 30% or 40% more than the conventional 10% often directed towards project expenditure on building of social housing, especially in the townships during the second phase of EPWP programme would generate more jobs, furthermore, only by utilising proven methods of increased labour intensity that the target set by Government to reduce unemployment by 50% by 2014 can be achieved (Crosswell and McCutcheon, 2011: 12). Subsequently, McCutcheon (2014) assert that if time, cost and quality of labour intensive projects are not compromised, labour-intensive construction is more economically efficient employment of as great a proportion of labour as is technically feasible to increase productive employment generated per unit of expenditure, this is only possible if construction cost of labour-intensive projects are significantly higher. For example, instead of estimated conventional cost usually directed towards road construction (6% -10%), storm water (10%), provision of water (8%) and sanitation (13%), they proposed costs is an increment of 30% - 40% for road construction, and 30% for storm water, provision of water and sanitation respectively.

ameliorate both unemployment and poverty), which offered each beneficiaries full-time non flexible work opportunities by setting low wages either at or below the going market rate (self-targeting), only provides the poor with 0.88 of their population share of employment, whilst, Zibambele (a type B) with explicit poverty targeting objectives that focuses on impoverished household rather than individual, using community selection criteria, and offering flexible employment, provides the poor with 1.27 times their population share of the PWP employment⁷⁰.

Recently, the replication of Zibambele type of road maintenance activities is strongly recommended for future implementation of EPWP infrastructure-related initiatives due to the possibility for recurring/preventive maintenance work, and expansion to absorb more unemployed poor since large-scale road maintenance projects are urgently needed in SA, to extend the life-span of existing road networks (e.g. repair potholes) instead of construction of new roads due to fiscal constraints, as well as, the realisation that very little labour-intensive road construction is taking place (see NDPW, 2012a:32). This proposition aligns with McCutcheon (2001) deduction that labour intensive maintenance can be cost competitive with conventional techniques if correctly implemented EPWP initiatives such as the Zibambele programme.

Finally, due to the popular reference in political discourse that expanded public works programmes, if properly managed as a large scale programme to produce higher labour intensity, it is possible to halve unemployment and poverty rate in SA by 2014. McCord and Meth (2009) assessed the efficacy of the political ideology suggesting that given the employment creation potential of public works programmes, poverty incidence and unemployment rate will be halved by 2014 in line with the Millennium Development Goal (MDG). They applied a simple purpose-built model developed by Meth (2004) to calculate what unemployment rates and levels may be in 2014 (Meth 2009b), on the proposition that the targeted 'work opportunities' of 4 million in Phase 2 of the EPWP becomes a reality (see Meth, 2010 for further discussion).

Based on this premise, similar results emerged from separate studies of McCord and Meth (2009) and Meth (2010), by computing four possible scenarios for economic growth, employment growth and changes in participation rate, including the contribution of the new CWP to employment opportunities generated by EPWP programmes. Empirical analysis from these studies emphasised that even in the most positive scenarios of 5 to 6 percent economic growth, high employment growth where all 4.5 million work opportunities is met, both unemployment and/or poverty will not be halved by 2014, since the residual unemployment rate is estimated at 18 per cent. Although, if the postulated work opportunities in CWP initiatives materialised (as scenario 2) in addition to the optimistic scenario, unemployment rate fell to about 14.4 per cent (closer to the goal of halving the official unemployment rate to

⁷⁰ These findings are relevant for EPWP programme design, objectives and setting targeting criteria in order to amplify the impact of public works programme the working age poor, given the evidence that active poverty targeting (as in Zibambele programme that targeted female-headed households), rather than reliance on the work conditionality, is 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. Equally, the long term nature of Zibambele programmes with considerable community participation in selecting beneficiaries have more impact on social development and asset investment than Gundo Lashu.

at least 14 per cent. Nonetheless, the outcome is very costly to the tune of R4 billion, if administrative and wage costs are included. Whereas, in the third and fourth scenarios, If economic growth slows down and remains at 4 per cent by 2013/14 (a pessimistic employment creation), and employment growth is modest (scenario 4), albeit, by 2013/14, over four million people will still be unemployed, at a residual unemployment rate of approximately 22 percent, even if both CPW and EPWP meet targeted work opportunities in their respective programmes. However, without the CPW, implementation of the EPWP alone would result in unemployment rates of over 25 per cent, leaving more than five million unemployed (scenario 3).

In sum, in spite of the popularity in political discourse as a one of the array of government initiatives to mitigate the extent of household poverty incidence, curtail the rising youth unemployment, offer social protection to the unemployed poor, as well as, the widespread adoption of expanded public works initiatives, the efficacy of the impact of EPWP initiatives on beneficiaries and outlined objectives at both macro- and micro-levels are severely under researched in South Africa. This research deficit is detrimental to the overall performance of EPWP *vis-a-vis* targeted objectives in terms of real value of public/community asset created, cost of wage transferred to the working poor, and sustainability of work opportunities generated to improve the livelihoods of the poor.

Indeed, both McCord and Meth (*ibid*,pp.48), McCord and Farrington (*ibid*,pp.4) argued that, in the absence of research into efficiency and cost effectiveness of EPWP initiatives shifting to labour intensification, and accurate assessment of EPWP's impact on beneficiaries offering social protection in comparison of alternative approaches that can provides equivalent effect (e.g. cash transfers), will result into inapt policy selections. According to Hemson (*ibid*), the lack of evidence to support the shift to labour intensive work approach to which the EPWP is committed is to, require further interrogation, specifically to explore the current practices, model costs and applications, and draw out policy conclusion (pp.96).

4.3.3. Has the National Government Respond to EPWP Challenges?

Apart from the well-known failures of EPWP that has been widely discussed in few international literature and case studies in South Africa, having taken cognisance of these critiques, the National Department of Public Works in ambitious attempts has made tangible efforts to incorporate these valid criticisms by actively amending the EPWP's Consolidate Framework for each implementation phase. For example, due to the failure of EPWP to gain traction and buy-in at both municipal and provincial levels⁷¹, as well as, the limited scale of the programme significantly affect the livelihood of its beneficiaries, provides quality assets and offer tangible income relief in its first phase (i.e. 2004 - 2009) were identified by some studies.⁷²

⁷¹ According to Deputy Director-General for EPWP, Stanley Henderson during the 3rd EPWP summit held in Pretoria, he revealed that in 2011, only 3 municipalities endorsed EPWP policies, but by 2013, 277 out of 278 municipalities had signed EPWP implementation agreement (see Vuk'uzenzele,pp.10, January 2013 issue). This observation validates the critique of lack of mobilisation, weak authority and oversight of the national public works, lack of technical expertise, and ineffectiveness of EPWP programmes to reach targeted beneficiaries.

⁷² See the evaluation studies of, e.g., McCutcheon et al. (2009), Lieuw-Kie-Song,(2009), Triegaardt (2009), McCord and Meth, 2007, Hemson, 2007, and McCord (2002, 2004a,2007b) amongst others.

Other short-comings of EPWP in the first phase includes: setting ambitious and multiple objectives without concrete technical skills by implementers, weak oversight and authority by NDPW, short duration of EPWP projects, unavailability of adequate or accredited trainings and/or work experience to enhance employability of beneficiaries or promote self-employment in entrepreneurial activities, limited incentives to absorb risks related to cost of programmes and the use of labour-intensive techniques; non-adherence to the use of labour-intensive techniques in construction and infrastructure projects owing to their perceived poor quality by contractors; non-uniform wage structure and work conditions, poor exist strategies, non-adherence to targeted beneficiaries owing to favouritism / nepotism by contractors and politicians⁷³, and lack of integration of EPWP objectives with other government programmes focusing on poverty-reduction and unemployment, and lack of private sector participation, limited community participation in selecting projects, and so on. These challenges were recognised by the national government and highlighted in relevant public document (e.g. see Expanded Public Works Programme Phase 2: Consolidated Programme Overview, 2009)

In direct response to these challenges the national government via NDPW, at the onset of the second phase of EPWP, introduced:

- EPWP wage incentive with the primary aim of facilitating the expansion (upscale) of public works schemes across sub-national government (i.e. provinces and municipalities). Also to provide additional funding for public bodies. To qualify for wage incentives, provinces and municipalities are required to: (i) meet minimum participation targets for women, youth and people with disabilities, (ii) meet employment creation targets using their conditional infrastructure grants and (iii) report on their contribution to the EPWP to NDPW.
- To amplify the impact of EPWP benefits through the non-governmental organisations, an new sector (i.e. Non-State sector) created in addition to the original three key sectors, namely, infrastructure, environmental and culture sectors and social. The programmes in the sector is sub-divided into two parts, (i) institutional based programmes to be implemented by NPOs, FBOs and CBOs; and (ii) Area based programmes, in which local organisations support initiatives to create employment, and assets using labour-intensive work method. Notably, the main objective of the Non-state sector is to offer regular work opportunities and income relief through part-time work.
- Augment EPWP job creating capacity and poverty-reducing impact by implementing Community Works Programme (CWP). In this way, EPWP initiatives aimed at benefitting large number of the poor unemployed living in the rural areas, where poverty incidence is the highest in SA with less infrastructure assets

⁷³ In EPWP phase 3 presentation to Public Works Programme Portfolio committee, on 5th March, 2014, and during the Green Job Summit (09 April 2014) highlight this issue, where selection of EPWP participants is hijacked by politicians for patronage purposes. In reference to this evidence, is the social unrest experienced in Smithfield district (Mohokare municipality) in Free State province, where an ex-councillor allegedly appoint 16 EPWP participants to replace selected beneficiaries (refer to article by Carmel Rickard in GroundUp local magazine titled *“Allegations Around Public Works Programme Spark Protests In Desperate Free State Dorp”*, 16 September 2014. This is contradictory to the selection process outlined in the EPWP framework policy documents.

- *Improvement in Communication and Awareness.* Subsequently, to improve awareness about EPWP and publicly communicate the programmes performance across all the three sphere of government, NDPW established the Vuk'uzenzele magazine dedicated to highlight variants of EPWP initiatives. Also, NDPW have established annual road campaigning tours and the Kamoso Awards to foster competitiveness and increase EPWP's performance across implementing departments at the national, provincial and municipal levels. The Kamoso Awards aimed at recognising best practice projects across each sectoral components capable of been replicated, best performing spheres of governments /non-governmental implementing agencies.
- *Reinforce Implementation Framework.* Equally, to improve the effectiveness and efficiency of EPWP initiatives, during the recently launched third phase (i.e. 2014/15 - 2019/20), the NDPW have devised key strategies to promotes cohesive integration of the programme with other relevant initiatives (e.g. National Youth Service to address growing unemployment amongst the youth); provides accredited trainings and strong support for SMME developments; enhance monitoring and evaluation (i.e. provides suitable exit strategies for beneficiaries, proactively assess the impact of assets created on beneficiaries and community, redefined participants selection criteria based on geographical targeting, poverty incidence and eligibility); improve quality of training (by defining training plans and budget allocation) to intensification of labour-intensive work approaches in construction/infrastructure projects by enforcing contractors to adhere to work contracts etcetera. In addition to NDPW's aim to reinforce the deficient training capacity amongst programme implementers by providing adequate technical support, the proposed Presidential Public Employment Coordinating Commission (PPECC) to be chaired by the SA's President/Deputy President, remain a critical decision of NDPW to reinforce EPWP's M&E, and, streamline its objectives relative to other existing government initiatives to tackle unemployment, alleviate poverty, promote enterprise and skill development in the country. The proposed PPECC will consists of national ministers, all provincial premiers and SALGA⁷⁴.

5. EMPIRICAL ANALYSIS OF EPWP PERFORMANCE AS A PUBLIC EMPLOYMENT PROGRAMME IN SOUTH AFRICA

5.1. Comparative Analysis: Benchmarking Sectoral and Provincial EPWP Performance of Free State

Having cautiously documented three branches of research programme either evaluating the performance of EPWP initiatives against its objectives in terms of employment created, social protection (income relief through wage transfers), value of assets created and skill development (via trainings or work experience received, which determines employability of beneficiaries in both current labour market or in future). In the absence of quality/valid data on EPWP projects, duration of work opportunities provided and types of trainings provided to participants presents a severe short-coming for reliable empirical assessment of EPWP performance (see McCutcheon et al., 2009; Meth, 2010; Chazwikira, 2010), which leads to scarcity of quantitative analysis, but a growing use of qualitative analysis in the form of a

⁷⁴ The Presidential Public Employment Coordinating Commission was approved in Parliamentary Cabinet in November 2013.

cross-sectional/longitudinal survey of specific projects across a geographical location within a demographical sample and complemented with secondary data.

To circumvent the emerging critique of commonly used by public bodies, and NDPW as a monitoring and evaluation indicator for expanded public work programmes (i.e. net work opportunities). According to Chazwikira (*ibid*,pp.248), the use of job created as the central performance indicator, rather than work days created render analysis problematic. The analytical approach in this paper, is further substantiated by the following argument that:

“As a major shift from current practice, it is suggested that the employment generation of the EPWP is monitored using labour intensity and Full Time Equivalents (FTEs) as the main indicators as opposed to the current practice of relying on work opportunities...the duration of the work opportunities vary significantly and for this reason, it is not an exact indicator. Still, it would be useful to monitor the number of work opportunities as it indicates the number of beneficiaries in the programme and duration of the jobs offered, however these figures should be treated as secondary output indicators”. (NDPW, 2012a:17)

But, drawing from the works of McCutcheon et al, (2009); Meth (2011) and 2012 NDPW’s report on labour intensity, several indicators were developed in this paper to critically assessed the performance of EPWP schemes from 2004/5 to 2014/15 financial year, at the national and provincial level. Nonetheless, for the purpose of policy recommendation, this paper delved further to examine the performance of EPWP departments at provincial and municipalities in the Free State.

5.1.1. Constructing Performance Evaluation Indicators⁷⁵

Variety of performance indicators constructed to critically analyse the performance of EPWP initiatives are reflected in Table 6. A typical thorough analysis of EPWP in SA at both national and provincial spheres of government is imperative because, first, to present a robust analysis devoid of technical biasness. Second, in the light of criticism against the use of the net work opportunities – a commonly used performance indicator by all public implementing bodies (including NDPW) in SA to evaluate the performance of implemented labour-intensive EPWP initiatives.⁷⁶ The critique remains that *net work opportunities* as a performance indicator only captures how many people are employed in one period or another, in the expanded public works programme The *net work opportunities* failed to fully capture the actual number of work opportunities generated due to the variability in the duration of employment

Additionally, same as McCutcheon et al.(2009) and Lieuw-Kie-Song (2009), other relevant evaluating indicators computed for analysis are: **(a)** EPWP budget versus actual expenditure by sector, **(b)** EPWP budget versus actual expenditure by Province **(c)** Labour intensity vs average cost of the programme and **(d)** EPWP net work opportunities created computed as a percentage of official unemployed by province.

⁷⁵ All estimation techniques are documented in Appendix ?

⁷⁶ Some performance evaluating studies criticise the use of this indicator as inadequate evaluating tool. See, for example, NDPW (2012a), Meth (2010) and Chazikwira (2010)

Table 6: Constructed Performance Indicators to Evaluate EPWP Initiatives: 2004 - 2014

Indicators	Formula	Measurement
Labour intensity (LI)	$\frac{\text{Total wage paid to beneficiaries}}{\text{Total Expenditure}}$	Validate if implemented EPWP projects are more labour intensive or capital intensive. Also, LI measures the degree of social protection provided to beneficiaries as wage transferred. A high LI confirm the use of more labour input, while low LI indicates the use of machines.
Mean Work duration: Numbers of days worked (absolute value)	$\frac{\text{No of workdays}}{\text{Net work opportunities created}}$	Measured the estimated (mean) number of work-days that an EPWP beneficiary enjoyed in the temporary jobs created in year. Useful training/skill development is generated from projects that lasted for about one year.
Total Numbers of days worked per year¹	Persons years of work (FTE) * 230	Denotes the number of work-days a beneficiary enjoy in a year in a full time job.
Mean number of work-days per month in a project²	$\frac{\text{No days worked (mean duration)}}{23 \text{ days}}$	This indicator measures the number of months that EPWP projects lasted for. A short duration of EPWP projects, indirectly prevent adequate training, skill development and work experience. This affects employability of beneficiaries.
Average Expenditure per FTE created	$\frac{\text{Expenditure per FTE}}{\text{Total No.of projects}}$	Measures the (actual) cost of creating a full time job. Often, higher expenditure shows an expensive project with a likelihood of minimal impact.
Expenditure per FTE	$\frac{\text{Total expenditure}}{\text{No. of FTE created}}$	Measures the (actual) cost of creating a full time job. How expensive does one created job cost? measures efficiency
Average Wage cost	$\frac{\text{Total expenditure}}{\text{No. of projects}}$	Measures labour intensity relative to average cost. As number of projects increases per expenditure, LI tends to decline.
Percentage of Total Expenditure relative to allocated budget.	$\frac{\text{Total expenditure}}{\text{Total allocated budget}} * 100$	How well a budget is spent? This indicator identify fiscal prudence, adherence to sound financial management principles and the use of fiscal resources for quality service delivery
Average (on-going) market wage rate.	$W_{avg.} = \sum_{i=1}^n w_1 + w_2 + \dots + w_n$	If estimated EPWP daily wage rate exceeds the aggregate (on-going) market wage rate, then job substitution, job rationing and exclusion of beneficiaries diminishes the effect of EPWP. This indicator can be used to evaluate if wage payment per sector to beneficiaries is at or above the average-market-wage rate wage leading to dead weight loss i.e. high daily wage rate above the market-going rates leads higher dependency on EPWP projects (as beneficiaries stays longer on a project that stipulated number of periods), job substitution, market failure and wage distortion. Both high dependency and job substitution effects excludes prospective beneficiaries who are the working-age poor or unemployed poor from participating in EPWP projects). On a positive side, it offers adequate income relief to smoothen income and promote savings

1. A full time equivalent job (FTE) refers to one person-year of employment. As per EPWP guideline, one person-year is equivalent to 230 person days of work.

2. It is assumed that EPWP participants can (at least) work for 23 working days per month (excluding weekends).

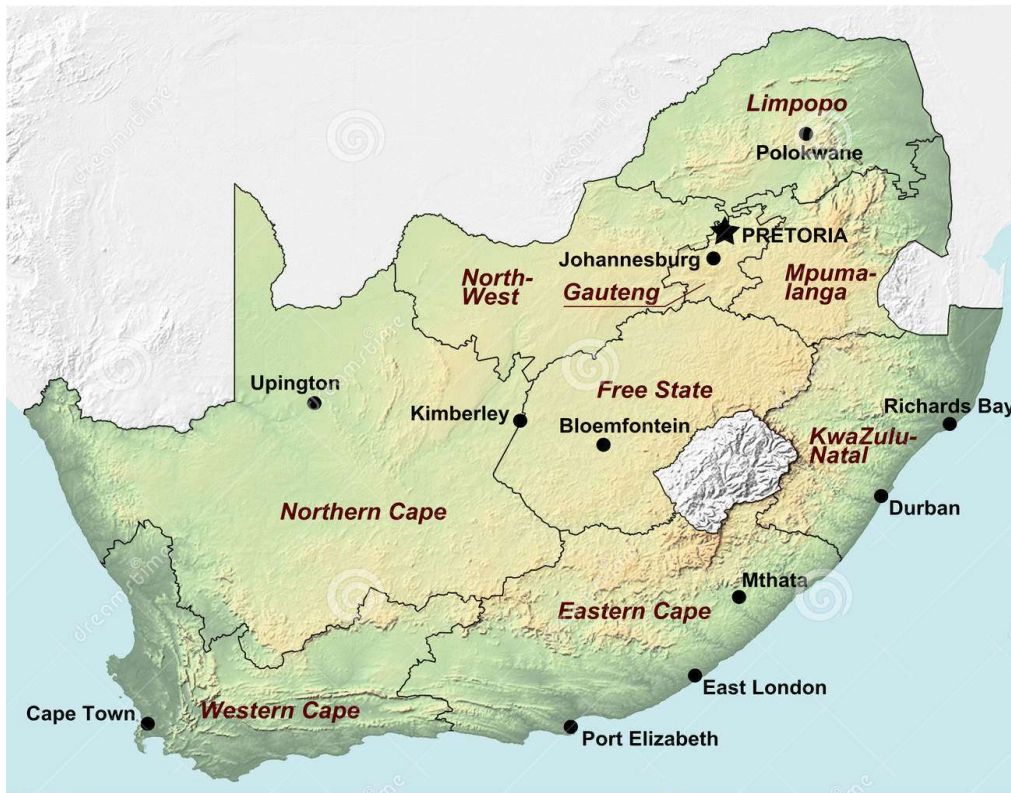
5.1.2. Data Source

This paper utilised several quarterly cumulative report by NDPW on EPWP performance at sectoral levels and across province (denoted as Annexure A to E), and quarterly cumulative reports on EPWP performance at metropolitan and districts per province (denoted as Annexure G) from Q1: 2004/5 to Q1:2014/15. Statistical data from 2008 to 2014 on demographics and labour market were sourced from StatsSA. Specifically the Quarterly Labour Force Survey, Quarter 3, 2014. For the econometric modelling, Eviews 7 was used for modelling and data generating purpose, and Global Insight Rex data was used for the extraction of macroeconomic data on Free State province such as GDP, total pollution, unemployment rate, employment rate and labour force). In addition, data on EPWP infrastructure expenditure was extracted from several *Provincial Votes Speech* (09) by FS Department of Public Works from 2007/08 to 2013/14. Otherwise stated, all data are sourced from the National Department of Public Works.

5.1.3. CROSS-PROVINCIAL ANALYSIS OF EPWP PERFORMANCE (NATIONAL)

Illustrated in Figure 1, South Africa consist of nine provinces spatially distributed. Labour data released in 2014 by StatsSA indicates that, across the provinces, Free State has the highest rate of structural unemployment of 34.6 percent (official definition) with labour market absorption rate of 40.6 percent. See Table 7.

Figure 1: Geographical Location of South Africa Provinces



Source: Own Illustration

Table 7: Unemployment and Labour Absorption Rate by Province, QLFS 2014

	Unemployment rate : Official Definition (%)	Unemployment rate: Expanded definition (%)	Labour Absorption rate (%) Official Definition
SA	25.4	35.8	42.6
EC	29.5	43	33.7
NC	29.7	39.5	39.8
WC	23.6	25.5	51.9
FS	34.6	40.9	40.6
MP	29.3	42	41.9
GP	24.6	29.6	51.5
LP	15.9	38.4	44.3
KZN	24.1	40.8	36.5
NW	26.8	41.8	38.5

Source: StatsSA, 2014.

5.2. PERFORMANCE ANALYSIS OF EPWP PHASE 1: END OF 2004/05 FINANCIAL YEAR, 01 APRIL 2004 - 31ST MARCH 2005

SECTORAL ANALYSIS (2004 - 2005)

Taking into account data in Tables 8 and 9, after the inception of EPWP programme in the financial year of 2004/05, the four sectors of the programme, namely infrastructure, economic, environment and culture, and social, created about 16 million workdays of employment, which translates into 71, 086 persons full time for an entire year. Across the sectors, infrastructure sector has the largest budgetary allocation of R3.6 billion followed by environment and culture sector (R716 million), economic sector (R37 million) and Social sector (R20 million). This budgetary allocation is due to original premise that the infrastructure sector forms the main component from which intensification of labour-intensive work can be implemented to generate work opportunities for the unemployed poor. Interestingly, in spite of infrastructure sector being the largest sector with relatively large fiscal allocation, it is the smaller sectors (i.e. environmental and culture) that used large percentage (89%) of allocated expenditure to generate slightly more than half (33.63% or 3) of employment created by the infrastructure sector (62.7%).

Table 8: EPWP Phase 1 Sectoral Analysis (National) 01April 2004 - 31st March 2005 (1 Year Review)

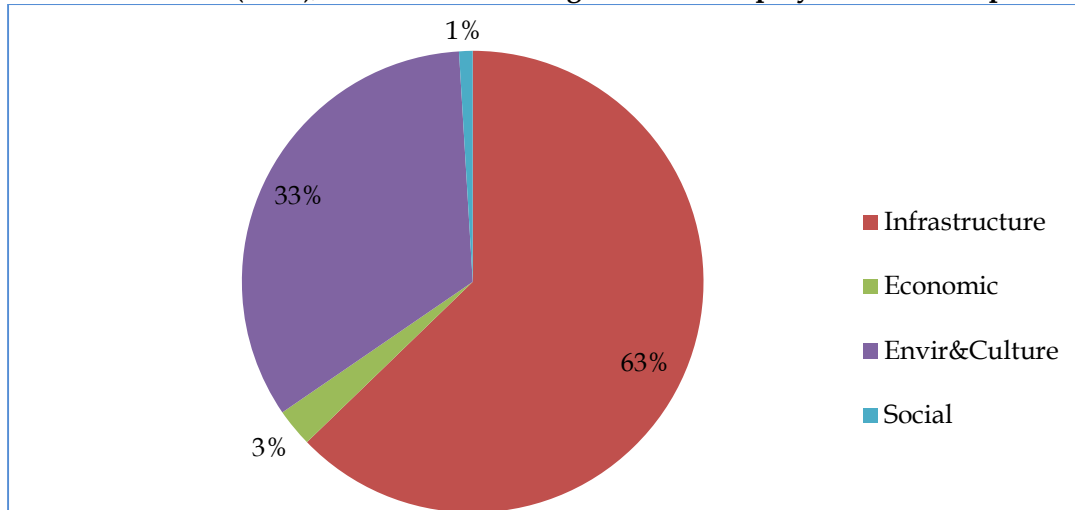
Sector	Perons-Year of Work (FTE)	Net job opportunities created	Total wages paid to EPWP workers	Average Cost per number of projects (mill)	Employment created by sector
Infrastructure	52,891	109,712	671,810.69	1,291,423.41	62.75%
Economic	286	4,687	2,917.51	348,349.26	2.68%
Enviro&Culture	15,944	58,796	132,647.30	502,278.03	33.63%
Social	1,965	1,650	15,827.49	85,783.39	0.94%
TOTAL	71,086	174,845	823,202.98	906772.2639	100%

Source: DPW 4th Qtr Report, Cumulative- 01/04 - 31/04 March, own calculations

Evaluating the numbers of work opportunities created, the Infrastructure sector generate some 52,000 FTE providing a temporary employment for 109,712 persons, followed by the environment and culture sector (15,994 FTE) with a wage component of 0.03 percent and 0.02 percent of total

expenditure respectively. Ironically, these two largest employment generating sectors have low intensity in contrast to the social sector that created a lower persons year of work of 1,965 with a higher labour intensity of 0.08 percent. The Economic sector with total expenditure on wages constituted 0.02 percent of aggregate expenditure, and generates 286 FTEs, which translates to 4,687 work opportunities for beneficiaries. It is worth mentioning that, although the infrastructure sector has the largest budgetary allocation and created the largest employment opportunities for the working age poor, yet, the environment and culture sector with a smaller budget allocation transferred more wages to beneficiaries as income relief, and create slightly more than half of work opportunities in comparison to the infrastructure sector. Social sectors, also, transfers more wages to beneficiaries than both the economic and infrastructure sectors.

Figure 2. EPWP Phase 1 (Start), 2004-2005: Percentage Share of Employment Created per Sector



Source: Own Illustration

In terms of targeted beneficiaries during the first phase of EPWP which constitute of 40% for Women, 30% (for youth) and 2% (for disabled people), across the sectors, there is evidence of non-adherence to this pre-set selection criteria. While the social and environment sectors tends to employed more women beneficiaries than the youths, this trend is reversed in both the economic and infrastructure sectors. However, the EPWP projects failed to meet the target set for the disabled people.

On cost effectiveness, it is more expensive to create work opportunities in the Economic sector than other remaining sectors, given that it cost R 85,290 (LI of 0.01%) to create a full time job for one year compared to the cost of R9,516 (LI of 0.08%) in the Social sector. Equally, it is fairly cost effective to create one full time employment per year in the Infrastructure and economic sectors given the expenditure of R40,354 (LI of 0.03%) and R46, 733 (LI of 0.02%). On this basis, the low labour input (measured by LI) lead to high cost to create a work opportunity

Comparing LI against average project cost, it is evident that labour intensity declined over time as the value of projects increases, in other words, as project values doubled, labour intensity declined. This inference suggest that as government increases the number of large infrastructure projects in order to increase expenditure, the use of labour intensive work approach diminished as contractors intensify the use of “business as usual” to utilising more capital-based technology. This inference is in line with McCutcheon et.al., (ibid, pp. 204)

The average aggregate (market) wage rate in the EPWP programme is R44.16 per day, yet, the Infrastructure sector has the highest wage rate of R55.12 per day far above the aggregate wage rate, whilst the social sector offered R45.75 per day to beneficiaries, slightly higher than the aggregate wage rate by R1.60. On the other hand, lower wages is paid to participants working in both the Economic and the Environment sectors. This result support the evidence that beneficiaries working in the infrastructure sector in the EPWP programme received better wages than participants elsewhere, partially due to the intensive nature of tasks to be completed in infrastructure projects. nonetheless this findings suggest the pervasiveness of higher job substitution (workers leaving casual labour with less payment to work in this sector), labour market disruption due to variability in wages above going market wage rate and/or associated dead weight loss. Most importantly, because of excess demand for job in the infrastructure, rationing selection method is intensified and large proportion of unemployed poor could be excluded from benefitting from the short-term jobs provided in this sector. In effect, poverty reducing effect of EPWP projects implemented in the infrastructure will be extremely limited without any significant positive impact on the poverty incidence in SA.

Table 9: EPWP Phase 1 Analysis of Sectoral Performance (Year 1): 01 April 2004 - 31st March 2005

Sector	Project Allocated Budget (R 'Mill)	Total Expenditure (R 'Mill)	% of Total Exp	No of Projects	Targeted Beneficiaries per group / GENDER			Constructed Evaluation Indicators			
					W (%)	Y (%)	D (%)	Avg. Daily Wages (Min.)	Expenditure per FTE (x1000)	Labour Intensity (%)	Total No of Work days per year
Infrastructure	3,657,702.22	2,471,784.41	67.58	1,914	35	39	0.40	55.12	46734	27.18	12,164,930
Economic	37,442.58	24,384.45	65.12	70	20	25	0.80	36.71	85290	11.96	65,757
Envir&Culture	716,326.36	643,418.16	89.82	1,281	44	50	1.10	39.04	40355	20.62	3,667,120
Social	20,820.78	18,700.78	89.82	218	64	36	0.30	45.75	9517	84.64	451,950
TOTAL (million)	4,432,291.94	3,158,287.80	71.26	3,483	40.7	37.5	0.65	44.16	181.895	26.06	16,349,757

Source: DPW 4th Qtr Report (released on 30 June 2005), Cumulative data in annexure A, Own calculations

PROVINCIAL ANALYSIS(2004 – 2005): EPWP Phase 1 (Year 1)

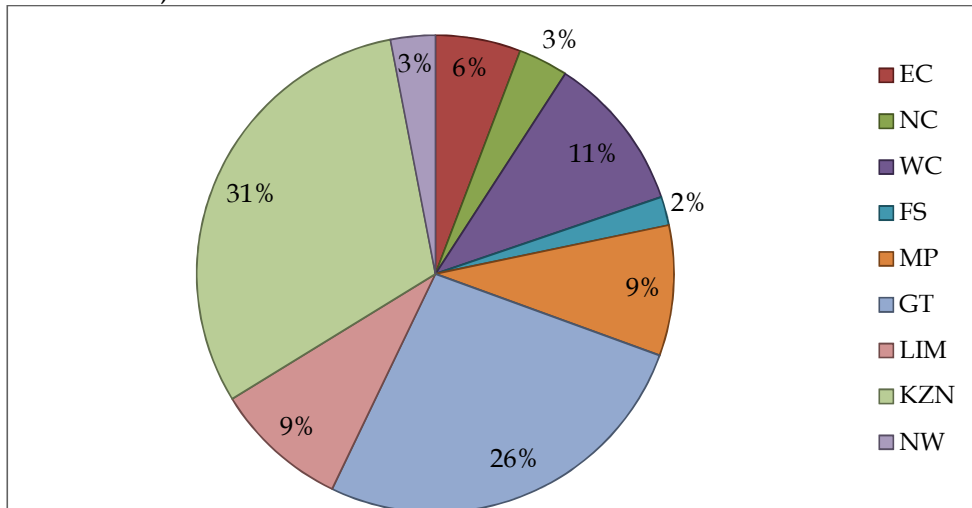
A review of EPWP data in Tables 9 and 10, across SA provinces revealed a wide disproportionate performance across the provinces, with the most industrialised and populated provinces (namely KZN and Gauteng) generating the largest share of total net work opportunities created for beneficiaries. Across the nine provinces, EPWP created about 16 workdays of employment, with Gauteng generating at least 8.5 million workdays of employment (equivalent to 36,998 persons full time for an entire year), followed by KwaZulu-Natal (approximately 3.4 million workdays of employment, equals 147,715 FTEs for a whole year), Mpumalanga (1.4million workdays of employment, equivalent to 6,184 FTEs per year, whilst **Free State generated the lowest workdays of employment of about 241,000 (equivalent to 1,050 FTEs for an entire year) to beneficiaries as the lowest performing province.** In terms of workdays employment created, provinces such as Eastern Cape (717,000) and Western Cape (736,000) performance are fairly poor but better than Limpopo (575, 000)and North West (345,000). By implication, most of the EPWP projects in Free State had a very short duration with a severely limited capacity to create labour intensive work

opportunities for beneficiaries. By implication, at provincial level, KwaZulu-Natal and Gauteng generated the largest number of temporary employments to 53,755 persons and 46,445 persons respectively, nonetheless, Free State created the lowest share of temporary work opportunities to 3,390 beneficiaries for the entire year.

Table 10: EPWP Phase 1, Cross-Provincial Performance Analysis: 01 April 2004 - 31st March 2005 (Year 1)

Sector	Perons-Year of Work (FTE)	Net job opportunities created	Employment created by province
Eastern Cape	3,119	10,118	5.79%
Northern Cape	1,815	5,916	3.38%
Western Cape	3,201	18,549	10.61%
Free State	1,050	3,390	1.94%
Mpumalanga	6,184	15,453	8.84%
Gauteng	36,998	46,445	26.56%
Limpopo	2,500	15,933	9.11%
Kwazulu-Natal	14,715	53,755	30.74%
North West	1,503	5,286	3.02%
TOTAL(million)	71,085	174,845	1.00

Figure 3: Number of EPWP Employment Created By Provinces during EPWP Phase 1 (First Year)



Source: Own Illustration

On efficiency of utilising budgetary allocations to generate employment opportunities, there is an evidence of varying poor performances that is not related to the amount of fiscal allocations transferred to provinces as PIG or MIG (see Table 11). For instance, in 2004/05 financial year, Gauteng received the largest allocation of R2.5 billion, of which 70.9 percent was spent on EPWP schemes, whereas, Free State received about 48 million from which R 45.9 million was spent on generating work opportunities for the poor unemployed. In view of fiscal effectiveness, that is, total expenditure spent on EPWP programmes relative to allocated budget, **Free State emerged as the best performing province (95.12%)**, followed by Eastern

Cape (87.64%), North West (85.42%) and KwaZulu Natal (85.34%). Whilst, the poorest performing provinces are Mpumalanga (54.09%) and Northern Cape (55.57%).

Table 11: Cross-Provincial EPWP Performance, Cumulative data, 01 April 2004-31st March 2005 (Year 1)

Province	Project Allocated Budget (R 'Million)	Aggregate Expenditure (R 'Million)	% of Total Exp.	No of Projects	Targeted Beneficiaries as per gender			Avg. Daily Wages (Min)	Expenditure per FTE	Labour Intensity	Total No of Work days per year
					W (%)	Y (%)	D (%)				
EC	124,240.28	108,885.33	87.64%	351	48	40	0.60	43.47	34.910	24.37%	717,370
NC	158,523.56	88,094.50	55.57%	105	51	39	0.90	38.69	48.537	17.01%	417,450
WC	309,388.78	212,851.17	68.80%	393	31	41	0.60	45.15	66.495	15.42%	736,230
F S	48,321.73	45,962.52	95.12%	111	41	53	0.70	39.27	43.774	19.61%	241,500
MP	318,852.08	172,472.26	54.09%	553	46	41	1.40	42.46	27.890	30.65%	1,422,320
GT	2,591,646.46	1,839,529.26	70.98%	1,296	25	54	0.60	58.62	49.720	27.57%	8,509,540
LIM	249,069.31	151,340.52	60.76%	168	22	22	0.30	36.16	60.536	13.19%	575,000
KZN	444,284.91	379,130.72	85.34%	386	59	27	0.20	40.66	25.765	38.29%	3,384,450
NW	187,334.84	160,021.52	85.42%	120	37	36	0.90	45.68	106.468	9.23%	345,690
TOTAL (Million)	4,431,661.94	3,158,287.80	71.27%	3,483	40	39.2 2	0.69	43	464.095	26.06%	16,349,550

Source: DPW 4th Qtr report, Cumulative- 01/04 - 31/04 March

By taking into account the extent to which the expanded public works had applied labour-intensive work methods measured as labour intensity (LI) across the provinces, the computed labour intensity rate affirmed that only four provinces had LI above 20%, an indicative of utilising a high labour input to generate transient employment for the poor unemployed, in effect, possibly absorbing large proportion of unskilled labours, given the likelihood of attracting employed workers elsewhere earning irregular wages into EPWP schemes that offers, financial stability, income insurance and temporary job opportunities. In this context, provinces that employed labour-intensive work approach in EPWP projects to create jobs are KZN (LI of 38.29%), Mpumalanga (LI of 30.6%), Gauteng (LI of 27.57%) and Eastern Cape (LI of 24.37%).

It is worth mentioning that, the observed high LI rate generated in KZN province is partially due to the widespread establishment of Zibambele projects that explicitly targeted impoverished female-head household, encouraged community participation to select beneficiaries per household, and offered a long-term road maintenance contracts to beneficiaries in rural areas. In fact, extensive comparative analysis suggested that Zibambele projects is one of the best practice PWP's suitable for replication due to; its active poverty-targeting modality, recurrent funding, single objective, and sound implementation framework, and the expansion capacity to adequately compete with capital intensive work method (see NDPW, 2012a; McCord, 2002; McCutcheon, 2001b). On this evaluation criteria, results confirmed that most of EPWP projects in the Free State (19.61% LI) are relatively more

labour-intensive than EPWP projects in the Western Cape (15.42% LI), Northern Cape (17.01%LI), and Limpopo (13.9%LI). North West generated the lowest labour-intensity (of 9.23%) suggesting little compliance to the labour intensive work approach as stipulated in EPWP framework document and the Division of Revenue Act (DoRA), implying that, conventional techniques (capital-intensive) are used in most EPWP projects.

Measuring EPWP performance in terms of targeted beneficiaries for phase 1 (i.e. all projects in the programme must employed at least 40% of women, 30% of youth and 2% of disabled people) to address acute poverty incidence and massive unemployment rate in the country, with the exception of Limpopo and KwaZulu Natal provinces that employed the lowest proportion of youths (i.e 22% and 27% respectively), other provinces employed large proportion of both women and youth. In particular, temporary work opportunities generated in the Free State attracted the largest proportion of youth (53%) in comparison to other provinces, even as, 41 percent of women benefited from EPWP programme in the FS. A striking evidence from the analysis of targeted beneficiaries is that working age unemployed poor who are disabled are significantly excluded from the positive spinoffs that are provided by EPWP schemes, no matter how little these benefits are.

Apart from Mpumalanga that attracted about 1.4 percent of disabled beneficiaries, data from other provinces revealed that the participation of disabled people is dismal. This finding contradicts the outlined criteria in EPWP policy document, as well as, remain significant because the disabled poor are marginalised from this poverty-alleviating and employment creating programme in South Africa. This inference is critical, and calls to attention of both NDPW and public bodies across the three sphere of government (i.e. national, provincial and municipality) to either reinforce the selection criteria targeted towards the disabled poor people and/or establish a new social programmes as an additional component to EPWP's pre-existing sectors solely to attract the disabled.

Assessing the probability of unintended consequences of generous wage offer inherent to some EPWP especially in the infrastructure sector. For example, high job substitution, labour market disruption, dead weight loss, increasing dependence on EPWP projects without any alternative income source and exclusion of the unemployed poor. Given the aggregate average market wage of R43 at provincial level, Gauteng offered the highest EPWP wage (R58.62), while other provinces wage rate are to some extent a little bit more than the aggregate average rate, namely North West (R45.68), Western Cape (R45.15) and Eastern Cape (R43.47). Average daily wage payment to beneficiaries participating in EPWP programmes (i.e. R39.27) is lower than the aggregate average wage rate. By interpretation, the wage setting for EPWP in FS satisfied the "less eligibility criteria" prescribed for PWPs (World Bank, 2001).

5.3. Performance Analysis of EPWP Phase 1: 2004/05 – April 2009/10 (5years)

SECTORAL ANALYSIS (Phase 1)

In attempt to critically reviews the performance of EPWP during the first five years of a completed phase (i.e. Phase 1), the sectoral analysis here focused on the performance data published in the 5year report as indicated in Table 12. The NDPW (2009a) copiously document the over-achievement performance of EPWP initiatives at across the four main sectors. In the spirit of Meth

(2010), the evaluation analysis presented in Table 12 used the NDPW report as a reference point. See, Meth (2010) for critical interrogation of EPWP five year report for phase 1.

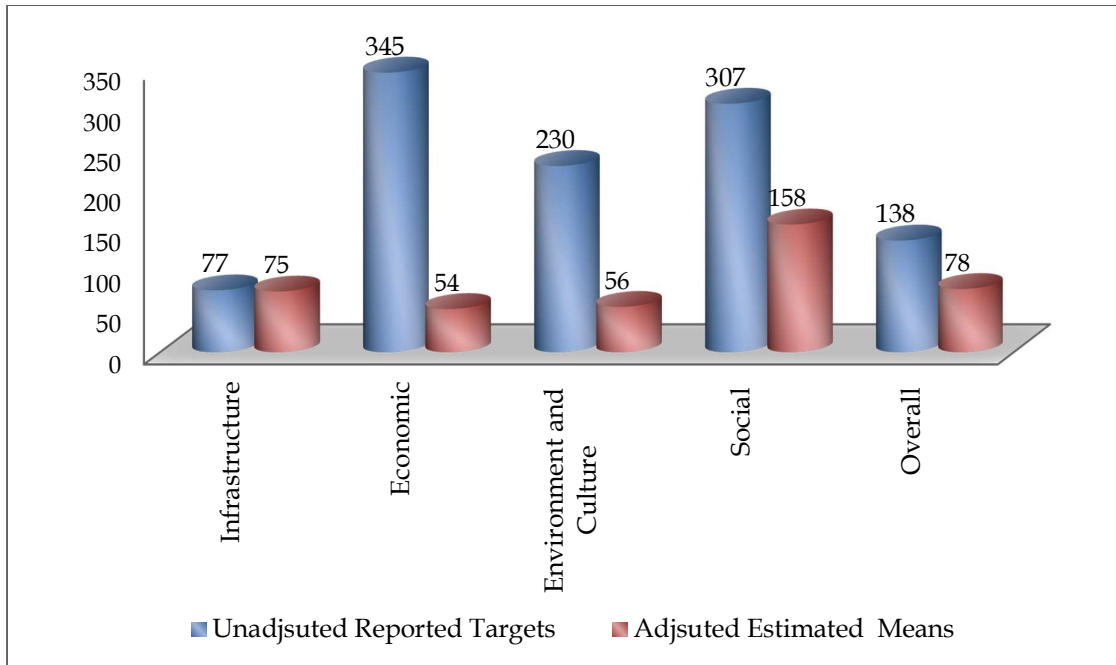
Table 12: Sectoral Analysis EPWP Phase 1 Performance, 01 April 2004 - 31st March 2009

Indicators	Sectors	Targets	Achieved	%
Network Opportunities ('000)	Infrastructure	750,000	955233	127
	Economic	12,000	20377	170
	Environment & Culture	200,000	467720	233.9
	Social	150,000	174366	116.2
	Overall	1,112,000	1,617,696	145.5
Persons-year of work (including training) - FTE ('000)	Infrastructure	250,000	312227	125
	Economic	18,000	4745	26
	Environment & Culture	200,000	114,228	57
	Social	200,000	119717	60
	Overall	668,000	550,917	82
Persons-days of training ('000)	Infrastructure	9,000,000	3397697	38
	Economic	39,000	55917	143
	Environment & Culture	2,005,000	1650647	82
	Social	4,535,000	2081882	46
	Overall	15,579,000	7,186,143	46
Persons years of work per job opportunity	Infrastructure	77	75	98
	Economic	345	54	16
	Environment & Culture	230	56	24
	Social	307	158	51
	Overall	138	78	57

Source: NDPW (2009a), First 5years EPWP Report, pg.110, own calculation.

According to the outlined guidelines for implementing labour-intensive work projects in EPWP, a full work year consist of 230 days. Thus, a mean estimation of number of days worked can be determined as shown in the last panel of Table 12. A furtive glance of the performance data in Table 12 revealed that the environment and culture sector generated the largest share of temporary work opportunities of about 267 million in excess of the targeted figures in column three, over the five year period (2004 - 2009), followed the Infrastructure sector, which create an additional 205 million work opportunities. However, the Economic sector created the lowest number of marginal work opportunities of about 8.4 million, whilst the Social sector created additional temporary jobs of at least 24.4 million. The inference observed by computing the numbers of marginal jobs created in excess of the targeted figures, become somewhat ambiguous, when the share of marginal works opportunities created is computed relative to the set targets., that is, although environment and culture sector become the best performing sector (234%), followed by the economic sector (170%), infrastructure sector (127%) and social sector (116.2%). Therefore, this deduction strongly support the rationale critique that using the number of jobs created in EPWP initiatives as a performance measure is inappropriate

Figure 4: Work Duration by Sector: Targets Achieved vs Adjusted Estimated Mean Work duration



Source: Own Illustration

Furthermore, from Table 12, since skill development (i.e. training and work experience) is a key component in EPWP to enhance the employability of beneficiaries after exiting the programme to take up productive work in the mainstream labour market or become self-employed⁷⁷. By taking the extent of trainings (or work experience) gained by participants into account, the best performing sector (i.e. environment and culture in terms total number of jobs created over a period of five years) becomes one of the worst performing sector. That is, given the target to generate 200,000 full time employment to beneficiaries, but only generated some 114,228 FTEs to give an unadjusted performance of 57 percent (see the fifth column of Table 12). Distributing this figure over the number of work opportunities actually created, actual mean as a percentage of target work days falls to 24 percent (fourth panel in Table 12), an indicative of poor performance whilst the infrastructure sector emerged the best performing sector with actual performance of 98 percent, followed by the social sector (51%).

By taking into account the longest duration of work opportunity created and accessibility to training, since the aim of EPWP initiatives to produce at least 75 working days opportunities to beneficiaries, the estimated mean employment durations estimations shows that Social sector had the longest mean employment duration is (158 work days), followed by Infrastructure employment (75 workdays), meanwhile, employment opportunities in both the environment and Economic sector were 54 and 56 workdays, indicating shorter period of employment for the working age poor. This particular inference, suggests that beneficiaries had longer employment opportunities in the Social sector (about 4 months), than the infrastructure sector (slightly more than 2 months). When this duration of employment opportunities created is compared to the stipulation that participants are entitled to at least 2 days of training per month as enacted in the Code of Practice for SPWP, by implication, at best, all unskilled working age poor can only gain maximum of 8 training opportunities and/or minimum of 4 trainings in EPWP initiatives. This

⁷⁷ "The central objective of the EPWP is to alleviate poverty through training of poor unemployed people." (DPW, 2005a, p.31)

short duration of training confirmed the strong evidence that beneficiaries of these programmes, EPWP initiatives has limited impact on employability of beneficiaries, in most cases, beneficiaries are ill-equipped with proper skills to take up employment available in the mainstream labour market, consequently, they falls back into long spell of unemployment after exiting EPWP programmes (as cited in the literature).

Sectoral Analysis: EPWP Performance of Phase 2: 1 April 2008 to 31st March 2009.

Furthermore, to present a robust analysis on the EPWP’s overall performance, this study analysed the reported 4th quarter data for the last year of the first phase of EPWP (i.e. April 2008 to March 2009). In Tables 13 and 14, approximately about 42 million days of jobs was created by all the EPWP four sectors, which translates into 184,642 FTE during the last year of phase 1. Noticeably, by assuming that a full persons-years work is equivalent to 230 days, the highest number of workdays of employment was created in the Infrastructure sector of about 27million workdays, equivalent to employing 118,594 persons full-time for a whole year, followed by the Social sector creating some 9 million workdays, and employed 39,917 FTEs, whilst the environment and culture sector created about 5 million workdays of employment, equivalent to employing 24,669 FTEs and the Economic sector create the lowest workdays of employment of about 336,000, which translated to 1,462 FTEs.

Characteristically, Infrastructure sector contributed about 70 percent of net work opportunities created in the last year of phase 1, while jobs created to EPWP participants in the remaining sectors are of poor performance, that is, environment and culture contributed about 18 percent of network opportunities, followed by the social sector (roughly 11%) and the economic sector (around 1%).

Table 13: EPWP Phase 1: Cumulative Sectoral data for Year 5, 01 April 2008 - 31st March 2009⁷⁸

Sector	Project Allocated Budget (R' Mill)	Total Expenditure (R'Mill)	% of Total Expenditure	No of Projects	Target by Gender			Avg. Daily Wages (min)	Expenditure per FTE	Labour Intensity (%)	Total No of Work days per year
					W (%)	Y (%)	D (%)				
Infrastructure	32,208,579,77	20,696,471,41	39.42%	9,603	36	46	1.08	78.3	174.515	9.41	27,276,620
Economic	2,430,361,25	197,586,911	0.38%	354	48	32	0.84	44.4	135.167	7.58	336,214
Envir&Culture	2,766,393,22	1,466,071,752	2.79%	1,377	44	45	1.65	53.8	59.430	20.51	5,673,870
Social	15,092,919,04	842,868,957	1.61%	5,535	75	41	0.21	42.7	21.116	43.32	9,180,910
TOTAL (Million)	52,498,252,27	23,202,999,02	44.2%	16,869	50.75	164	0.04	54.80	390.23	11.33	42,467,614

Source: DPW 4th Qtr Report, Cumulative- 01 April 2008 – 31 March 2009 (Annexure A); Own calculations

On efficiency of utilising budgetary allocations to create job opportunities, during the financial year 2008/09, data analysis indicates under-expenditure of allocated funds across the four sectors, where, infrastructure sector spent roughly 39.4 percent of allocated budget, the budgetary performance of the other three sectors was dismal. In this case, the environment and culture sector only utilised about 2.8 percent of allocated budget, followed by the social sector (about 1.6%) and the economic sector (0.4%). This observation clearly indicates administrative and financial management challenges in EPWP sectors to optimally utilise

⁷⁸ EPWP report for the period April to March 2009 (year 5) released on 12 June 2009. This report contains the interim cumulative data for the period: 1 April 2008 to 31 March

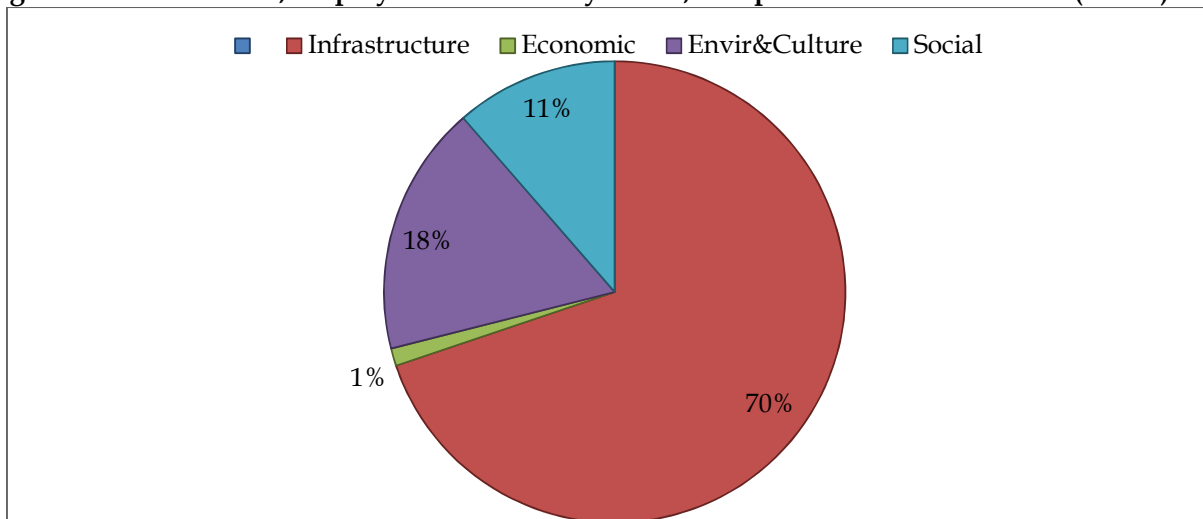
allocated funds to generate greater employment opportunities for the working age poor. Other possible factors that could be responsible for this problem could be; lack of project planning, delay in starting selected projects, supply chain management problems that hinders procurement of materials, and so on. Intuitively, the observed under-expenditure implies suggests that large proportion of work opportunities that ought to be created to absorb substantial of the unemployed poor failed to materialised, this drastically limit the poverty-reducing effect of EPWP initiatives, as well as, social protection function.

Table 14: EPWP Phase 1: Cumulative Sectoral data for Year 5, 01 April 2008 - 31 March 2009

Sector	Perons-Year of Work (FTE)	Net job opportunities created	Total wages paid to EPWP workers (mil)	Average cost per project (mil)	Employment created by sector
Infrastructure	118,594	397,984	1,948,098,09	2,155.21	69.82%
Economic	1,462	7,067	14,981,44	558.16	1.24%
Envir&Culture	24,669	99,987	300,679,92	1,064.69	17.54%
Social	39,917	64,981	365,133,83	152.28	11.40%
TOTAL	184,642	570,019	2,628,893.27	1,375.48	100%

Source: DPW 4th Qtr Report, Cumulative- 01/04 - 31/04 March, own calculations

Figure 5: EPWP Phase 1, Employment Created by Sector, 01 April 2008 - 31 March 2009 (Year 5)



Source: Own Illustration

Considering the adherence of contractors to the use of labour-intensive work methods in EPWP projects across the four sectors using labour intensity, which is a measure of performance and wage transferred to beneficiaries (i.e. total wage expenditure). Surprisingly, the social sector had the highest LI (43.32%), followed by environment and culture sector with LI of 20.51 percent. Even though, implemented projects in both the infrastructure and economic sectors failed to use labour-intensive work approach due to very low labour intensities of 9.41% and 7.58% respectively, the poor performance of the infrastructure sector is very worrying indicating that contractors tend to employed a very high proportion of conventional construction techniques which are capital intensive to complete ongoing projects, rather than, using labour input. This findings supported the growing concern openly discussed by NDPW officials that contractors perceived labour to be slow, demanding and of

poor quality⁷⁹. This notion is expressed in the Deputy Minister of National Department of Public Works to the Parliamentary Portfolio Committee for Public Works, Jeremy Cronin in the presentation of EPWP performance during phase 2, and the strategic framework for phase 3, he pointed out that:

“There was a perception of risk for public bodies taking on EPWP projects. There was concern that labour-intensive methods are slow and the quality is poor”. (DPW 2014: 2)⁸⁰

Measuring EPWP's performance *in terms of targeted beneficiaries* for phase 1, to provide work opportunities for women, youth and disabled people in a proportion of 40 percent, 30 percent and 2 percent respectively. The performance EPWP data reflected in Table 13 shows that, apart from the Infrastructure sector offered work opportunities to 36 percent of women, other three sectors provided created jobs for women beneficiaries ranging from the lowest proportion of roughly 44 percent (in the Environment and Culture sector) to the highest percentage share of 75 percent (in the Social sector). The plausible argument for employing more youth than women in the infrastructure sector can be associate with the degree of physical strength and endurance require to execute manual tasks (e.g. digging trenches) in these projects (see Khanyile, 2008). Then again, there is an improvement in both Infrastructure and E&C sectors to employed about 1.08 and 1.65 percent of disable unemployed in EPWP projects, whereas, interestingly the social sectors only employed 0.21 percent of disabled people during the last year of the first phase of EPWP. An indicative that as policy imperative, NDPW and governments should either create and/or upscale social programmes (e.g. Community Public Works, Early Child Care, Community Homes Based Care etc)

However, investigating the evidence that payment of higher wage rates in public works programme could cause high job substitution, labour market disruption, dead weight loss, increasing dependence on EPWP projects without any alternative income source and exclusion of the unemployed poor. Given the aggregate average market wage of R54 per day, across the four sectors, apart from the three sectors that satisfied the “less eligibility criteria” prescribed for PWP by offering low wages below the aggregate market wage rate, as usual, the infrastructure sectors offered the higher daily wage rate of R78. This inference indicates the likelihood of unemployed poor being explicitly excluded from participating in infrastructure projects.

Conclusively, as highlighted in Table 14, by dividing total wage cost over the number of projects created per sector, on average, it is very costly to one employment opportunity per project implemented in both the Infrastructure and E&C sectors, equivalent to R 2.2 million and R 1.1 million respectively, while, in economic sector and social sectors about R558,000 and R152,000 was used to create employment opportunity per EPWP project.

⁷⁹ Refer to the transcripts of the meeting, titled “*Presentation by Department of Public Works (DPW) on EPWP Phase 3*”, 05 March 2014. Available at: <http://www.pmg.org.za/print/report/20140305-phase-3-expanded-public-works-programme>. Alternatively, refer to EPWP Phase 3 presentation at the Green Job Summit, 09 April 2014.

⁸⁰ To address the misconception of contractors about using labour inputs, NDPW intend to include labour-intensive methods in the training curriculum of the engineering profession. According to McCutcheon (2014), labour intensive work method can be competitive with conventional construction techniques, if properly implemented and effectively managed including an increment of about 30 - 40 percent in capital expenditure allocated to labour-intensive projects without compromising time and quality, labour intensive work method could generate roughly 3 to 60 jobs (while conventional construction creates 1 job) with an average of five high standard infrastructure, and at least enhanced the construction of 60 roads in remote rural areas.

PROVINCIAL ANALYSIS(Year 5 of Phase 1)

Drawing from data in Tables 15, 16 and Figure 6, there is evidence of fiscal allocation imbalance in favour of economically industrialised provinces and less industrialised provinces. For instance, Western Cape received the largest allocation (about R18 billion) for EPWP initiatives during 2008/09 financial year, followed by Gauteng with roughly R11 billion. Apart from Eastern Cape and KwaZulu Natal provinces (two of the provinces with the most acute poverty and unemployment in rural areas) that received roughly R7 billion for EPWP schemes, other provinces received less than R2.7 billion. In particular, Free State and North West provinces received R1.7 billion and R1.1 billion respectively.

Table 15: EPWP Phase 1, Cumulative Provincial data for the Period of 01 April to 31st March 2009(Year 5)

Province	Project Allocated Budget (R 'm)	Aggregate Expenditure	% of Total Exp	No of Projects	Targeted Beneficiaries per group / GENDER			Avg. Daily Wages (min)	Expenditure per FTE	Labour Intensity (%)	Total No of Work days per year
					W (%)	Y (%)	D (%)				
								R			
EC	7,302,116.57	4,676,691.81	64.05%	1,413	44	38	0.67	63.75	165.822	8.08%	6,486,690
NC	1,340,658.74	700,881.04	52.28%	560	51	48	2.25	71.61	81.678	16.44%	1,973,630
WC	18,469,628.98	2,687,391.95	14.55%	1,630	40	60	0.97	80.91	219.720	7.35%	2,813,130
FS	1,763,514.95	1,091,127.83	61.87%	2,071	44	49	0.93	48.43	113.329	10.04%	2,214,440
MP	827,634.42	516,487.83	62.41%	1,736	56	41	0.70	72.87	38.438	23.45%	3,090,510
GP	11,853,640.79	7,565,318.39	63.82%	1,639	26	54	1.83	69.17	163.606	10.53%	10,635,430
LP	2,657,147.27	1,689,750.88	63.59%	2,791	42	37	0.93	51.97	104.654	10.58%	3,713,580
KZN	7,155,494.31	3,587,959.44	50.14%	3,924	48	39	0.78	71.54	87.783	17.69%	9,400,790
NW	1,128,407.24	687,389.85	60.92%	1,105	54	50	0.90	44.96	73.905	14.13%	2,139,230
TOTAL (Mil)	52,498,243.27	23,202,999.02	44.20%	16,869	45	46.2	1.11	64	1048.936	11.33%	42,467,430

Source: **Annexure B1**

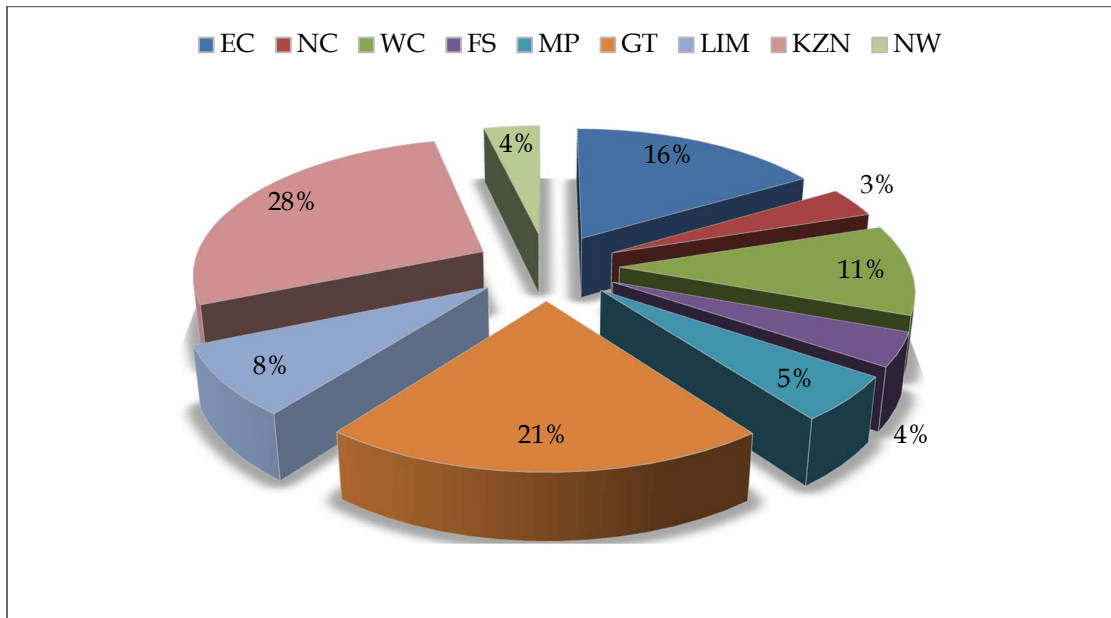
In total, approximately 42 million workdays of employment was generated across the provinces, translating into an employment for 184,641 persons full-time for the whole year. Remarkably, while Gauteng and KZN contribution to total number of job opportunities created was roughly 21% and 28%, other provinces contributions ranges from 17% (Eastern Cape) and 4% (Free State, Northern Cape and North West).

Although, to some extent, Free State fairly used EPWP allocated budget (about 61.87%) in comparison to other provinces, government investment in this province only generated some 9,628 work years, providing temporary employment of 22, 322 or 2.2 million workdays of employment to beneficiaries. In contrast, provinces such as Gauteng and KZN generated the largest persons-years of work (FTE) with about 46, 241 and 40, 873, equivalent to 157,825 and 117,642 net work opportunities respectively.

Table 16: EPWP Phase 1, Cumulative Provincial data, 01 April 2008 - 31st March 2009 (Year 5)

Province	Perons-Year of Work (FTE)	Net job opportunities created	Average Project Cost	Employ created by sector
EC	28,203	93,741	49,889.50	16.45%
NC	8,581	20,080	34,904.43	3.52%
WC	12,231	60,522	44,403.55	10.62%
FS	9,628	22,322	48,881.28	3.92%
MP	13,437	30,115	17,150.52	5.28%
GT	46,241	117,642	64,307.97	20.64%
LIM	16,146	46,904	36,025.73	8.23%
KZN	40,873	157,825	22,733.78	27.69%
NW	9,301	20,868	32,939.90	3.66%
TOTAL(million)	184,641	570,019	351,236.67	100%

Figure 6: EPWP Phase 1, Employment Created By Provinces, 01 April 2008 - 31st March 2009, Year 5



Source: Own Illustration

Conversely, from Tables 15 and 16, given the supposition that participants are entitled to 230 days job opportunity per year, Gauteng produced the highest total number of workdays of about 11 million per annum for EPWP beneficiaries, followed by KZN with 9.4 million workdays, and Eastern Cape (generating 6.5 million workdays per year), whilst Mpumalanga generated about 13,437 FTEs, equivalent to employing 30,115 persons full-time for the whole year (or created 3 million workdays per year).

Then again, using the total number of workdays per year as a measure of employment opportunities offered to beneficiaries during the last year of EPWP phase 1, province such as Free State, North West, Western Cape and Northern Cape performance were too low. In comparison to KZN and Gauteng, Free State only created roughly 2.2 million of total workdays per annum,

whilst North West, Western Cape and Northern Cape generated total number of workdays per year of roughly 2.1 million , 2.8million and 1.9 million respectively.

On labour intensity, the wage component transferred to beneficiaries as the total expenditure of EPWP projects implemented in **Free State (10.04%)**, Gauteng(10.53%), Limpopo (10.58%) **suggested that majority of the implemented projects are less labour-intensive and/or more capital intensive employing more conventional work methods.** While Western Cape and Eastern Cape performed recorded very low labour intensity of 7.35 percent and 8.08 percent respectively, provinces such as KZN, Northern Cape and North West utilised fairly more labour input in EPWP projects given their modest labour intensity rate of 17.69%, 16.44% and 14.13% respectively.

Furthermore, there is significant asymmetry in the capacity of each provinces to create employment opportunities, when total project expenditure is assessed relative to numbers of projects created across the nine provinces. From Table 16, on average, the combined cost to create one full time job per year in EPWP projects amount to R351,000. Taking this into consideration, there is a considerable variability in average project cost to produce a full-time job for one year, for example, the average project cost for a full year, in provinces such as North West, Northern Cape and Limpopo is approximately R33,000, R35, 000 and R36,000 on average. Meanwhile, the average cost to create a full time job for one year in Gauteng is computed as R64,307, this is twice the amount of the aforementioned provinces. Mpumalanga recorded the lowest cost of producing one full time job per year of R17, 150, a similar average cost for a full time job per annum in Free State was R48,884. For Free State province, this is a critical finding, given the evidence of labour intensity as a result of limited wage transferred as income relief to EPWP participants, low number of net job opportunities created and under-expenditure of allocated budget for EPWP projects at 61.87 percent.

In provinces with low labour intensity, in particular, the Free State, in the light of the empirical analysis on EPWP allocated funds spent to create one full time job opportunity per annum, it is evident that considerable amount of fiscal allocation (i.e. PIG and MIG) are either diverted into other EPWP non-related projects, accounted for as fruitless expenditure, formed part of obscure administration and overhead costs (see, e.g., Ashton, 2012), this obvious lack of capacity to spend hinders the positive impact of EPWP projects to filter into the local economy, mitigate poverty incidence in poor households, stimulate employment and economic growth.

On the other hand, given the average total wage rate of R64, Western Cape paid the highest daily wage of about R81, followed by Mpumalanga (R73), Northern Cape (R72) and KwaZulu-Natal (R72). The unintended consequences of setting wage rate above the going market wage rate would materialised in these provinces. Whilst, the amount of daily wage paid in Gauteng (R69) is modest, even though, the daily wages paid (on average) in Limpopo (R52), North West (R44) and Free State (R48) satisfied the “less eligibility” criteria to attract only the working age unemployed poor to into productive work through EPWP initiatives, the daily wage rates in these provinces are too low to have impact on high unemployment and poverty rate, for in most cases, participants could opt for irregular casual jobs with better daily wage, or increase their dependency on cash transfers/grants as an alternative source of income with less or no hard work, in effect, exerting more fiscal burden on the national government.

Conclusively, there was a general improvement in adhering to the selection criteria per beneficiaries during the final year of EPWP phase 1, however, much attention to attract women participants in Gauteng province and employment of disabled beneficiaries is required from NDPW and/or the national government. For instance, women participation rate in Gauteng hardly improved from 25 percent (2004/5) to 26 percent (2008/2009), whereas, across the provinces, only Northern Cape exceeded the 2 percent rate of employing the disabled, followed by Gauteng,

where about 1.8 percentage share of the disabled gained employment. Free State may have exceeded the stipulated participation rate for EPWP phase 1 by attracting 44 percent and 49 percent of women and youth respectively, less than 1% of disabled people gained temporary employment opportunity.

5.4. Performance Analysis of EPWP Phase 2: 2009/10 - April 2013/14 (5years)

SECTORAL ANALYSIS (Year 5 of Phase 2)

Building on the success of EPWP performance in its first phase of five years, in the second phase (hereafter EPWP Phase 2) which commenced from May 2009 to April 2014, the national government set an ambitious target to generate 4.5 million temporary work opportunities (equivalent of 2 million full time work per year) with an average duration of 100 workdays for the unemployed and working age poor in order to contribute to halving unemployment by 2014, through the delivery of public and community services. Subsequently, the number of FTEs generated would be scale up from 210 000 FTE's per year in 2009/10 to 680 000 FTE's in 2013/14 (see final EPWP Phase 2 Consolidated Programme document, 2009). Full breakdown figures distributed over the five year periods across EPWP sectors are documented in Table 17.

Table 17: Breakdown of EPWP Phase 2 Targets by Sectors (Net Work Opportunities)

Phase 2	Infrastructure	Environ & Culture	Social	Non-State	Total
2009/10	300,000	150,000	80,000	20,000	550,000
2009/11	342,000	156,000	96,000	48,000	642,000
2009/12	440,000	200,000	132,000	96,000	868,000
2009/13	572,000	275,000	187,000	176,000	1,210,000
2009/14	720,000	375,000	255,000	300,000	1,650,000
Cumulative Total	2,374,000	1,156,000	750,000	640,000	4,920,000

Source: NDPW presentation on EPWP Phase 2; Crosswell et al., (2011:4)

Having mentioned that the introduction of EPWP incentive grant (additional subsidy) based on provincial and municipal performance was introduced in Phase 2 to enhance mobilisation, as well as, encourage large scale implementation EPWP projects at the municipal level owed to their adverse perception of risk relating to high operating cost of many EPWP programmes. In addition to this, a new Non State sector was established consisting of implementing bodies in the private sector (refer to section ? of this paper for more discussion).

Equally, the selection criteria of beneficiaries was revised upward to attract at least 55% of women, 40 percent of youth and 2 percent of disabled people. It is worth mentioning that, to eradicate the erroneous reporting of non-EPWP projects as EPWP projects, eradicate the pervasive low intensity and minimise the unintended consequence of daily wage disparity certain criteria was outlined, that is EPWP projects must be: (i) highly labour intensive, where large percentage of the overall project costs are paid out in wages to the target group, (ii) daily wage entitled to beneficiaries can only be between R50 and R100, (iii) target group are to be employed under the Special Public Works Programme conditions of work.

Crosswell et al., (2011) observed that a low uptake of EPWP incentives across provinces and municipalities. He finds that only 80 of 126 municipalities which in total claimed only 8% of the allocated R679 million, whilst, at the Provincial level only four Provinces (a total of 6

Departments) claimed R49 million or 18% of the R267 million allocated, indicating “under access” of available incentive funding, and general unwillingness to implement labour intensive construction projects. Moreover, in their analysis of incentive payment by NDPW to sub-national spheres of government in the 3rd quarter of 2010/11 financial year shows that the province with the largest uptake utilisation out the allocated R330 million for labour intensive projects is Limpopo (234% or R679 000), followed by both KZN and Gauteng (80% or R135 million each), Western Cape (47% or R28 million) and Mpumalanga (46% or 829,000). **The use of EPWP incentive in Free State is very low with 17% (or R2.3 million out of roughly allocated R13 million).**

Table 18: Sectoral Analysis EPWP Phase 2 Performance, 01 April 2009 - 31st March 2014

Indicators	Sectors	Targets ¹	Achieved ²	%
Net work Opportunities	Infrastructure	2,374,000	1,255,824	53%
	Environment & Culture	1,156,000	611,718	53%
	Social	750,000	674,730	90%
	Non-State:			
	NPO	256,000	129,576	51%
	CWP	384,000	382,179	100%
	Overall	4,920,000	3,054,027	62.07%
Persons-year of work ² (including training) -FTE	Infrastructure	903,478	365,034	
	Environment & Culture	325,652	176,110	54%
	Social	513,043	247,601	48%
	Non-State:			
	NPO	111,304	38,439	35%
	CWP	166,957	41,789	25%
	Overall	2,020,434	868,973	43%
Estimated Persons years of work per job opportunity	Environment & Culture	88	67	76%
	Social	65	66	102%
	Non-State:			
	NPO	157	84	54%
	CWP	100	68	68%
Overall	410	286	70%	

Source: DPW, EPWP Phase 2: Consolidate Programme Overview, 2009:10; Own calculations

1. Data extrapolated from National Department of Public Works presentation for EPWP targeted performance for Phase 2 referred to as “breakdown for EPWP targets (FTE Equivalents)”.
2. EPWP phase 2 performance data was sourced from a public press release on 03 July 2013⁸¹. The tabulated achieved FTE targets was publicly released at end of 31 March 2013. *Validated performance data is yet to be publicly released by DPW.*

For the period under review, this under-utilisation of the newly introduced incentives worsened in Free State, where, at municipal level, only 4% was used for labour intensive projects, out of the total allocated R34 million. EPWP incentive utilisation at municipal level is reported for Gauteng, followed by KZN, Limpopo, NorthWest with EPWP incentive-utilisation rate of 67%, 34%, 29% and 26% respectively. Western Cape only utilised about 17%, whilst, Northern Cape used roughly 5% of their respective incentive at the municipal level to facilitate labour intensive projects as reported in the 3rd quarter of 2010/11.⁸²

⁸¹ Data extracted from the Public media briefing session on EPWP’s progress and achievement by EPWP Deputy Director-General, Stanley Henderson, NDPW.

⁸² Refer to figures 8 and 9 (i.e. tables) in Crosswell et.al., (2011:10)

In Table 18, given the anecdotal performance EPWP performance data publicly announced by NDPW, as of July 2013, a comparative analysis shows that Social emerged as the highest performing sector to generate additional work opportunities having achieved about 90 percent of targeted FTEs, thereafter, the newly introduced Non-State, Infrastructure and E&C sectors have achieved roughly 51%, 53% and 53% of targeted FTEs. Overall, approximately 62.07 percent of the targeted FTEs have been achieved at the day of the released data.

In general, as reflected in Table 18, the combined project expenditure across the four sections created some 702 million workdays (equivalent to 3.1 million jobs created) of employment relative to targeted 1.1 billion workdays of employment (assuming all the 4.92 million work opportunities was achieved at the end of phase 2. In this context, for the duration under review, the Infrastructure is ahead of other three sectors, having produced about 288 million workdays of employment (or offered full time employment to 365,034 people for a whole year), followed by the Social creating about 155 million workdays of employment (equals to employing 247,601 persons in full time job for an entire year) and the E& C sector had produced about 141 million workdays (translates into full time job creation for 176,110 persons full-time per year). At the time of this analysis, the Non-State sector have only produce 87 million workdays, equivalent to employing 80,228 persons full-time for an entire year.

Taking into account, the estimated persons-years of work opportunity as an performance evaluation indicator, looking at analysed performance data presented in Table 18, based on the elementary importance of skill development (i.e. training and work experience) as a key component in EPWP programmes. In relative terms, the Non-State sector is the best performing sector, having achieved total of 150 percent of targeted net work opportunities, but in absolute term (in terms of work opportunity persons-years of work created), followed by Social sector having achieved about 90 percent, Environmental and Culture (54%), Social (48%) and infrastructure becomes the least performing sector (40%), compared to achieving their respective targeted network opportunities outcome.

Similarly, even though, the Non-State sector is perceived to be the highest performing sector on total number of job opportunities created, by computing the number of person years of work per job opportunity assumed to be fill by one person (as reflected in the fourth panel of Table 18), the performance of the Non-State sector on the duration measure is found to be modest. Since the targeted outcome is generate 278,261 person years of work (and 640,000 net work opportunities) given a targeted mean duration of one year (see Table 20). Actual performance work-years recorded as of July, 2013 was 80,228 to give an unadjusted performance of roughly 60 percent. If this is distributed over the numbers of work opportunities actually created, the actual mean as a percentage of target works falls to 93 percent (see panel 4 Table 18). Also, using a similar *mean estimation* as a adjusted performance measure for the other three sectors, E&C sectors immediately emerged as the best performing sector in the process of achieving the targeted net work opportunities with 102 percent, this is in contrast to its unadjusted performance of 53 percent (see panel 1, Table 18), followed by the Non-State sector (93 percent), infrastructure (76 percent) and Social sector (54 percent).

Still in reference to the data analysis depicted in Table 18, Using the duration of work opportunities and training provided by EPWP initiatives during in its second phase, since the aim of EPWP initiatives in Phase 2, is to a maximum of 100 working days opportunities for the unemployed working age poor. The *estimated mean employment durations* revealed that Non-State sector jointly had the longest mean employment duration is (93 work days), followed by the Social

sector (84 workdays), meanwhile, employment opportunities in both the Infrastructure and E&C sectors are estimated to last for 67 and 66 workdays respective. This finding is the same as the concluding inference noted in Phase 1 analysis, underscoring the short employment and training periods inherent to EPWP projects. In this case, beneficiaries had longer employment opportunities in Non-State sector lasting about 3 months), than the infrastructure sector (slightly more than 2 months) . When this duration of employment opportunities created is compared to the least 2 days training beneficiaries are entitled to within a month as stipulated in the Code of Practice for SPWP, by implication, at best, unskilled working age poor can only gain maximum of 6 training opportunities and/or minimum of 4 trainings in EPWP initiatives. There is a noticeable decline of about 1 month period in contrast to the inference made in Phase 1. This evidence of short employment and training (or work experience) duration affirmed that the expanded public works programme in SA continue to exert limited impact on employability of beneficiaries, skill development and social benefits.

EPWP PHASE 2 PERFORMANCE FOR APRIL 2013 - MARCH 2014 (YEAR 5)

For a unbiased evaluation of EPWP performance in Phase 2 across the sectoral components. This study analysed the 4th quarter report published by NDPW for the final one year of EPWP Phase 2. By looking at the data in Tables 19 and 20 and Figure 7, it is apparent that the national government significantly increased fiscal allocation to upscale the EPWP initiatives as proposed at the onset of the programme in Phase 2. Out of the total amount of R118 billion spent on the programmes at sectoral level, infrastructure received the largest chunk of R102 billion, thereafter, E&C (R9.7 billion), Social (R 4.1 billion) and the newly established sector received roughly R2.6 billion.

Table 19: EPWP Phase 2, Sectoral Analysis, Cumulative Performance data for period, 01 April 2013 to 31st March 2014 (Year 5)

Sector	Project Allocated Budget (R bn)	Total Expenditure (bn)	% of Total Exp	No of Projects	Targeted Beneficiaries as per gender			Avg. Daily Wages (min)	Expenditure per FTE, (m il)	Labour Intensity (%)	Total No of Work days per year
					W (%)	Y (%)	D (%)				
Infrastructure	102,239,315.04	12,398,016.54	12.13%	6,312	47	44	0.29	112.16	119.015	16.15%	23,959,560
Environment & Culture	9,607,903.23	2,103,206.85	21.89%	3,232	53	57	0.87	93.17	35.480	53.28%	13,633,917
Social	4,090,260.49	1,932,317.09	47.24%	6,655	83	48	2.13	66.3	28.694	57.78%	15,488,890
Non State	2,559,827.46	948,649.04	37.06%	487					19.791	60.72%	11,024,590
Community Works (DoG)	2,087,825.18	757,533.66	36.28%	160	72	48	0.07	68.42	20.508	73.80%	8,495,970
NGO (NPO'S)	472,002.28	191,115.37	40.49%	327	73	50	3.08	67.63	17.384	8.88%	2,528,620
TOTAL (million)	118,497,306.22	17,382,189.5	14.67%	16,686	65.6	49.4	1.30	81.54	202.980	27.71%	64,106,957

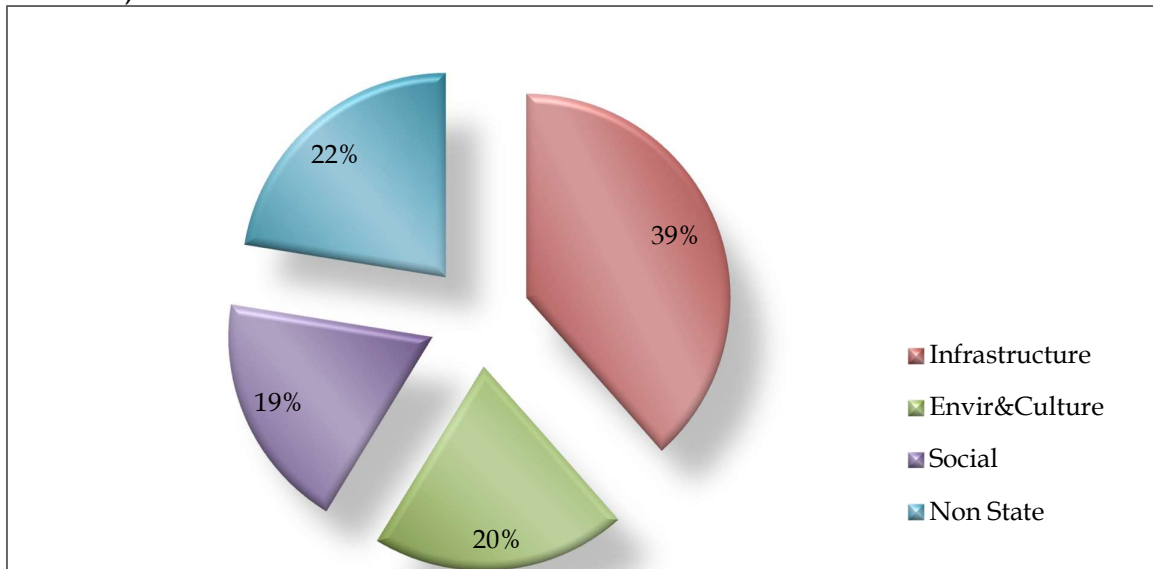
Source: DPW, Overall National Consolidated report, 4th Qtr, Annexure A; Own calculation

Nonetheless, under-spending still remain a persistent problem, from Tables 19 and 20, only the Non State sector spent about 77% of allocated fund to generate some 228, 324 net work opportunities, whilst, the spending pattern of other sectors grew worse than the last year of Phase 2. For instance, the Social sector utilised only 47 percent of allocated funds to generate 191, 516 net work opportunities, meanwhile, the E&C sector used 22 percent of its fiscal allocation to create 205, 870 net work opportunities and infrastructure sector spent about 12 percent of its allocation to generate 391, 555 net work opportunities. Paradoxically, the Infrastructure might have created the largest number of job opportunities the unemployed working age poor, however, with the

accompanying under-spending, beneficiaries are prevented from benefitting from additional work opportunities, if the entire allocated budget was spent on labour intensive projects.

As the largest of the four sectors, the significant increment in government investment in the infrastructure sector led to creation of 104,172 work years, providing temporary employment to 391,555 persons, whereas, the Non-State sector generated some 47,933 work years, offering employment to 228,324 persons, followed by the E&C sector, which generated 59,278 FTEs (or temporary work opportunities of 205 870) and the Social sector created the lowest employment opportunities to about 228, 324 persons (or equivalent to 67, 434 FTEs).

Figure 7: EPWP Phase 2, Employment Created per Sectors, 01 April 2013 - 31st March 2014 (Year 5)



Source: Own Illustration

Conversely, focusing on the revised *selection criteria* for Phase 2, for all EPWP projects to attract at least 55% of women, 40 percent of youth and 2 percent of disabled people. Only both Non State (3.2 percent) and Social sectors (2.1 percent) employed above the required 2 percent of disabled people, whilst Infrastructure and E&C sectors continued restrict participation of the disabled people below 1 percent. In the last year of Phase 2, the employment opportunities of both women and the youth significantly improved.

Based on the conditionality that beneficiaries are entitled to a daily wage between R50 and R100, the average aggregate wage rate was R81.54, as usual, the Infrastructure sector paid the highest wage rate of about R112 per day (more than the recommended R100 in EPWP Phase 2 policy document). Whilst both the Non State and Social sector paid the lowest wage rate of R68 and R66 to participants, even as, the E&C sector paid a daily wage rate of R93 to participants. Although, the daily wage rates paid to beneficiaries in the Non State and Social sectors meet the “less eligibility criteria”, albeit, these wage rate a slightly far below the market wage by approximately R13, which most of the unemployed working age poor can use as transport fare to the project sites.

Therefore, this observation suggest the need for government to actively monitor daily wage rate of EPWP projects in order to prevent labour market disruption, exclusion of the working poor from EWP programmes and indirectly increase the rationing selection criteria. The imbalance in wage rate is not only detrimental to the current labour market but has several adverse implication for the EPWP objectives to alleviate poverty, generate temporary work opportunities and reduce inequality. Indeed, Woolard et al.(2009) finds that the inefficiency is SA's labour market is partly driven wage inequality based on level of skill, they conclude that significant reduction in the level of inequality can be achieved only through employment growth and reduced wage inequality (pp.98).

Table 20: EPWP Phase 2 Sectoral Analysis, Cumulative Performance data, 01 April to 31st March 2014 (Year 5)

Sector	Persons-Year of Work (FTE)	Net job opportunities created	Total wages paid to EPWP workers	Employment created by sector (%)
Infrastructure	104,172	391,555	2,002,787.80	38.4
Environment & Culture	59,278	205,870	1,120,664.46	20.24
Social	67,343	191,516	1,116,502.20	18.83
Non State	47,933.00	228,324	576,009.77	22.44
TOTAL	278,726.90	1,017,265	4,815,964.23	100%

Source: DPW, Overall National Consolidated report, 4th Qtr, Annexure A; Own calculation

By taking into consideration, the average cost to create one full time job in a year as another performance measure. Typically, due to government commitment to upscale the Community Work Programme (CWP) component of the Non State sector, it cost about R5.3 million to create a full time job for one year, whereas, the Infrastructure sector can generate one full time job for an entire year using a fraction (about R1.9 million) of the average cost observed in the Non-State sector. The Social sector had the lowest average cost of R290,000 to create one full time job per year.

PROVINCIAL ANALYSIS (Year 5 of EPWP Phase 2)

A visual review of data in Table 22 and Figure 8, due to the national government to tackle the ongoing acute poverty and unemployment rate from the grass roots (i.e. provincial and municipal levels), there is a clear evidence of fiscal re-allocation in line with this prerogative to non-industrialised provinces such as Limpopo (R33 billion), and Eastern Cape (R18 billion), whereas, industrialised province, for example Gauteng and Kwazulu Natal received about R20 billion each. Free State still remain one of the provinces a smaller proportion of allocation for EPWP projects as PIG and MIG, in the 2013/14 financial year, Free State received fiscal allocation of about R7 billion to implement expanded public works programmes. Northern Cape and Western Cape received the lowest allocation of about R2.5 billion and R4.7 billion respectively for EPWP projects. Nonetheless, total allocation for the expanded public works projects amount to R118 billion.

In term of provincial capacity to spend allocated grants, the result of budgetary analysis suggests the prevalence "chronic under-expenditure" across the provinces. Only Western Cape and Mpumalanga spent above 40 percent of their allocations, whilst with exception of Northern Cape that spent about 33 percent, other provinces hardly spend up to 20 percent of

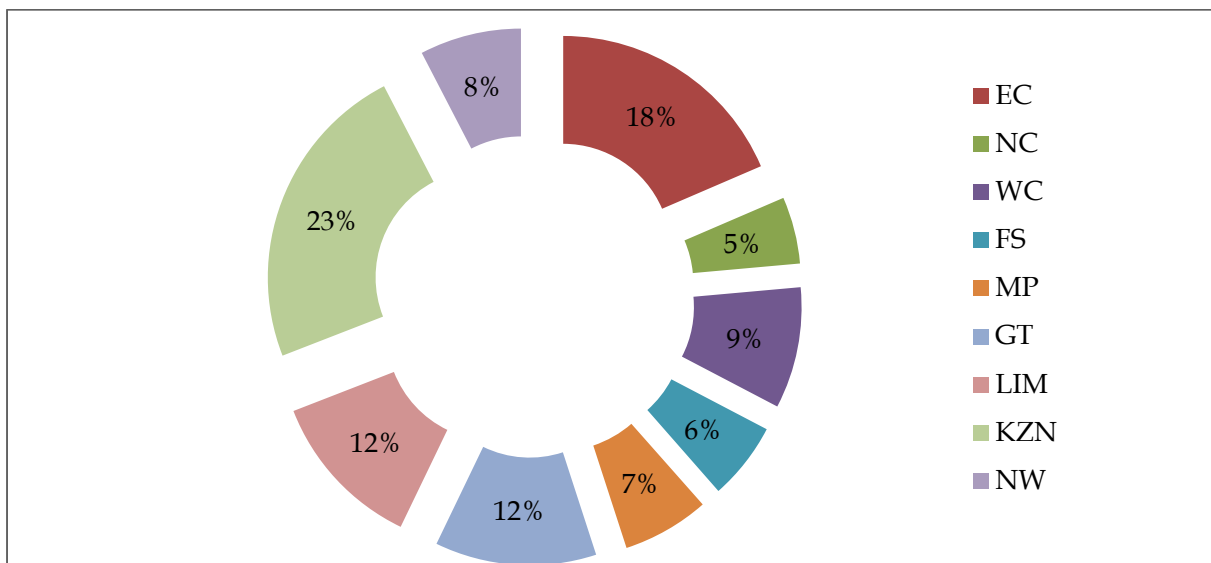
their allocation to create temporary employment opportunities through EPWP projects. In fact, Free State spent only 12 percent of its allocated budget in the last year of Phase 2.

Table 21: EPWP Phase 2 Cross-Provincial Analysis, Cumulative Performance data, 01 April 2013 to 31st March 2014 (Year 5)

Province	Project Allocated Budget (R 'm)	Aggregate Expenditure	% of Total Exp	No of Projects	Targeted Beneficiaries per group / GENDER			Avg. Daily Wages (min)	Expenditure per FTE	Labour Intensity (%)	Total No of Work days per year
					W (%)	Y (%)	D (%)				
EC	18,196,186.47	3,594,340.55	19.75%	1,740	58	41	0.56	86.58	69.683	23.11%	11,863,630
NC	2,516,145.67	832,329.15	33.08%	623	60	52	0.86	87.93	87.283	20.61%	2,193,280
W C	4,707,300.52	2,198,807.69	46.71%	2,016	50	57	0.70	110.68	115.097	18.91%	4,393,920
FS	7,231,213.16	845,665.37	11.69%	1,245	64	58	0.70	74.22	47.472	35.84%	4,097,220
MP	5,745,034.31	2,469,520.75	42.99%	2,068	62	54	1.56	84.43	100.735	19.77%	5,638,450
GT	19,601,802.30	1,795,798.86	9.16%	1,543	53	55	2.75	103.64	41.904	46.67%	9,856,650
LIM	33,327,874.47	2,256,644.69	6.77%	3,072	64	43	0.86	73.02	85.456	21.75%	6,073,610
KZN	19,577,245.33	2,748,237.19	14.04%	2,559	67	44	0.59	105.45	40.267	39.97%	15,697,500
NW	7,594,503.99	640,845.27	8.44%	1,820	65	54	0.69	73.43	34.338	51.80%	4,292,490
TOTAL (Mil)	118,497,306.22	17,382,189.51	14.67%	16,686	60.3	50.8	1.03	89	622.235	28.59%	64,106,750

Source: DPW, Overall National Consolidated report, 4th Qtr, Annexure B1, Own calculation

Figure 8: EPWP Phase 2, Employment Created By Provinces, 01 April 2013 - 31st March 2014 (Year 5)



Source: Own Illustration

Moreover, it is worth mentioning that due to shift of fiscal allocation away from industrialised provinces, for the first time, provinces such as Eastern Cape had meaningful contribution as a percentage of the net work opportunities provided to beneficiaries as 18.5 percent, although, KwaZulu Natal had the largest contribution of 23 percent, the shift in fiscal location hold back a little the usual large percentage contribution for KZN, as well as, Gauteng (12%). Free State (5.82%) and Northern Cape (5.02%) had the lowest contribution to the total number of jobs created in the financial year 2013/14, as illustrated in Figure 8.

Equally, based on the assumption that EPWP beneficiaries are entitled to 230 days job opportunity per year, KwaZulu Natal generated the largest workdays of employment of about 15 million workdays, equivalent to employing 68,250 persons full-time for an entire year, followed by Eastern Cape, which provided rough 12 million workdays of employment, equals to employing 51,581 persons full-time for a year. Whereas, Northern Cape generated the lowest workdays of employment (2.1 million workday, or employed 9,536 persons for full-time for an entire year), yet, Western Cape, North West and Free State created at least a third of workdays of employment in Eastern Cape, in particular, all the EPWP projects in the Free State created about 4.1 million workdays of employment, which translates to a full time employment opportunities for 17,814 persons in a whole year.

Nonetheless, utilising network opportunities provided as a performance measure, KZN created the largest number of temporary work for the poor unemployed (237,084), followed by, Eastern Cape (188,499), Gauteng (121,281) and Limpopo (121,281). Then again, lowest total number of jobs was created in the Northern Cape (51,043) and the Free State (59,214), even North West out-performed Free State by providing 77,486 net work opportunities. See Tables 21 and 22.

Table 22: EPWP Phase 2 Cross-Provincial Analysis, Cumulative Performance data, 01 April 2013 to 31st March 2014

Province	Persons-Year of Work (FTE)	Net job opportunities created	Total wage paid to EPWP	Average Wage Cost	Employ created by sector
EC	51,581	188,499	830,709.11	2,065.71	18.53%
NC	9,536	51,043	171,520.43	1,336.00	5.02%
WC	19,104	92,775	415,823.03	1,090.68	9.12%
FS	17,814	59,214	303,053.07	679.25	5.82%
MP	24,515	66,520	488,282.22	1,194.16	6.54%
GT	42,855	123,363	838,155.43	1,163.84	12.13%
LIM	26,407	121,281	490,744.25	734.58	11.92%
KZN	68,250	237,084	1,098,508.05	1,073.95	23.31%
NW	18,663	77,486	331,968.64	352.11	7.62%
TOTAL(million)	278,725	1,017,265	4,968,764.23	9,690.28	100

DPW (2009) Presentation on Phase 2

Overall National Consolidated per Province 4th Quarter 2012/13, 1st April 2013 - 31st March 2014

Remarkably, majority of the projects implemented across provinces during Phase 2, produced considerably large labour intensity above 20 percent, with the exception of the Western Cape, which had labour intensity of 18.91 percent indicating “business as usual” in using more conventional construction technique in EPWP projects, rather than the recommended labour

input. In fact, North West had the largest labour intensity of 51.8 percent as a wage component of total expenditure transferred to beneficiaries, followed by Gauteng (46.67%), KwaZulu Natal (39.97%) and the Free State (35.84%). This is an admirable achievement for the Free State province due to poor low labour intensity recorded in the past.

Furthermore, taking into account the cost of creating one full-time work opportunity per beneficiaries (persons-year of work or FTE), both Western Cape and Mpumalanga has the highest costs of about R100,000 to create a single FTE per participants involved in EPWP initiatives in contrast to low expenditure per FTE observed in North West, KZN, Gauteng and Free State of about R34,000, R40,000, R42,000 and R47,000 respectively.

On the other hand, given the average total wage rate of R89 relative to the recommended R100 per day for beneficiaries as per Phase 2 criteria. Interestingly, the three most economically industrialised provinces paid EPWP beneficiaries daily wages higher than R100. For instance, Western Cape paid the highest daily wage of about R110, followed by Kwazulu-Natal (R105) and Gauteng (R103). Meanwhile, provinces such as Mpumalanga, Northern Cape and Eastern Cape, paid beneficiaries fair wage rates between R 84 and R87. In this context, Free State, North West and Limpopo paid the lowest daily wages between R 73 and R74, which is at most R15 below the going market wage rate of R89 or R25 below the prescribed daily wage rate of R100. Since wage transfer is the main channel to provide income insurance, smoothing consumption (and increase nutrients uptake), improved the livelihoods of EPWP beneficiaries, and reduce rural-urban migration, it is imperative to encourage uniform daily wage rate across the provinces by the national government and/or NDPW. Even so, implementing bodies in provinces such as Free State with perpetually low daily wage rate should increase their wage incentive grants uptake to raise daily wage rate close to the ongoing market wage rate or the prescribed R100 outlined in the Phase 2 of EPWP.

Conclusively, there was a general improvement in adhering to the *selection criteria per beneficiaries* during the final year of EPWP phase 2. Only Gauteng (about 2.7 percent) and Mpumalanga (about 1.6 percent) employed significant proportion of disabled unemployed on implemented projects. Whilst, there is a palpable general improvement in the employment rate of both women and youths across the Provinces, a minor noticeable improvement could be observed on the employment of disabled people across the provinces. For example, both Northern Cape and Limpopo employed about 0.9 percent of disabled people, whereas, Free State and Western Cape offered employment opportunity to roughly 0.7 percent of the proportion of disabled people. Eastern Cape (0.6%) and KwaZulu-Natal (0.6%) has the lowest number of employed disabled people.

In sum, the national government and/or NDPW has taken a major step forward to increase the employment of women and youths in EPWP schemes, it is of a great importance to also divert the needed proactive attention to raise awareness about marginalisation of the unemployed poor disabled people in term of benefitting from the positive spin-offs of implementing EPWP projects in order to ameliorate the prevailing high poverty rate in SA, and foster an inclusive employment and economic growth.

5.5. Cross Sectional Analysis of The Impact of Work Opportunities Generated In EPWP Phase 2 On Unemployment Rate By Province.

Drawing from the findings of McCord and Meth (2009)⁸³, in spite of positive economic and employment growth resulting from EPWP, and CWP creating the target net work employment opportunities proposed in Phase 2 of the programmes, the high poverty incidence and unemployment will not be halved by 2014 in line with the MDG.

This paper examined this inference from a simple macroeconomic perspective. To do this, demographic data extracted from the quarterly labour force survey (Q3:2014) published by Statistics South Africa (StatsSA), by dividing the cumulative jobs created during the last year of Phase 2 by both official and expanded unemployment rates reported by StatsSA across the provinces. The general deduction is that unemployment rate across the province is high and remains acute. For example, taking into account the expanded definition of employment, Limpopo recorded the highest effect of the jobs created in EPWP on unemployment rate of about 53 percent (whilst 47 percent of the population are poor unemployed!), whereas Gauteng has the weakest and/or poorest impact of EPWP jobs on unemployment of about 7.7 percent, by implication, larger number (92.3 percent) of the people remained unemployed poor in Gauteng.

For Free State, jobs created through EPWP had insignificant impact on unemployment, as 85.2 percent of the economically active participation (EAP) remained unemployed using the official definition of unemployment.

Table 23: Cross-Provincial Analysis - Evaluating Jobs Created in EPWP Phase 2 on Unemployment Rate

Province	Net work opportunities created (mil) ¹	Unemployment per Province (official definition) ²	Unemployment per Province (expanded definition) ²	Total Job opportunities as % of unemployed (official def)	Total Job opportunities as% of unemployed (expanded def)
SA	1,017.27	5,151	8,436	19.7%	12.1%
EC	188.50	576	1,037	32.7%	18.2%
NC	51.04	128	198	39.9%	25.8%
WC	92.78	675	747	13.7%	12.4%
FS	59.21	399	755	14.8%	7.8%
MP	66.52	471	821	14.1%	8.1%
GP	123.36	1,599	2,028	7.7%	6.1%
LP	121.28	229	752	53.0%	16.1%
KZN	237.08	768	1,669	30.9%	14.2%
NW	77.49	338	662	22.9%	11.7%

Source: DPW, 2014 ; StatsSA, 2014 ; Own calculations

Overall National Consolidated per Province 4th Quarter 2012/13, 1st April 2013 - 31st March 2014

1. Data extrapolated from 4th Quarter Report (Cumulative: 01 April 2013 – 31st March 2014), Annexure B1. Five-year EPWP performance data released on 23 May 2014. Note: a deflator of 1000 is used for a simple computation
2. 2008 - 2014 Quarterly Labour Forces Survey (QLFS) published by StatsSA

As shown in Table 23, in reality, the unemployment-reducing impact of EPWP across the provinces became highly insignificant, as the effect of aggregate jobs created severely diminished,

⁸³ Ibid

when the expanded definition of unemployment is used. For instance, only 25.8 percent of the working age poor benefited from jobs generated in Northern Cape, meanwhile, the percentage share of the unemployed is estimated as 74.2 percent (the province with supposedly the largest impact). Again, Free State emerged as one of the worst performing provinces (in terms of job creation through EPWP), where net work opportunities generated only benefitted 7.8 percent of the able-bodied working age poor, whilst, massive number of unemployed working age poor as percentage proportion is 92.2 percent. This analysis confirmed the findings of McCord and Meth (2009).

Undoubtedly, it will take decades before temporary jobs created through EPWP can induce a considerable impact on unemployment and high poverty incidence in South Africa. Furthermore, this miracle would only manifest in the presence of un-interrupted economic growth, increase in labour market absorption rate, fall in wage inequality and provision of adequate skills relevant to the scarce skills in the labour market.

On the other hand, the subsequent achievement of EPWP initiatives to meet the 4.5 million temporary work opportunities target during the period of five years (i.e. 2009-2014), spurred the government to accelerate its effort to make available 6 million temporary jobs to the poor unemployed in the third phase of the expanded public work programme, the main objective of:

“...provid(ing) work opportunities and income support to the poor and unemployed through the delivery of public and community assets and services, thereby contributing to development.”
NDPW (2014)

Table 24: Breakdown of Targets for EPWP Phase 3 by Sectors (Full Time Equivalents)

Financial Year	Infrastructure	Environ. & Culture	Social	NPO	CWP	Total
2014/15	379,000	227,650	202,714	52,825	213,000	1,075,189
2015/16	447,219	229,000	205,307	48,500	217,000	1,147,026
2016/17	487,219	230,500	205,968	48,400	226,000	1,198,087
2017/18	534,219	231,000	210,496	48,565	231,000	1,255,280
2018/19	587,219	233,000	214,444	48,755	241,000	1,324,418
Total	2,434,876	1,151,150	1,038,929	247,045	1,128,000	6,000,000

Source: EPWP Phase 3 Presentation, Green Job Summit (2014)

The targeted EPWP beneficiaries by gender have been revised accordingly as 55 percent of women, 55 percent of youth, and 2 percent of disabled people. The unavailability of quality data and the relatively short implementation period of the first year of phase 3 at the time of this study (i.e. 9 months) constrict any meaningful analysis of EPWP performance for Phase 3. Nonetheless, it is yet to be seen, how effective the objective of Phase 3 will materialised.

6. Exploratory Analysis of EPWP Performance in Free State: Sectoral, Provincial and Municipalities

For a balanced analysis on the performance of EPWP at provincial level with a narrowed focus on the Free State (FS) province. In this concluding section, the performance of impact of EPWP initiatives in the Free State province is analysed at both departmental (EPWP implementing public bodies) and municipal levels using similar constructed performance indicators employed in prior quantitative analysis.

6.1. Geographical Overview of Free State Province.

The Free State is located in the geographical centre of South Africa, bordered by the Northern Cape, Eastern Cape, North West, Mpumalanga, KwaZulu-Natal and Gauteng provinces, as well as Lesotho. The Free State is a rural province of farmland, mountains, goldfields and widely dispersed towns.⁸⁴ (see Figure 9). In SA, Free State province is the third-largest province, as well as, the second-smallest population of about 2 745 590 (or 5.3% of SA's population), and second-lowest population density.

Figure 9: Geographical Distribution of Municipalities and Local Districts in Free State.



Source: Own Illustration

⁸⁴ Geographical information available at <http://www.localgovernment.co.za/provinces/view/2/free-state>

As reflected in Table 25, the province is divided into one metropolitan municipality (Mangaung, formerly known as Bloemfontein), and four district municipalities (Fezile-Dabi, Lejweleputswa, Thabo Mofutsanyana and Xhariep). These four districts are sub-divided into nineteen (19) local municipalities or districts.

Moreover, according to recent labour market data released by Statistics South Africa (Stats SA) presented in Table 24, in comparison to other provinces in SA, Free State province currently has the highest unemployment rate either by expanded (40.9 percent) or official definition (34.6 percent), with labour absorption rate of 40.6 percent based on official unemployment rate⁸⁵.

Table 25: Free State Metro, Municipalities and Local Districts

Metropolitan	Mangaung (Bloemfontein)
District Municipalities	Local Municipalities
Fezile-Dabi	Mafube , Metsimaholo, Moqhaka and Ngwathe
Lejweleputswa	Masilonyana, Matjhabeng, Nala, Tokologo, and Tswelopele
Thabo Mofutsanyana	Dihlabeng, Maluti-A-Phofung, Mantsopa, Nketoana, Phumelela, and Setsoto
Xhariep	Kopanong, Letsemeng, Mohokare and Naledi

6.1. Performance Analysis of EPWP Phase 1: 2004/05 – April 2009/10 (5years)

6.1.2. Analysis of EPWP Performance at Departmental Level (Implementing Bodies)

In reference to the EPWP analysed data documented in Tables 26 and 27, provincial departments implementing EPWP initiatives in the Free State created some 1.3 million workdays of employment across the four EPWP sectors during the last year of phase 1 of the programme (2008/2009), equivalent to employing 5,637 persons full time for an entire year spending about 61 percent of allocated budget in the 2008/09 financial year. Interestingly, although the infrastructure sector was allocated the largest share about 91.08 percent (about 820,100) of the total budget (i.e. R900,000) for the period under review, yet, the Social sector with a significantly less budget allocation of R77, 100 (8.57 percent of total budget) generated the highest proportion of temporary employment to some 4,652 to beneficiaries, equivalent to employing 3,616 persons full-time for an entire year, followed by the Infrastructure sector which created some 2,004 FTEs, as a result, providing temporary employment to 3,546 persons. Meanwhile, the poorest performing sector in terms of short-term job creation within the sectors are Environment and Culture sectors, and the Economic sector, however, with different degree of poor performance. The Economic sector generated only 11 FTEs, equivalent to temporary jobs opportunity for 117 beneficiaries, whilst, the Economic and Culture merely created employment opportunities from 20 beneficiaries.

Given the aim of EPWP initiatives to produce at least 75 working days opportunities to beneficiaries in the first phase of EPWP, the computed *estimated mean employment duration* enjoyed by beneficiaries for an entire year revealed that Social sector offered the longest mean employment duration of about 179 days, followed by infrastructure employment (roughly 130 workdays), whilst, the Environment and Culture provides 69 workdays days of employment opportunities, the Economic sector created the shortest employment duration of about 21 work days. This finding is akin to the analytical outcome of Phase 1 at the national level. Evaluating this critical finding in line with the stipulated condition for training (skill development) embedded in the

⁸⁵ Notably, qualitative discourse on the provincial profile including economic overview, demographic aggregation and structure of production is beyond (and not) the focus of this study.

Code of Good Practice for Special Public Works Programmes that *beneficiaries of EPWP are entitled to at least 2 days of training per month*. By interpretation, at best, all unskilled working age poor had the opportunity to attend maximum of 6 training opportunities (in the Social sector) and/or minimum of 1 training (in the Economic sector) in the EPWP initiatives implemented in Free State. evidently, this short duration of training confirmed the strong evidence that beneficiaries of these programmes are ill-equipped with proper skills to take up employment available in the mainstream labour market, this in turn, not only severely limit their employability in the current labour market or to be hire in the future, but also hamper self employment given the lack of education via skill development training. In the medium to long-term, EPWP beneficiaries tend to falls back into long spell of unemployment after exiting EPWP programmes (ibid).

Table 26: EPWP Phase 1, FS Provincial Departmental Performance Analysis, Cumulative data, 01 April 2008 - 31 March 2009 (Year 5)

EPWP Sectors & Implementing Departments	Project Allocated Budget (R 'm)	% of Total Exp	Aggregate Expenditure	W (%)	Y (%)	D (%)	Avg. Daily Wages (R)	No of Projects	Expenditure per FTE	Labour Intensity (%)	Total No of Work days per year
Infrastructure	820,098.39	57.51%	471,661.64	24	53	2.88	50	216	1,096.68	0.05	460,920
Public Works & DPRT	389,113.00	66.14%	257,356.72	42	38	2.88	50	191	289.816	0.04	204,240
Social Development	87,664.44	28.23%	24,749.10	9	60		50	2	116.193	0.10	48,990
Education	128,012.72	68.68%	87,916.77	12	69		50	17	158.695	0.07	127,420
DETEA	2,600.00	46.15%	1,200.00	35	35		50	1	240.000	0.05	1,150
Health	212,708.22	47.22%	100,439.06	22	61		50	5	291.974	0.04	79,120
Economic Sector	2,700.00	100.00%	2,700.00	44	37	0.00	50.	1	255.20	0.05	2,433
Agriculture	2,700.00	100.00%	2,700.00	44	37	0.00	50	1	255.198	0.05	2,433
Envir&Culture	472.00	77.95%	367.93	55	55	0.00	50.	1	61.32	0.18	1,380
Agriculture	472.00	77.95%	367.93	55	55	0.00	50.	1	61.322	0.18	1,380
Social	77,136.50	94.90%	73,199.78	86	41	0.46	40.06	1,218	107.66	0.48	831,680
Social Development	41,550.90	95.72%	39,773.48	95	8		40.58	346	75.615	0.14	120,980
Health	26,560.40	93.27%	24,771.90	83	46		56.07	224	12.215	0.94	466,440
Education	5,580.00	100.00%	5,580.00	99	61		20.00	520	6.747	0.68	190,210
Sports,Arts,Culture & Recreation	3,445.20	89.24%	3,074.40	65	48	0.45	43.59	128	13.083	0.83	54,050
TOTAL	900,406.89	60.85%	547,929.35	52.13	46.3	0.83	48	1,436	97.210	10.66%	1,296,413

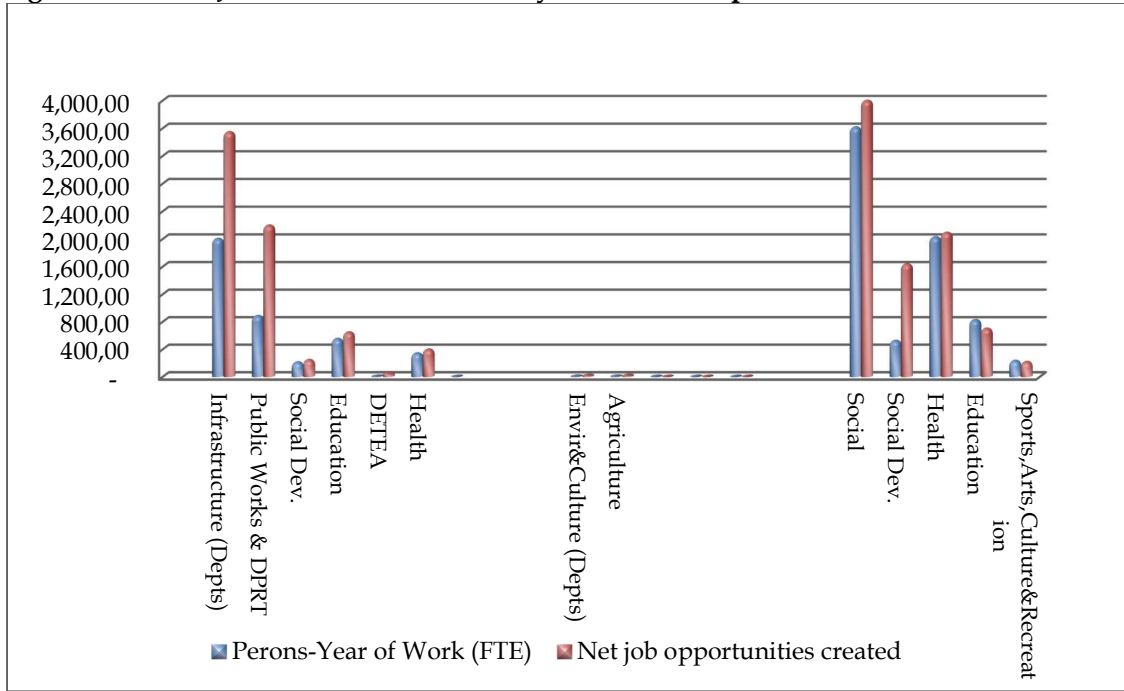
Source: EPWP Quarterly report, Interim cumulative data for the period: 1 April 2008 to 31 March 2009, released at 12 June 2009, Annexure C2, and Own Calculations

*Total figures summed to EPWP figures in Annexure D1: Provincial Govt Dept.

Furthermore, another very worrying inference from this analysis is the extremely **low wage component below that ranges between 0.05 percent and 1 percent observed across the four sectors**. This measure of EPWP performance remains crucial as its indicate the extent of social protection offered as wages (income relief) as a measure of EPWP's , and most importantly, an indicative of how many labour intensive projects were created to provide transient work opportunities for the majority of the unemployed poor without adequate skill. The extremely low labour intensity affirmed that most EPWP projects (if not all, in this case) created during Phase 1,

used more conventional construction technique “business as usual”, which are capital intensive rather than labour input, this violates the mandated guidelines for EPWP schemes enacted in the Code of Good Practice for SPWPs, the Division of Revenue Bills (DoRA) and EPWP Framework policy.

Figure 10: EPWP Jobs Created in Phase 1 By Provincial Departments in Free State



Source: Own Illustration

On the other hand, considering *cost effectiveness* of the implemented EPWP schemes in Free State during 2008/09 financial year (last year of Phase 1), on average, it is more expensive to create one job per beneficiary in the infrastructure sector that in the other sectors. For instance, it cost R3, 796 to create a full time job for one year in the infrastructure sector, as compared to R472 in the Environment and Culture sector. Nonetheless, this finding should be interpreted with caution, given the variability in the numbers of projects implemented per sector relative to the aggregate expenditure by provincial departments on these projects, as well as, the rationale that infrastructure investment requires large inputs for materials and equipment.

With the exception of other three sectors that meet the criteria of reaching the targeted proportion of women (30 percent) and youth (40 percent), only the infrastructure sector failed to meet this selection criteria. However, the main deduction is that **the provincial government need to step up its effort to creatively design EPWP initiatives that will be suitable to attract the unemployed working age disabled people, as EPWP initiatives in the province marginalised this group.**

Taking into consideration, EPWP performance across the four main sectors at provincial level, at an average daily wage rate of R50, the largest number of short-term employment is created in Social sector, where EPWP initiatives created some 831,680 workdays of employment, which equalled to employing 3,616 persons full-time for a whole year. In this sector, EPWP schemes in the provincial Health department offered the largest number of short-term work opportunities for beneficiaries by employing 2,092 participants (translates into 2,028 FTEs for the entire year, by providing about 466,400 workdays of employment), followed by Education which created some 190, 210 workdays of employment, translating into an employment opportunities to 827 persons full-time per annum, and 703 net work opportunities), Social Development that employed 526

persons full-time per annum (about 1,638 short-term work opportunities), whilst the provincial department of Sports, Art, Culture and Recreation offered employment to merely 235 FTEs for an entire year (equivalent to creating 216 jobs opportunities for EPWP participants)

Table 27: EPWP Phase 1, FS Departmental Performance Analysis, Cumulative data, 01 April 2008-31 March 2009

EPWP Sectors & Implementing Departments	Perons-Year of Work (FTE)	Average Project Cost	Net work opportunities created	Average Cost per Project	Mean work duration (days)	Working Days per Month	Employ created by Depts (%)
Infrastructure (Depts)	2,004		3,546	3,796.75	130.0	5.65	
Public Works & DPRT	888	2,037.24	2,197	2,037.24	93.0	4.04	59.98
Social Development	213	43,832.22	248	43,832.22	197.5	8.59	6.77
Education	554	7,530.16	649	7,530.16	196.3	8.54	17.72
DETEA	5	2,600.00	52	2,600.00	22.10	0.98	1.42
Health	344	42,541.64	400	42,541.64	197.8	8.6	10.92
Envir&Culture (Depts)	6.00		20.00	2,700.00	69.0	0.90	
Agriculture	6	472.00	20	2,700.00	69.0	0.90	
Social	3,616.00		4,652.00	63.33	178.8	7.77	
Social Development	526	120.09	1,638	120.09	73.9	3.21	35.21
Health	2,028	118.57	2,092	118.57	223.0	9.69	44.97
Education	827	10.73	703	10.73	270.6	11.76	15.11
Sports, Arts, Culture & Recreation	235	26.92	219	26.92	246.8	10.73	4.71

Source: Own Calculations

Note: PW, DETEA, SACR, CoGTA, DPRT denotes provincial departments of Public Works; Economic Development, Tourism and Environmental Affairs; Department of Sports, Arts, Culture and Recreation; Cooperate Governance and Traditional Affairs; Police, Roads and Transport.

Additionally, during the 2008/09 financial year (last year of EPWP phase one), the Infrastructure sector, emerged as a major contributor of temporary-work opportunities in the province, after the Social sector (see Table 27). In this sector, the provincial department of public works accounting for about 60 percent (equivalent to employing 888 persons full-time for an entire year by implementing 191 labour intensive projects) , followed by Education which created about 649 employment opportunities (about 18 percent), whereas Health contribute about 11 percent to the net work opportunities created in the infrastructure sector (equivalent to employing about 400 persons full time for a whole year). In this sector, DETEA performed poorly by only generating temporary work opportunities for only 52 persons full-time for an entire year, thus providing only some 1,150 work days of employment (equivalent to only 5 FTEs for a whole year), whilst the infrastructure sectors offered about 204, 240 workdays of employment, followed by Education, which created about 127,420 workdays of employment), meanwhile Social Development and Health provincial departments created some 48,990 and 79,120 workdays of employment respectively, which translates into generating about 213 FTEs in Social Development and 344 FTEs in Health.

Overall, in the Infrastructure sector, data revealed that the pervasive low labour intensity rates across the provincial departments resulted into higher cost to create temporary EPWP jobs . For

example, it is more expensive to create jobs in the Social and Health departments with average costs of R43,832 and 42,541 respectively, compared to R2,000 spent in the provincial Public Works/DPRT departments. Interestingly, it is more cheaper to generate sizeable short-term employment opportunities for EPWP participants in the provincial departments implementing social-related labour intensive programmes (e.g. Social Development, Health, Education and Sports, Arts, Culture and Recreation) in the Social sector, compared to the average cost of creating a single job in the remaining three sectors (i.e. Infrastructure, Economic and Environment and Culture).

Remarkably, contrary to the theory that labour intensity falls rapidly overtime, as the value of projects increases as a result of an rising infrastructure expenditure to intensify the use of conventional construction methods (see McCutcheon at.al., 2009:204). Even though, the analytical results depicted in Table 26 accentuate a very low labour intensity across the four sectors and provincial departments, yet, regardless of EPWP project size or numbers implemented, the evidence of decline in labour intensity due to the value of projects implemented is ambiguous. For instance, the provincial departments of Public Works and Police, Road and Transport during the period under review, initiated 191 EPWP projects, with a poor labour intensity rate of 0.04 in the Infrastructure sector, whereas, Health department (in the same sector) completed only 5 projects with similar labour intensity rate.

Noticeably, for this low labour intensity rates for public works programmes are considered as an ineffective implementation of EPWP projects, compared to what would be common practice of such programmes in other countries where labour intensity rates are in the range of 30 to 50 percent (e.g. Botswana and Kenya), especially because these programmes are supposed to be more labour intensive to generate employment⁸⁶

6.1.3. Free State Metro, Municipal and Districts Analysis - EPWP Phase 1

Given the EPWP analysed data in Tables 28 and 29, during 2008/09 financial year, a total of 3,010 persons years of employment (FTEs) was created as result of applying labour intensive work methods at both provincial and municipal or district levels. At an average daily wage of R60, it cost EPWP programme R967,780 to create a one year of employment for one beneficiaries (using a full work year of 230 workdays as stipulated in EPWP guidelines). For the period under review, total of 7,519 work opportunities was created for participants in the province, at an average work duration of 3.8 months.

In the major seven district municipalities and metro (Mangaung) in the Free State, EPWP initiatives implemented in 2008/09 (last year of Phase 1 EPWP) created about 692,300 workdays of employment, which translates to 2,947 persons full-time for an entire year (FTEs). The total expenditure on wages (as a measure of efficiency, effectiveness and extent of social protection offered to beneficiaries in the form of wage transfer) constituted 0.14 percent of total expenditure. This finding is very crucial for our analysis, because low labour intensity suggests that, first, little use of labour input in all implemented projects, which erodes the poverty-reducing and employment-generating benefits of EPWP in the Free State province.

Secondly, apart from the evidence of ineffectiveness and lack of proper project management to ensure tangible service delivery, the insignificant use of labour inputs implies that large proportion of the working age poor and unemployed are marginalised from participating in EPWP programmes. Thirdly, the implementation of EPWP initiatives in Free State would make no dent

⁸⁶ See McCutcheon and Parkins (ibid, pp.205) and DPW (2012:21)

on the prevailing high unemployment rate, poverty incidence and inequality, as sizeable proportion of the population who are unskilled are excluded from participating in these programmes, owing to use of more conventional work method, rather than, labour intensive work method which is the foundational basis of EPWP framework.

Table 28: EPWP Phase 1 Performance Analysis, Across Municipalities and Local Districts in Free State, 01 April 2008 - 31st March 2009 (Year 5)

District & Local Municipalities	Project Allocated Budget (R 'Mill)	Total Expenditure	% of Total Exp	No of Projects	W (%)	Y (%)	D (%)	Avg. Daily Wages (min)	Expenditure per FTE	Labour Intensity (%)
Thabo Mofutsanyane	3,420.11	3,244.51	94.87%	7	49	78	0.05	51.43	51.50	0.24
Local Municipalities	564,902,535	436,429,729	77.26%	56	31	47	0.005	60.99	967,728.59	0.09
Dhlabeng	69,157,000	29,598,973	42.80%	10	18	21	0.007	47.20	44046.091	0.24
Maluti-a-Phofung	46,007,643	36,323,761	78.95%	5	45	48	0.008	50.00	80184.903	0.13
Mangaung	354,726,653	295,809,783	83.39%	19	29	51	0.001	65.89	224608.795	0.06
Maljthabeng	45,700,398	40,228,325	88.03%	7	43	59		67.66	146818.704	0.11
Moqhaka	26,694,714	17,530,997	65.67%	12	48	47	0.004	59.17	139134.897	0.09
Naledi FS	9,142,857	5,951,376	65.09%	1	22	65		72.00	180344.727	0.09
Setsoto	13,473,270	10,986,514	81.54%	2	14	40		65.00	152590.472	0.10

Source: EPWP Quarterly cumulative report for the period 1 April 2008 to 31 March 2009 (Year 5), Annexure G1 and G3, and Own calculations.

Taking into account EPWP data analysis represented Figure 10 and Table 29, empirical results shows a disproportionate distribution of fiscal allocation in the favour of the urban area (Mangaung Metro), than the local municipalities. Obviously, this EPWP allocation will determine the extent of positive spin-offs from public work programmes that will filter to the working age and unemployed poor in the different district. While, about 7,519 temporary job opportunities was generated in 2008/09 in all the municipalities, roughly 65 percent proportion of the aggregate jobs created was isolated to main municipalities, namely Mangaung Metro (32 percent or 2,423 work opportunities, equivalent to employing 1,317 persons full-time for a whole year) and Dhlabeng (28 percent or 1,711 work opportunities, translating to about 672 full-time employment for one year).

Whilst some local districts such as Maljthabeng and Maluti-a-Phofung created about 15 percent (940 work opportunities or 274 FTEs) and 13 percent (839 net work opportunities or 453 FTEs) respectively to the total number of temporary jobs generated through EPWP projects in the province, employment-generating performance of other local municipalities were generally very poor, for example, local municipalities such as Setsoto, Naledi and Moqhaka created about 1.6 percent, 1.8 percent and 4 percent of job opportunities for EPWP participants. This inference, clearly suggested scarcity of labour intensive projects in the rural areas of Free State province, where poverty incidence and unemployment are the highest and in need of quality service, in

contrast to the urban areas that largely benefits from EPWP projects such as road construction, maintenance and upgrade works.

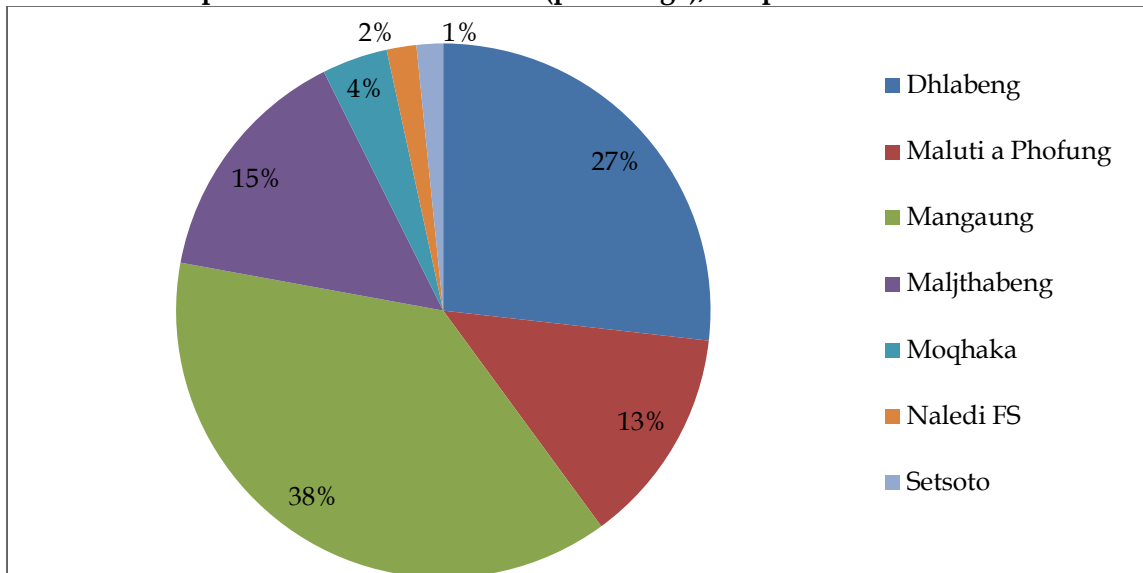
Table 29: EPWP Phase 1 Performance Analysis Across Municipalities and Local Districts in Free State, 01 April 2008 - 31st March 2009

District & Local Municipalities	Person-Year of Work (FTE)	Net work opportunities created	Total wage paid to EPWP workers	Mean work duration (days)	Average Cost per FTE	Working Days Per Month	Employ created by metro & local municipality
Thabo Mofutsanyane	63.00	1,134.00	767.48	12.78	7.4	0.56	0.15
Local Municipalities			38,251,059	106.16	17,280.9	4.62	
Dhlabeng	672	1,711	7,029,528	90.33	4,404.6	3.93	26.80%
Maluti-a-Phofung	453	839	4,794,650	124.18	16,037.0	5.40	13.14%
Mangaung	1,317	2,423	18,973,546	125.01	11,821.5	5.44	37.95%
Maljthabeng	274	940	4,255,242	67.04	20,974.1	2.91	14.72%
Moqhaka	126	254	1,574,805	114.09	11,594.6	4.96	3.98%
Naledi FS	33	115	545,328	66.0	180,344.7	2.87	1.80%
Setsoto	72	103	1,077,960	160.78	76,295.2	6.99	1.61%

Source: DPW, 2014 ; StatsSA, 2014 ; Own calculations.

1. Average work duration is estimated by dividing mean average work per year by 23 days (maximum number of working days in a month)

Figure 11: Employment Opportunities Created during EPWP Phase 1 by Free State Municipalities and Local Districts (percentage),01 April 2008-31st March 2009



Source: Own Illustration

The analysis of data in Table 28 suggests that, first, extremely low labour intensity, which is insufficient to reduce high unemployment rate and poverty incidence in the province. By implication, low labour intensity implies non-adherence to EPWP objectives and guidelines, in particular, by contractors possibly due to lack of skill to implement labour-intensive projects, aversion to labour intensive work method as a result of poor quality and high cost argument, weak monitoring and evaluation plan by implementing bodies and/or responsible officials to visit projects sites and/or enforce the implementation of labour intensive work methods. Second, the implementation of public works programmes in majority of the provinces attracts high cost per FTE. For example, the cost of creating a full-time employment opportunity for a year is relatively high in Manguang (R224, 609), followed by Naledi (R180,345), Setsoto (R152,509), Maljthabeng (R146,819) and Moqhaka (R139, 135). Only in Maluti-a-Phofung and Dhlabeng is the cost of creating one FTE per participants are cheaper (below R81,000). Third, only few local districts had EPWP projects running between 4 months to 7 months, this includes Moqhaka (4.9 months), Maluti a Phofung (5.4 months), Mangaung (5.4 months) and Setsoto (6.9 months).

Overall, the short duration of public works programmes limit skill development gained through either trainings or work experience, provides minimal and temporary income relief that cannot guarantee the graduation of the working age poor and the unemployed from poverty trap, as well as, induce no financial asset accumulation benefit to participants. In addition, the general low daily wages offered to public work programme's participants, to a greater extent, may serve as a disincentive to search for temporary work opportunities provided by EPWP projects due to the difficult nature of tasks (e.g. excavation) to be executed which demand solely labour input, copious physical strength and energy. Accordingly, potential beneficiaries may opt for less tedious casual work alternatives and/or remain dependent on cash transfers, this in turn, heightens the national government's fiscal burden.

6.1.4. Free State Metro, Municipal and Districts Analysis - EPWPPHASE 2

6.1.4.1. Analysis of EPWP Performance at Departmental Level (Implementing Bodies)

In order to facilitate considerable expansion of expanded public works programmes with the primary aim of reaching larger number of the unemployed poor living in the rural and urban areas, the fiscal allocation from the national government to Free State province considerably increased from R900 million (2008/09) to R4.2 billion in 2013/14 (the last year of the Phase 2). In the main sectors, in Table 30, the Infrastructure sector received the biggest share of the allocated funds to initiate EPWP projects to the amount of R4 billion, while the Social and Environment and Culture sector received R137 million and R24.8 million respectively.

In the last year of the second phase of EPWP (i.e. 2013/14 financial year), aggregate expenditure in the three sectors recorded was R261 million, equivalent to an expenditure of 6.24 percent. This immediately indicate an acute under-expenditure problems by public implementing bodies at both the provincial and municipal level. This lack of capacity to utilise allocated EPWP budget will not only adversely affect the main objectives of EPWP in terms of job creation, poverty alleviation and social protection (welfare improvement), but also, prevent asset creation, which in turn, hamper adequate service delivery. By and large, the lack of service delivery often lead to violent social unrest and disruptions.

Table 30: EPWP Phase 2, FS Provincial Departmental Performance Analysis, Cumulative data, 01 April 2013 – 31st March 2014 (Year 5)

EPWP Sectors & Implementing Departments	Project Allocated Budget (R 'm)	% of Total Exp	Total Expenditure	No of Projects	W (%)	Y (%)	D (%)	Avg. Daily Wages (R)	Expend per FTE	Labour Intensity (%)	Total No of Work days per year
Infrastructure Sector	4,035,396.71	3.80%	153,414.44	81	22	58	0.10	108.27	832.48	0.26	407,100
Public Works	570,890.63	13.05%	74,513.58	30	41	65	0.00	90.40	132.586	0.14	129,260
DPRT	415,068.89	5.55%	23,054.62	12	33	69	0.00	120.42	41.615	0.55	127,420
Education	407,689.84	4.29%	17,506.12	24	19	55	0.00	99.54	105.459	0.20	38,180
Sports,Arts,Culture &Recreation	245,429.53	2.65%	6,510.95	8	8	50	0.28	147.75	45.215	0.76	33,120
Health	207,835.80	10.22%	21,235.63	4	9	52	0.41	99.75	433.380	0.06	11,270
DETEA	2,109,844.32	0.05%	1,119.80	1	9	55	0.00	90.00	38.614	0.54	6,670
CoGTA	78,637.70	12.05%	9,473.75	2	35	63	0.00	110.00	35.616	0.71	61,180
Envir&Culture Sector	24,818.08	62.50%	15,511.73	40	34	59	1.50	97.11	70.85	1.06	205,390
Public Works	20,481.69	65.17%	13,348.38	25	67	49	2.76	78.28	17.113	1.05	179,400
Agriculture & Rural Dev	3,286.39	49.04%	1,611.63	13	41	55	0.00	81.15	21.206	0.87	17,480
DETEA	500.00	49.23%	246.16	1	13	58	3.22	90.00	10.703	1.96	5,290
Sports,Arts,Culture &Recreation	550.00	55.56%	305.56	1	16	72	0.00	139.00	21.826	1.46	3,220
Social Sector	136,836.71	67.80%	92,780.17	778	84	41	0.32	71.12	116.24	0.65	910,823
Education	5,767.70	47.06%	2,714.52	40	96	38	1.25	45.60	16.860	0.70	37,030
Health	66,010.52	51.02%	33,679.85	293	85	39	0.09	70.56	15.557	1.05	497,950
Social Development	63,704.05	87.83%	55,954.01	441	89	42	0.24	62.44	34.582	0.40	372,140
No Dept Name	88.44	25.00%	22.11	2	100	20	0.00	70.00	22.110	0.70	230
Public Works & Rural Dev	1,266.00	32.36%	409.68	2	50	64	0.00	107.00	27.131	0.94	3,473
TOTAL	4,197,051.50	6.24%	261,706.34	899	46.7	52.5	0.64	92	39.514	44.74%	1,523,313

Source: EPWP Quarterly report, interim cumulative data for the period: 1 April 2013 to 31 March 2014, released at 23 May 2014, Annexure C2 and Own calculations.

Particularly, as shown in Table 30, on aggregate, while total expenditure in the Social and Environment and Culture (as a percentage of allocated budget) are slightly above 60 percent, the expenditure performance of the Infrastructure sector was very poor at 3.8 percent. Further analysis of the fiscal expenditure data during the 2013/14 financial year shows that, in the Social sector, provincial department of Social Development has the highest expenditure rate of about 87.8 percent, followed by Health (51 percent), whilst expenditure in other departments (i.e. Education, Public Works and Rural Development) ranges from 32 percent to 47 percent.

Equally, in the Economic and Culture sector, the departments of Public Works and Sports, Arts, Culture and Recreation (SACR) are the main contributors to the observed moderate expenditure (as a percentage share of total allocation) with about 65 percent and 56 percent respectively. On the contrary, there is a **general poor and severe problem of lack of capacity-to-spend** in all the seven provincial departments that made up the Infrastructure sector, as total expenditure in most of these departments are 6 percent, with the exception of Public Works (13 percent), CoGTA (12 percent) and Health (10 percent).

Since, the Infrastructure sector is the core sector in EPWP framework with the utmost potential to create large number of temporary job opportunities for the working age and unemployed poor through labour intensive work method, thus, the evidence of acute under-spending in this sector will directly affect the jobs created, labour intensity and the degree of social protection benefit (income relief or insurance) provided to beneficiaries. For the period under review, using the total number of temporary jobs created as a performance measure, surprisingly, the Social sector generated the most job opportunities of about 8,029 to EPWP beneficiaries in the entire Free State province, followed by the Infrastructure sector that created some 5,398 work opportunities, whilst the Environment and Culture sector created 2,121 work opportunities according to analysed data in Table 31.

Table 31: EPWP Phase 2, FS Provincial Departmental Performance Analysis, Cumulative data, 01 April 2013 - 31st March 2014 (Year 5)

Sector	Perons-Year of Work (FTE)	Net job opportunities created	Average Cost per Project	Mean work duration (days)	Working Days per Month	Employment created by sector
Infrastructure (Depts)	1,770	5,398	10.2776	75.4	3.28	
Public Works	562	1,547	4.4195	83.6	3.63	28.66%
DPRT	554	1,684	3.4679	75.7	3.29	31.20%
Education	166	678	4.3941	56.3	2.45	12.56%
Sports,Arts,Culture& Recreation	144	353	5.6519	93.8	4.08	6.54%
Health	49	240	108.3451	47.0	2.04	4.45%
DETEA	29	119	38.6138	56.1	2.44	2.20%
CoGTA	266	777	17.8078	78.7	3.42	14.39%
Envir&Culture (Depts)	893.00	2,121.00	1.7712	96.8	4.21	
Public Works	780	1,555	0.6845	115.4	5.02	73.31%
Agriculture & Rural Dev	76	510	1.6312	34.3	1.49	24.05%
DETEA	23	31	10.7026	170.6	7.42	1.46%
Sports, Arts, Culture & Recreation	14	25	21.8256	128.8	5.60	1.18%
Social	3,960.10	8,029.00	0.1494	113.4	4.93	
Education	161	480	0.4215	77.1	3.35	5.98%
Health	2,165	4,246	0.0531	117.3	5.10	52.88%
Social Development	1,618	3,270	0.0784	113.8	4.95	40.73%
No Dept Name	1	5	11.0550	46.0	2.00	0.06%
Public Works & Rural Dev	15	28	13.5655	124.0	5.39	0.35%

Source:

Looking at the results presented in Table 31, in order to undertake a more robust analysis, if the number of net work opportunities created per sector is converted to number of workdays of employment (by multiplying number of FTEs by 230 days of a full year work as a common practice in EPWP projects). On this basis, all public works programmes in 2013/14 generated about 1.5 million workdays of transient employment for EPWP participants, equivalent to employing 15,548 persons in a full time work for the entire year. Employing the same analysis across the three sectors, the Social sectors created some 910,823 work days of employment for

participants, equivalent to employing 3,960 persons full-time for an entire year, followed by the Infrastructure sector that created some 407,100 workdays of employment (i.e. employed about 1,770 beneficiaries in a full time work for the entire year), while the Environment and Culture sector created some 205,390 workdays of employment that translated into a full-time job opportunities for 893 participants.

By using the length of work opportunities in terms of long or short duration and accessed to training (skill development) as per the objective of EPWP initiatives to produce at least 75 working days opportunities to beneficiaries, the estimated mean employment durations estimations shows that the Social sector had the longest mean employment duration is (158 work days or about 4.9 months), followed by the Environment and Culture sector (97 days or 4.2 months). The Infrastructure sector recorded the lowest duration of employment opportunities of roughly 75 working days, equivalent to 3.3 months. This findings is in line with several evidence on the overall performance of EPWP at the national level cited in this study. This deduction is crucial because of amount and quality of skills acquired by EPWP beneficiaries either through (in)formal trainings or (on-the-job) work experience is directly dependent on the duration of implemented EPWP projects, when the computed duration of employment opportunities created is compared to the stipulation in the Code (participants are entitled to at least 2 days of training per month), by implication, at best, all unskilled working age poor can only gain maximum of 8 training opportunities and/or minimum of 4 trainings in EPWP projects implemented in the province. Clearly, this shortness of employment duration validate the evidence that public works programme has limited impact on employability of beneficiaries, in most cases, beneficiaries are ill-equipped with proper skills to take up employment available in the mainstream labour market, consequently, they falls back into long spell of unemployment after exiting EPWP programmes (as cited in the literature).

Taking into account the adherence of contractors to the use of labour-intensive work methods in EPWP projects measured by labour intensity (also a useful performance of effectiveness and wage transferred to beneficiaries). During the final year of EPWP's Phase 2 (2013/14 financial year), total expenditure on wages constituted 44.7 percent of total expenditure, indicating that more labour inputs was used in majority of EPWP projects to attract significant proportion of working age/unemployed poor into active participation, thereby, increasing the provincial labour absorption rate. Interestingly, further disaggregation of labour intensity rate across provincial departments yield different result of serious problem of an extremely low labour intensities that ranges between 0.2 percent and 2 percent. For example, the Economic and Culture sector had labour intensity of 1.06 percent, followed by the Social sector with 0.65 percent, while 0.26 percent of labour intensity was achieved by the Infrastructure sector. The typical interpretation of these deductions is that the poor performance of the infrastructure sector is an indicative o the reality that majority of contractors of EPWP projects utilised a considerably high proportion of conventional construction techniques which are capital intensive to complete ongoing projects, rather than, using labour input, perhaps due to the perception that labour inputs are cost ineffective and of poor quality.

Moreover, examining the evidence that payment of higher wage rates in public works programme could cause high job substitution, labour market disruption, dead weight loss, as well as, increase participant's dependence on EPWP projects without looking for any alternative income source and exclusion of the unemployed poor. Using daily wage rates as a performance measure, the Infrastructure sector, which comprises of seven (7) provincial departments, DETEA and Public Works paid the lowest daily wage rate of R90, whilst,

department of SACR, CoGTA and Education offered high daily wage rates of R148, 120 and 110. Equally, while the provincial department of Public Works paid the lowest daily wage rate of R78 in the Environment and Culture sector, the department of SACR offered EPWP participants the highest daily wage rate of R139.

Albeit, the daily wage rate in the Social sector remains modest in comparison to the other two sectors, with an average (sectoral) daily wage rate of R71. The daily wage rate in this sector ranges from the lowest of R46 (paid by Education department) to the highest wage rate of R107 offered by the provincial departments of Public Works and Rural Development. By implication, based on the “less eligibility criteria” prescribed for PWPs by offering low wages at or below the aggregate market wage rate, given the average provincial daily wage of R92 or R50 (prescribed by NDPW), the generous daily wage offered to workers in the Infrastructure sector (R108) and Environment and Culture sector (R97) strongly suggest the likelihood of unemployed poor being explicitly excluded from participating in EPWP schemes, causes labour market failure and weakened the employment-generating and poverty-reducing effects of EPWP in the Free State.

The lack of uniformity or a standardised daily wage rates for adopted, albeit, varying EPWP projects across the provincial departments significantly increases the job substitution rate and rationing, which, severely reduce the probability of the working age poor or targeted groups of unemployed participating in EPWP projects as large number of semi-skilled and employed workers in casual jobs elsewhere are drawn into these projects because of the financial stability (i.e. high and consistent wage payment) they offered.

On the other hand, using the average cost per FTE created as a measure of cost effectiveness, for the period under review, amongst the sectors, creating temporary full-time jobs for a year through EPWP projects is more expensive in the Infrastructure sector at R832 000 (on average), in contrast to R70,000 in the Environment and Culture sector. Another deduction from the computed data is that, it is generally more costly to create on full-time job for an entire in the Infrastructure sector than the remaining two sectors. Also, Health department had the highest cost of R433,000 to create a full-time job opportunity for EPWP beneficiary for an entire year within the Infrastructure sector. On the other hand, it is cheaper to generate temporary job opportunities via EPWP initiatives in the provincial departments such as Education, SACR, DETEA, Agriculture and Rural Development.

6.1.4.2. Free State Metro, Municipal and Districts Analysis – EPWP PHASE 2

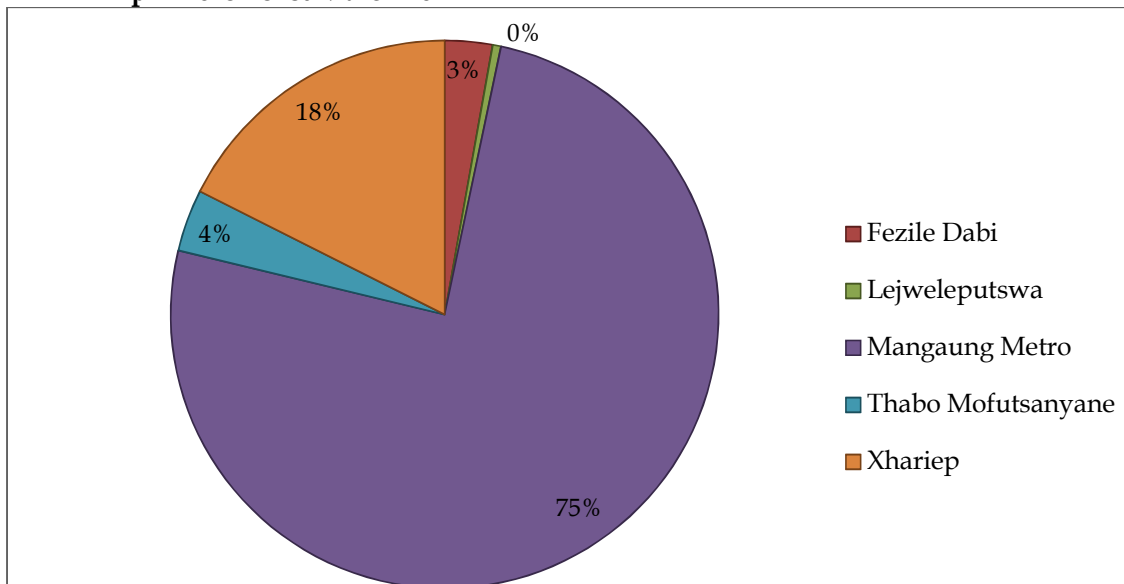
In the 2013/14 financial year, to initiative EPWP project at sub-national sphere of government (i.e. local municipalities and districts), about R195 million was allocated to the main five local municipalities (i.e. Fezile Dabi, Lejweleputswa, Mangaung Metro, Thabo Mofutsanyane and Xhariep) in Free State. Mangaung Metropolitan received the largest share of EPWP allocation of R157 million, followed by Xhariep (R30.4 million). In contrast, Lejweleputswa received the lowest allocation of R500,000, while, Fezile Dabi and Thabo Mofutsanyane was allocated the sum of R 3.4 million and R4.7 million respectively. This evidence of widely unequal fiscal allocation in favour of urban area (e.g. Mangaung Metro), at the expense of rural areas, is detrimental to socioeconomic development, asset created, employment growth, extent of poverty incidence and aggregate economic growth at provincial level. In addition, this finding implies that employment and income-generating opportunities are not implemented in the

rural areas where poverty and unemployment rate is highly prevalent, and bulk of unskilled and unemployed working age poor that constitute more than 75 percent of the population are living. Without any in-depth analysis, the lopsided fiscal allocation away from the rural areas, suggests that the impact of EPWP initiative in the province, in response to the current high unemployment and poverty rate, remains insignificant.

Further analysis on the efficiency of utilising EPWP allocations to implement labour intensive projects as documented in Table 32, revealed a persistent problem of under-expenditure in majority of the local municipalities, a similar inference common to the provincial departments. Apart from Fezile-Dabi local municipality that spent about 91 percent of allocated EPWP funds during the last year of Phase 2 (i.e. 2013/14), the total expenditure among the remaining four local municipalities ranges from 37 percent (Mangaung Metro) to 4.9 percent (Xhariep). The graphical illustration in Figures 11 and 12, elucidates the total work opportunities generated via EPWP schemes in Free State during the second phase of EPWP.

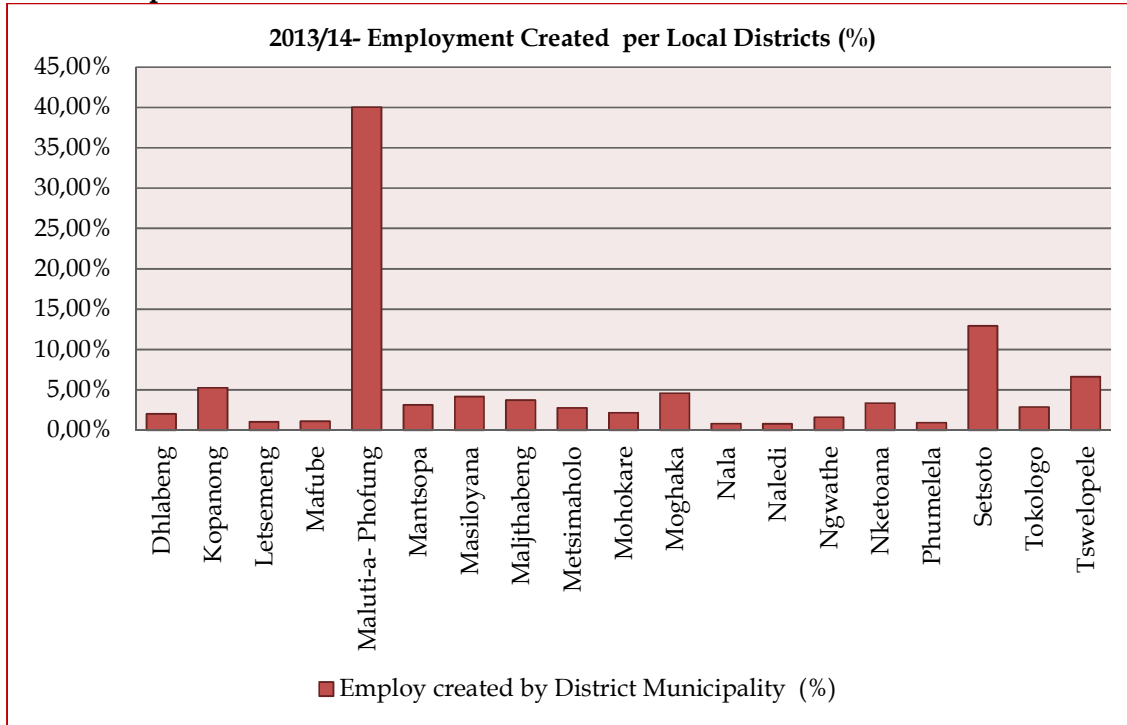
Moreover, from Table 32, in the nineteen (19) local districts that made up the five municipalities were allocated the sum of roughly 1.2 billion, out of this, Setsoto district received the largest sum of R245 million, followed by Maluti-a-Phofung (approximately R155 million) and Maljthabeng (about R140 million). On the other hand, fiscal allocation to two other districts (Metsimaholo and Kopanong) over R80 million, allocation to districts such as Dhlabeng, Mantsopa, Letsemeng, Phumelela, Naledi and Tswelopele ranges between R35 million and R14 million. In contrast, local districts of Mohokare and Nala received the lowest allocation of about R4.5 million and R4.3 respectively. Meanwhile, only four local districts (i.e.Moghaka, Naledi, Mohokare, Metsimaholo) spent slightly above 50 percent of total fiscal allocation to initiate EPWP projects in 2013/14 financial year. This analytical result strongly confirmed the entrenched serious *lack of capacity to spend* allocated budgets effectively by public implementing bodies in Free State(see Table ?)

Figure 12: Employment Opportunities Created during EPWP Phase 2 by FS Municipalities, 01 April 2013 - 31st March 2014



Source: Own Illustration

Figure 13: Employment Opportunities Created during EPWP Phase 2 by FS Local Districts, 01 April 2013 - 31st March 2014



Source: Own Illustration

In 2013/14 financial year, all the 205 EPWP projects implemented across the local municipalities (5) and districts (19) created some 431, 020 workdays of employment, equivalent to employing 1,874 persons full-time for an entire year (or net employment opportunities for 8,831 beneficiaries). Additionally, for the period under review, the *estimated mean workdays duration* indicates that, EPWP participants in the province will merely be able to work for 95 days (equivalent of 4 months) in any given project. This implies that the maximum number of trainings beneficiaries can accessed is limited to 8 (in)formal trainings (assuming 2 per month as specified in the Code of Good Practice for SPWP). It is difficult (if not impossible) to sufficiently equipped participating workers in these projects with adequate skills required to be employed in the mainstream labour market or become self-employed after exiting EPWP initiative and/or completion of implemented projects. The total expenditure on wages (as a measure of labour intensity and the degree of social protection as income relief offered to beneficiaries) constituted 0.28 percent of total expenditure.

Also, Table 32 depicts the average daily wage rate for EPWP programmes across the local municipalities and districts was higher at nearly R85, above the prescribed R50 by NDPW. Even though, the introduction of an incentive grants into Phase 2 of EPWP is aimed at encouraging municipalities and local districts to upscale EPWP initiatives, intensify the use of labor input by setting appropriate wages to attract the unemployed poor, and covers high operational cost associated with expanded public works programme, nonetheless, the finding of high daily wage rate above the market wage rate implies that, to some extent, dead weight loss including an higher rate of job substitution and rationing which excludes the targeted unemployed poor is present in various implemented projects.

Table 32: EPWP Phase 2 Performance Analysis Across Municipalities and Local Districts in Free State, 01 April 2013 - 31st March 2014 (Year 5)

Metro & District Municipalities	Project Allocated Budget (R 'm)	Aggregate Expenditure	% of Total Exp	No of Projects	W (%)	Y (%)	D (%)	Avg. Daily Wages (min) R	Expenditure per FTE	Labour Intensity (%)	Total No of Work days per year
Free State	195,952,019	63,802,833	32.56%	72	36%	58%	0.001	75.78	484,040.37	0.13	100,740
Fezile Dabi	3,476,165	3,158,106	90.85%	1	16%	51%		30.00	242,931.23	0.03	2,990
Lejweleputswa	500,000	52,480	10.50%	1	18%	73%		91.00	26,240.00	0.85	460
Mangaung Metro	156,793,660	58,730,942	37.46%	40	34%	58%		91.45	169,253.44	0.12	79,810
Thabo Mofutsanyane	4,756,751	369,395	7.77%	6	60%	34%	0.001	78.33	19,441.84	0.90	4,370
Xhariep	30,425,443	1,491,910	4.90%	24	53%	73%		88.13	26,173.86	0.77	13,110
Local Municipalities	1,173,006,292	253,914,151	21.65%	133	36%	59%	0.00	93.98	4,635,181.44	0.12	330,280
Dhlabeng	35,329,761	17,206,337	48.70%	3	34%	55%		120.00	521,404.15	0.05	7,590
Kopanong	83,872,682	29,165,701	34.77%	19	31%	60%		90.79	288,769.31	0.07	23,230
Letsemeng	15,801,733	3,500,000	22.15%	2	19%	45%		90.00	250,000.00	0.08	3,220
Mafube	60,853,644	429,260	0.71%	4	32%	64%		78.75	25250.58	0.82	3,910
Maluti-a-Phofung	154,919,017	23,087,857	14.90%	10	57%	49%	0.00	102.90	54,710.56	0.42	97,060
Mantsopa	62,066,908	6,968,366	11.23%	6	31%	52%		82.50	165,913.47	0.11	9,660
Masiloyana	22,913,968	7,047,197	30.76%	7	47%	61%		78.14	117,453.28	0.16	13,800
Maljthabeng	139,960,387	19,523,011	13.95%	12	27%	65%		82.08	574,206.20	0.04	7,820
Metsimaholo	87,669,850	60,125,159	68.58%	7	38%	56%		70.43	1,113,428.87	0.02	12,420
Mohokare	4,549,387	3,305,290	72.65%	4	44%	70%		99.00	122,418.14	0.20	6,210
Moghaka	48,998,188	26,411,838	53.90%	11	32%	61%		98.73	338,613.30	0.08	17,940
Nala	29,463,424	2,271,162	7.71%	3	24%	43%		126.00	133,597.76	0.20	3,910
Naledi	4,275,831	2,436,508	56.98%	1	40%	68%		90.00	243,650.80	0.08	2,300
Ngwathe	15,693,984	6,826,757	43.50%	6	36%	55%		87.50	273,070.28	0.09	5,750
Nketoana	70,034,288	10,215,900	14.59%	7	48%	64%		113.57	154,786.36	0.14	15,180
Phumelela	19,367,176	358,520	1.85%	2	32%	81%		100.00	25,608.57	0.85	3,220
Setsoto	245,306,215	25,261,653	10.30%	16	50%	53%		93.88	84,487.13	0.21	68,770
Tokologo	57,367,724	7,379,432	12.86%	6	15%	45%		84.17	94,608.10	0.21	17,940
Tswelopele	14,562,125	2,394,203	16.44%	7	44%	70%		97.14	53,204.51	0.41	10,350

Source: EPWP 4th Quarter 2013/14 cumulative report for the period 1 April 2013 to 31 March 2014, and Own Calculations.

Table 33: EPWP Phase 2 Performance Analysis Across Municipalities and Local Districts in Free State, 01 April 2013 - 31st March 2014 (Year 5)

Metro & District Municipalities	Perons-Year of Work (FTE)	Net job opportunities created	Total wage paid to EPWP workers	Average Project Cost	Estimated Mean Work Duration	Working Days in Months	Jobs created per sector
Free State	438	2,236	8,540,306	886,150	45.1	1.96	
Fezile Dabi	13	63	86,460	3,158,106	47.5	2.06	2.8%
Lejweleputswa	2	11	44,590	52,480	41.8	1.82	0.5%
Mangaung Metro	347	1,687	6,923,626	1,468,274	47.3	2.06	75.4%
Thabo Mofutsanyane	19	82	334,100	61,566	53.3	2.32	3.7%
Xhariep	57	393	1,151,530	62,163	33.4	1.45	17.6%
Local Municipalities	1,436	6,595	30,496,864	1,909,129	50.1	2.18	
Dhlabeng	33	132	921,480	5,735,446	57.5	2.50	2.00%
Kopanong	101	347	2,110,050	1,535,037	66.9	2.91	5.26%
Letsemeng	14	69	283,680	1,750,000	46.7	2.03	1.05%
Mafube	17	74	352,730	107,315	52.8	2.30	1.12%
Maluti a Phofung	422	2,640	9,792,202	2,308,786	36.8	1.60	40.03%
Mantsopa	42	206	785,730	1,161,394	46.9	2.04	3.12%
Masiloyana	60	275	1,097,828	1,006,742	50.2	2.18	4.17%
Maljthabeng	34	246	719,165	1,626,918	31.8	1.38	3.73%
Metsimaholo	54	182	944,540	8,589,308	68.2	2.97	2.76%
Mohokare	27	144	655,258	826,323	43.1	1.88	2.18%
Moghaka	78	302	2,099,635	2,401,076	59.4	2.58	4.58%
Nala	17	54	463,063	757,054	72.4	3.15	0.82%
Naledi	10	53	205,560	2,436,508	43.4	1.89	0.80%
Ngwathe	25	106	609,020	1,137,793	54.2	2.36	1.61%
Nketoana	66	221	1,436,220	1,459,414	68.7	2.99	3.35%
Phumelela	14	62	306,040	179,260	51.9	2.26	0.94%
Setsoto	299	854	5,218,328	1,578,853	80.5	3.50	12.95%
Tokologo	78	190	1,520,685	1,229,905	94.4	4.11	2.88%
Tswelopele	45	438	975,650	342,029	23.6	1.03	6.64%

Source: DPW 4th Qtr report, Cumulative data, 01/04 - 31/04 March, and Own calculations.

As shown in Figures 11 and 12, and Table 33, looking at the main five local municipalities, out of the 72 EPWP's projects implemented in 2013/14, about 40 projects were created in Mangaung Metro, whilst 24 projects was put in place in Xhariep and 6 projects in Thabo Mofuntsanyane, whereas, Fezile Dabi and Lejweleputswa were able to adopt one project respectively. On the basis of this inference, Mangaung Metro (an urban area) generated the highest net work opportunities of about 75.4 percent (equivalent to 1,687 temporary job opportunities or creating a full-time work opportunity for 347 participants for the year). While Xhariep created some 393 temporary work opportunities (equivalent to employing 57 persons full-time for the entire year or about 17.6 percent of total share of net work created), other local municipalities employment-creation performance were dismally poor, for example Fezile Dabi, Thabo Mofutsanyane and Lejweleputswa contributed merely 3.7 percent, 2.8 percent and 0.58 percent, to the total net work opportunities generated in EPWP projects during the last quarter of EPWP Phase 2.

Undoubtedly, the poor performance of these local municipalities can be cause by host of co-operand factors such as lack of financial management and project management skills, common use

of capital-intensive work techniques than labour inputs (leads to low intensity), inadequate communication about EPWP initiatives to the community, in completed infrastructural projects owed to delay in paying contractors and deficient monitoring and evaluation (e.g. site visits by public implementing bodies) on ongoing projects, and so on.

Nevertheless, given the evidence that bulk of temporary work opportunities is generated in the Mangaung Metro, this can lead to an forceful rural-urban migration, whereby substantial proportion of unemployed workers in the rural areas migrate to urban centres searching for work. This shift in population dynamics would not only create congestion in the urban areas, but leads to intense competition for available EPWP jobs, and, possible rise in crime (in the absence of job opportunities). Therefore, it is of an utmost importance, that both policy makers and public implementing bodies for EPWP initiatives put focus more on the socioeconomic and infrastructural development in rural areas in the Free State, and urgently implement labour-intensive projects in those local municipalities and districts, where few EPWP projects are been adopted to achieve a balance all-inclusive growth.

Furthermore, the computed results on daily wage rate documented in Table 32, across local municipalities in FS province, Mangaung Metro and Lejweleputswa paid the highest daily wage rate of R91 given an average daily market wage of R72, while Fezile Dabi paid EPWP beneficiaries the lowest wage rate of R30. This evidence reinforces inter-municipal migration and/or rural-urban migrations, also, there is a strong likelihood that the working age poor living in Fezile Dabi may be discourage to participate in short-term public-employment projects given the low wage rate.

In the same vein, considering the daily wage rate in the local districts paid to EPWP workers at local district level, on average, daily wage rate ranged from R 70 (the lowest wage rate paid by Metshimaholo district) to R126(the highest wage rate offered by Nala district). Specifically, about eight (8) local districts offered EPWP beneficiaries daily wage rate above the estimated market rate of R93, these are: Nala (R126), Dhlabeng (R120), Nketona (R114), Maluti-a-Phofung (R103), Phumelela (R100), Mohokare (R99), Moqhaka (R98), and Tswelopele (R97). Even though it appeared that the daily wage rate across the local districts are well-distributed closed to mean average daily market wage rate of R93, in the 19 local districts, albeit, at this rate, the average market wage rate remains high above the prescribed R50 by NDPW.

Furthermore, using the longest duration of workdays generated as a measure of performance, skill transfer and/or work experience acquired is sufficient to improve the employability of EPWP beneficiaries after exiting the programme in the mainstream labour market and/or self employment. By comparing the estimated mean workdays duration and expressed these estimates in months, in comparison to the EPWP aim of generating at least 75 workdays opportunities to beneficiaries, the estimated mean employment durations estimations shows that, across the five local municipalities, on average beneficiaries can only work in any EPWP projects for about 44.7 workdays, equivalent to 1.9 months (assuming 23 working days per month). In general, the mean duration of workdays across the local municipalities is between 33.3 workdays (equals to 1.5 months) in Xhariep, to about 53.3 workdays (2.3 months) in Thabo Mofutsanyane. While EPWP projects will last for about 2 months in Mangaung Metro and Fezile Dabi, participants would only be able to work in EPWP projects for about one-half months in Lejweleputswa and Xhariep. This finding implies that, beneficiaries would benefit from maximum of two (2) formal trainings, this short-duration for training or work-experience is inadequate to guarantee satisfactory skill transfer to the unskilled working age / unemployed poor or allow ample time to set up an appropriate re-training programme for those with obsolete skills. Given this inference, it is doubtful that by design, EPWP projects in any of the Free State local municipalities provides

tangible skill development opportunities to beneficiaries either through quality training and/or work experience.

However, applying the estimated mean workdays duration analysis to the available data on the 19 local districts (see Table 33). Results shows that beneficiaries of EPWP employment opportunities can work for between 2 and 2^{1/2} months in some local districts (e.g. Dhlabeng, Letsemeng, Mafube, Mantsopa, Masiyoyana, Ngwathe and Phumelela), whereas, expanded public works programme projects last for about 3 and 3^{1/2} months other local districts (e.g. Kopanong, Metsimaholo, Nala, Nketona and Setsoto). Interestingly, the longest short-term work opportunities during 2013/14 via EPWP projects was implemented in Tokologo, which lasted slightly for more than 4 months (equivalent to 94.4 estimated mean workdays). On the contrary, the extremely short duration of work employment opportunities of about 1 and 1^{1/2} months in local districts such as Maluti-a-Phofung, Mohokare, Naledi and Tswelopele, acutely undermines and effectively erodes the employment-generating and poverty-alleviation effects of EPWP in these local districts.

Moreover, by taking into account the adherence of contractors to the use of labour-intensive work methods in EPWP projects measured by labour intensity (also a useful performance of effectiveness and wage transferred to beneficiaries). During the final year of EPWP's Phase 2 (2013/14 financial year), empirical results support the evidence of pervasive and extremely low labour intensity across both municipal and local districts. Specifically, labour intensities across the local municipal and districts fell below one percent, characteristically, ranging from 0.12 percent to 0.90 percent. As reiterated, poor performance of EPWP projects due to low or little use of labour input to execute tasks in EPWP projects cannot be over-emphasis, apart from violating the enacted rule and regulation guiding the implementation of EPWP's projects, potential beneficiaries available for work are in actual fact become marginalised as a result of utilising conventional construction technique, which are capital-intensive in nature. See Table 32.

Additionally, using the average cost per FTE created as a measure of cost effectiveness as analysed in Table 33, in 2013/14 financial year, creating temporary full-time jobs for a year through EPWP projects is more expensive in municipalities such as Fezile Dabi at R3.2 million (on average), in contrast to Lejweleputswa (R54,480), Thabo Mofutsanyane (R61,566) and Xhariep (R62,163). Another deduction from the computed data on local districts is that it is generally more costly to create on full-time job for an entire in local districts such as Metsimaholo and Dhlabeng at R8.6 million and R5.7 million respectively, compared to the same cost of R342,029 in Tswelopele, R179,260 IN Phumelela and R107,315 in Mafube.

Finally, it is worth mentioning that, possible factors that could explain the variability and high cost of creating a full-time job for an entire year in Free State province could be:

- (i) Type of EPWP initiatives been adopted, evidently infrastructure projects has more project and operating cost than a feeding scheme project categorised as EPWP projects, and
- (ii) The proportion of mixed labour-capital inputs, while labour is often perceived by contractors as demanding, inefficient, has poor quality and takes longer-term to complete projects, on the contrary, capital intensive techniques are considered cost-effective, saves time, efficient and of good durable quality.

6.2. Value for Money? Assessing Suitability of Labour Intensive Infrastructure Projects for Free State.

A general consensus in empirical studies that validates the positive relationship between increase in public infrastructure investment and economic growth concur that infrastructure investments in maintenance of existing assets (e.g. road networks) stimulates economic growth by creating income-earning jobs than construction of new infrastructure assets.⁸⁷ Specifically, Romp and de Haan (2005) asserts that the maintenance of the existing infrastructure assets are more important than providing new assets as inadequate maintenance generate large and recurrent capital costs (WorldBank, 1994). Typically, an increase in maintenance expenditure to ensure good roads (highways) in a condition of minimum repair usually generate the highest rate of return on investment, whereas, an improvements of existing roads beyond the state of good repair would not yield positive returns (Gramlich, 1999). Nonetheless, lack of maintenance budgets is due to the perverse incentive features of politicians, because of political aim to attract higher votes and maintain high visibility, popularity, as well as, be highly significant in the public, new public investment projects are politically more attractive but less rewarding economically unlike maintenance (Romp et al, 2005:58)⁸⁸.

Additionally, the provision of new infrastructure assets requires a subsequent adjustment the infrastructure budgets to shift funds towards creation of new assets, this practice tends to disrupts budgetary plans and delay the implementation of a planned budget. But, fiscal allocation for maintenance and improvement of the existing/new infrastructure extends assets life-span and operation. For instance, Rioja (1999) finds that shifting resources towards infrastructure maintenance stimulates economic growth and general welfare. Also, Estache and Fay (2007) finds that preventive maintenance reduces operating costs and negative externalities, as well as, prolong asset life, nevertheless, mostly in developing countries governments typically undervalues fiscal allocation for maintenance perceiving it as fiscal savings that is useful to meet budgetary targets or priorities during fiscal stress periods or budget cuts. Similarly, Fay and Yepes (2003), Esfahani and Ramirez (2003), and Canning and Bennathan (1999) confirmed that many (developing) countries tend to under-spend on maintenance, which in turn, shorten the useful life of infrastructure assets and lower their rate of returns. To promote infrastructure investment and maintenance under-spending, Estache et al.(2007) suggests that government allocation for maintenance should consists of 2% of the replacement cost of capital for electricity, roads, and rail, 3% for water and sanitation, and about 8% for mobile and fixed lines. In their empirical work, Fay and Yepes (2003) argued for the need for a sufficient maintenance budget, especially in developing countries to facilitate easy accessibility to quality service and improves rehabilitation (upgrade) of existing assets to prevent weak infrastructure performance.

In fact, in a multi-country analysis, Fay et al (2003) computed a fiscal allocations (as a benchmark) required for new infrastructure investments and maintenance of existing infrastructure assets according to global classification of countries, as presented in Table 34.

⁸⁷ See Omoshoro-Jones (2013) for comprehensive survey of literature and comparative provincial analysis on public infrastructure investment in SA

⁸⁸Evidence provided by Robinson and Torvik (2005) shows that, from a political perspective, it is more to practical to construct new infrastructure rather than improve the quality of existing. As a result, politicians are more inclined to focus on implementing new infrastructure projects regardless of the possibility that these new projects are not cost-effective and inefficient instead of improving the quality/service of existing projects. Often, there is strong likelihood of this perverse incentive occurring, if the existing infrastructure projects were initiated by a previous political regime (Fourie,2007). For instance, Edwards (2013) finds that U.S. federal government intensify its investment on low-value infrastructure projects, which in turn, have a mild influence on economic growth efforts.

Table 34: Estimated Fiscal Allocation for Infrastructure Investment and Maintenance as a Percentage of GDP (Average 2005 - 2015)

Country Group	Investment (%)	Maintenance (%)	Total (%)
Low Income	4.2	3.3	7.5
Lower Middle Income	3.8	2.5	6.3
Upper Middle Income	1.7	1.4	3.1
TOTAL	0.2	2.3	6.5

Source: Fay and Yepes (2003)

Therefore, having identified possible co-operant factors preventing distributional impact of EPWP as a multi-pronged strategy to tackle the prevailing high structural unemployment rate, acute poverty incidence and inequitable distribution of income in South Africa, which could be attributed to weak economic growth, distorted labour market and draconic segregation institutional policies executed in the Apartheid government.

Based on the status quo, although, from an operational perspective, the implementation of EPWP to reduce the high employment rate and poverty gap (by providing variety of training as a means of skill development) might be viewed as an unproductive policy exercise owing to several administrative and technical factors already cited in this paper, albeit, the limited accrued benefits of EPWP initiatives to the poorest of the poor cannot be ignored. Arguably, irrespective of the plethora critique of EPWP schemes as an employment-generating and poverty-reducing public programme with the aim of offering sufficient social protection (i.e. income relief), create useful public assets and employability of the able-bodied working poor through skill development (training or work experience), still, the factual consequence is that the large proportion of the poor (which consists of large proportion of African Blacks) bears the brunt of EPWP's weak performance outcome associated with under-expenditure and slow service delivery.

On the view of the current high unemployment rate and sizeable poverty gap in the Free State province, especially in the rural areas located in the local municipalities/districts, over the years, fiscal allocation to upscale EPWP schemes have increased, yet, at both provincial and municipal levels, "how" to optimise the use of the available financial resources to enhance provincial economic growth, and also create an income-generating jobs with longer duration for the unemployed poor remains elusive. Hence, a relevant policy questions are: Based on the empirical and theoretical evidence that high investment in infrastructure stimulates economic growth and alleviates poverty, among the array of EPWP sectors, which sub-sectors should provincial government direct its infrastructure investments? Second, to revive provincial growth and ameliorate the persistent high poverty incidence, which geographical location should policy makers prioritise to effective policy outcome using EPWP schemes? Third, what type of best-practice EPWP initiatives can the provincial government emulate to absorb large amount of labour input? Put differently, which EPWP initiatives can increase labour intensity work method in Free State?

To augment the results of the extensive quantitative analysis on the performance of EPWP initiatives at the national, provincial and municipal spheres of government, this section provides possible answers to highlighted policy questions by drawing largely from the study of NDPW (2012a) that examines the degree of labour intensity generated by EPWP initiatives, with a specific focus on majority of provincial roads networks in South Africa.⁸⁹ All analysis are based on available EPWP performance data in the MIS database for the financial year of 2010/2011.

⁸⁹ To avoid repetitive analytical evaluations in the study commissioned by National Department of Public Works (referred to as NDPW, 2012a), despite the use of similar data, our analysis differs since the performance of EPWP infrastructure projects in the Free State province remain the focal point.

6.2.1. Analyzing Components of EPWP Infrastructure Sector: Work Types

[Insert Table 37 here]

For the purpose of an exploratory analysis on EPWP's investment on infrastructure projects in Free State province, Table 37 (see Appendix) provides the analytical disaggregation of the different labour-intensive projects that constitutes the Infrastructure sectors for the financial year of 2010/2011. A notable inference affirmed that out of the seven (7) labour-intensive components of the Infrastructure sector, surprisingly, EPWP investments in Waste Management projects has the highest labour intensity rate (38.5%), followed by Electricity (23.1%). Although EPWP's Roads projects yield a fairly low labour intensity of about 11.1 percent, in comparison to larger share of about 30 percent - 50 percent LI achieved in similar road projects elsewhere in Africa, for example, in Kenya and Botswana (see McCord et al., 2009). Even so, in terms of the number of full time jobs created in a year, Roads projects generated largest employment opportunities of about 57 percent (46,089 FTEs) with a lower cost of R139,509 to create job for one beneficiary, in comparison to high cost per FTE observed in Buildings (R641,890) and Stormwater (R599,174) projects. In addition to low cost per FTE and significant use of labour inputs (labour intensity) to attracts ample proportion of unemployed or working age poor, according to the analysis in Table 37, Roads projects had the longest work duration of 3.9 months (mean duration estimates). This finding on ample job creation and poverty reduction effects of road infrastructures is consistent empirical evidence in extant literature (see Canning and Bennatan, 1999; Romp et al., 2005). Typically in developing countries, road projects have been found to generate sufficient returns on investment.⁹⁰

Table 35: Employment Generated Across Provinces by Various EPWP Road Works Projects (Infrastructure Sector): 2010/2011 Period.

Province	Number of Projects			Average FTE per Project			Average work opportunity per project			
	Construction	Maintenance	Total	Construction	Maintenance	All	Construction	Maintenance	All	Average Employment (months)
EC	146	26	172	7.3	338.5	57.4	37	986	181	3.8
FS	58	59	117	13.5	26.0	19.8	45	37	41	5.8
GT	85	21	106	47.3	89.7	55.7	109	173	122	5.5
KZN	88	29	117	33.7	555.2	162.9	120	1573	480	4.1
LIM	105	40	145	8.6	37.2	16.5	32	246	91	2.2
MP	95	128	223	8.7	15.4	12.5	21	37	30	5
NC	41	37	78	5.5	7.9	6.6	53	50	51	1.6
NW	52	17	69	10.0	23.1	13.2	48	143	71	2.2
WC	114	121	235	10.9	8.9	9.9	44	33	39	3.1
Total	784	478	1,262	16	70	37.0	55	209	113	3.9

Extracted from NDPW (2012a: 23), Data source: EPWP MIS database 2010/11 financial year.

Furthermore, a cross-provincial analysis in Table 35 reveals that road projects based on (preventive) maintenance works generates considerable more temporary job opportunities for

⁹⁰ For example see the studies of Cohen, Freiling and Robinson (2013), Pereira and Roca, 1999 for Spain; Li (2005) for China; Briceño-Garmendia, Smit and Shafik (2004) for World Bank infrastructure projects from 1960-2000; World Bank (1994) for all projects funded during 1983 to 1992.

EPWP beneficiaries (209) than construction projects (55) at a lower investment cost. In 2010/11, disaggregate EPWP infrastructure projects across provinces shows that about 75 percent of employment is created through routine maintenance works (NDPW, 2012a:233). A closer look at EPWP infrastructure projects, shows that investments on infrastructure maintenance works generated more full time job opportunities (26 FTEs) to EPWP beneficiaries for an entire year, relatively twice the size of jobs created in construction works (some 13.5 FTEs). On the contrary, the amount temporary jobs are created in construction works (45) was slightly more than the work opportunities offered to 35 unemployed /working age poor. Further results on duration of employment in infrastructure projects for Free State was roughly 6 months.⁹¹ These deductions affirmed that EPWP investments in infrastructure maintenance works produce ample positive externalities than construction works. In general, the performance of the Infrastructure sector in FS is dismally poor compared to the significantly large number temporary jobs created via infrastructure maintenance projects in provinces such as KZN (1,573), Eastern Cape (986) and Limpopo (246).

6.2.2. EPWP Infrastructure Projects by Province: Road Construction vs. Maintenance

[Insert Table 38 here]

In fact, analysed data results presented in Tables 38 (see Appendix) reinforced the sizeable magnitudinal and positive effects of intensifying infrastructure investments on road maintenance works than constructions projects. In particular, tabulated results affirmed that provinces such as KZN and EC with similar types of lengthman road maintenance infrastructure projects (i.e. Zibambele-type projects) generate half of the total employment created by EPWP infrastructure projects during 2010/11, in particular, roads projects implemented in KZN and EC provinces employed about 19,064 and 9,873 beneficiaries in a full time EPWP jobs respectively, equivalent to 41 percent and 21 percent of total FTEs created during 2010/11 financial year. Whilst other provinces such as Free State (2,318 FTEs), Western Cape (2,318 FTEs) and Limpopo (2,392 FTEs) equivalent to about 5% of total full time jobs created in a year. Albeit, Gauteng, North West and Northern Cape are worse off by generating about 1% full time jobs as a percentage of total FTEs created. If the numbers of temporary jobs created are considered, on average, KZN and Eastern Cape provinces are leading by providing employing about 56,216 and 31,054 beneficiaries respectively, whilst Free State only employed 4,801 workers in temporary EPWP jobs during the period under review. In particular, on aggregate, routine road maintenance projects created about 79 percent job opportunities relative to 21 percent opportunities created in construction road works during 2010/11 financial period.

In response to the formulated first policy questions, from the data in Table 38, it is clear that provincial government expenditure on EPWP projects in road maintenance works is not only cost-effective (low cost per job created) but generates relatively large labour intensity (28.3) and create more full time jobs (1,536 FTEs) twice the size of jobs created in executed construction projects (782FTEs) with low labour intensity of 3.5. Noticeably, Free State have a high cost of creating one full time jobs (about R286,103) after North West (R452,527) and Western Cape (R434,122) compared to provinces with lower cost of job creation such as Gauteng (R147,926), KZN (R79,442) and Limpopo (R96,072).

⁹¹This inference is relative similar to analytical results on EPWP projects as documented in Tables 35 for EPWP Phase 2 projects. But the difference is that only implemented projects in the Environment and Culture sector and Social sectors have high estimated mean employment duration that ranges from 5 – 7.5 months.

Interestingly, another relevant deduction from Table 38, is that provinces with Zibambele-type infrastructure projects generate large number of jobs, use more labour-intensive techniques, which implies, the employment of large number of unemployed/working age poor), in effect, reduce poverty incidence (via wage transfers) and effectively utilise their fiscal allocations by creating fairly sustainable jobs at a lower cost. This finding with the persistent inference that the overall performance of EPWP initiatives in Free State suggests low labour intensity due to the use of conventional construction techniques rather than more labour input as factor of production to absorb considerable proportion of the unemployed poor. The indulgence of such practice, could perpetually undermine the benefit of EPWP initiatives in Free State, as well as, erode the influence of an increasing infrastructure investment on economic growth and labour market absorption rate.

Based on concrete evidence, to amplify the impact of EPWP Infrastructure projects in FS province including additional infrastructure investment (or EPWP incentives), the provincial government needs to intensify (and upscale) routine road maintenance projects than constructing of new assets to generate more job opportunities per annum for the unemployed poor (as full time or transient employment)

6.2.3. EPWP Road Network Projects by Province: Urban vs Rural Roads

[Insert Table 39 here]

Besides, identifying the most appropriate EPWP infrastructure projects that could have a significant influence on job creation, poverty gap and income inequality in Free State, the postulated second policy question requires explicit indication on the most suitable geographical location (i.e. urban or rural) where EPWP projects will have a far reaching positive influence. In this context, evaluation results in Table 39, provides mixed results, foremost, chunk of infrastructure investment on EPWP projects was concentrated in the rural areas (R3.7billion, equivalent to 60% of total expenditure) than the urban area (R2.5 billion, equivalent to 40% of total expenditure) during 2010/11 financial period, thus validating the national government's commitment to rural development and revitalisation programme. Nonetheless, while infrastructure road projects in urban areas, on aggregate, provided full time jobs for some 22, 855 beneficiaries (57% of total FTEs), on the contrary, roads projects in the rural area generated 17,468 full time employment opportunities (43% of total FTE).

Focusing on Free State, from Table 39, large portion of expenditure on EPWP roads work projects are spent on construction works in the urban areas (R483 million), the opposite is observed in the rural areas, where sizeable infrastructure expenditure are diverted towards maintenance road work projects (R116 million). Most importantly, road construction projects in the urban areas in Free State province offered full time employment in a year, to some 652 beneficiaries at a significant cost of R483 million, whilst, road maintenance projects generated relatively less number of full time jobs to 403 unemployed poor at a lower cost of R23 million. Equally, EPWP infrastructure expenditure of R116 million generated some 1,111 full time jobs for participants in the rural areas through road maintenance projects, in contrast, an expenditure of R39 million on road construction works in the rural area employed only 130 beneficiaries in a full time job for 2010/11 financial year. By interpretation, first, Free State provincial government implementing EPWP projects (especially by constructing new roads) more on urban areas than rural areas, where poverty and unemployment is acutely prevalent, physical infrastructure assets is scarce and quality service delivery is needed. Second, Free State government spent large amount of EPWP fiscal allocations on road construction projects (about five times) more than rural areas (i.e. grass roots), which are the coal-face of service delivery, and yet, maintenance road projects executed in

the rural areas generated bulk of employment opportunities to EPWP participants in spite of smaller fiscal allocation.

This finding is consistent with the estimated results in Tables 32 and 33, confirming that large portion of EPWP projects (roughly 70 percent) implemented in Free State from 2004 up till now, are concentrated in Mangaung metropolitan municipality, albeit, with severely low labour intensity. Meanwhile, other municipalities with local districts implement very few labour-intensive projects. This implies that, the evidence of disproportionate distribution of infrastructure projects (especially road construction projects) that favours the urban areas than the rural areas, effectively, widens existing poverty gap by exacerbating poverty severity amongst the large proportion of unemployed households (constituting of mainly the African Black), and makes no dent on current high unemployment rate. Also, this inference provides support for the finding that benefits of EPWP initiatives are severely limited in Free State province, compared to provinces such as KwaZulu-Natal, Mpumalanga and Limpopo, where labour-intensive infrastructure projects are implemented in deep rural areas.

Having, proven underscored the imperativeness for policy makers in the Free State to reprioritise EPWP incentives and public investments towards intensification of maintenance road works projects and rural areas, specifically in local municipalities and districts, in addition, it is important to further disaggregate the performance of EPWP road work projects in terms of executing large or small projects. In other words, does prolific implementation of large labour-intensive road projects generates more positive externalities that stimulate economic growth, reduce poverty rates and raise employment than smaller projects?

On this basis, empirics and economic theory asserts that, in general, large infrastructure projects enhance economic growth by increasing aggregate demand for both skill and unskilled labours, in this way, the high labour absorption rate of unskilled labour simultaneously improve general welfare by increasing household income, and reducing both poverty and unemployment rate, while total factor productivity is positively stimulated indirectly. In a cross-provincial analysis examining the link between high infrastructure investments, welfare gain and economic growth in SA, Omoshoro-Jones (2013) found prolific implementation of too many small projects with insignificant effect on economic growth, high employment and poverty rates in FS province. Also, he finds that many provincial departments in Free State, apart from lack of capacity to monitor these projects, and gross under-expenditure, the completion of infrastructure projects are often delayed owing to non-alignment of project funding outside the MTEF periods to benefit from sufficient fiscal allocations. In addition, lack of capacity to manage these projects lead to substantial backlogs and cost-overruns, indirectly hindering infrastructure development and potential positive externalities associated with the growing increase of government's infrastructure investments in the province.

6.2.4. Analysis of EPWP Road Network Projects by Provinces: Large vs. Small Projects

[Insert Table 40 here]

Data in Table 40 shows that during 2010/11 financial year, majority of large EPWP road work projects was construction of new roads in three main provinces, viz: KwaZulu-Natal (20 projects), Gauteng and Western Cape implemented 15 projects respectively. Whereas, had only 5 large projects. On the contrary, prolific implementation of small projects (in both construction and maintenance road works) is evident across all provinces. In Free State, out of the 111 EPWP small projects created, about 58 projects are based on routine road maintenance works, whilst the 53

projects are road construction works. Results shows that some 1,514 beneficiaries were employed in a full time jobs in road maintenance projects with lower costs of R140 million, and generates relatively high labour intensity of 28.3. In contrast, EPWP road construction projects in Free State province only offered full time employment to some 479 beneficiaries, with a higher cost of R193 million with an extremely lower labour intensity of 5.3 percent. This finding is consistent with earlier empirical results in this study suggesting that EPWP infrastructure projects in Free State are predominantly capital intensive linked to low labour intensity, which indicates low labour inputs because unemployed or working age poor are explicitly excluded from active participation in EPWP initiatives (confirmed by current high unemployment rate of 39%), limited impact on poverty rate (little or no income relief), high project costs and diminutive wage transferred to beneficiaries (evidenced by the chronic under-spending problem)

6.2.5. Analysis of EPWP Road Network Projects: Provincial vs. Municipal Roads Projects

[Insert Table 41 here]

Finally, a comparative assessment of the extent of infrastructure projects created in urban areas vis-a-vis those in rural areas as documented in Table 41 revealed that road network projects across various provinces in SA, are relatively twice the size of municipal infrastructure projects. In fact, about 3,337 road construction projects was initiated during 2010/11 periods compared to the far lower 410 road maintenance projects. Cross-provincial analysis confirmed that local municipalities implement fewer EPWP road infrastructure projects (69 routine road maintenance and 500 road construction projects) compared to the Metros that created about 341 road maintenance and 2,947 construction projects). Evaluation results in NDPW (2012a) suggest high expenditure of roughly 12 times on road construction projects than maintenance projects. Then again, across provinces, road maintenance projects established in provinces with acute rural poverty rate such as Eastern Cape and Kwazulu-Natal generated substantial labour intensity of 92.8 and 74.3,⁹² whereas, Limpopo and Free State had labour intensity of 33.3 and 28.3 generated from road maintenance projects.

A closer look at Free State data in Table 41, shows that provincial government put less emphasis on creating road maintenance work projects in municipalities (especially local districts) , but focused more urban infrastructural development given the expenditure of R140 million on 58 road maintenance projects that generated 28.3 LI, and no fiscal allocation for infrastructure maintenance work in the local municipalities. This is consistent with the empirical results in this study (refer to Tables 32 and 33). Nonetheless, this inference is attributable to several factors. For example, the analysed EPWP data in Table 41 shows that Free State government have intensified infrastructure spending (R518 million) on constructing new roads in municipalities (and local districts), rather than maintenance presumably most rural areas in the province do not have well-developed road networks (but used mainly foot-paths). Still, despite the increase in infrastructure spending in the rural area on road construction projects, very low labour intensity of 3.3 was generated. By implication, the implemented construction projects lacked proper monitoring and evaluation by public implementing bodies as conventional techniques are used, instead of labour-intensive work method as enacted in EPWP framework and guideline document.

Conclusively, the erroneous allocation of infrastructure investments and the accompanied high expenditure on urban projects, rather than rural projects has an insignificant influence on Free State's provincial economic growth and stability. In particular, violent protests for quality service delivery and infrastructure assets could occur more frequently in local municipalities (consisting of

⁹² Surprisingly, Zibambele EPWP-type model (lengthman system) are presently been replicated in Eastern Cape and other provinces (see NDPW, 2012a:13).

rural areas). As a turn-around strategy, it is imperative for Free State government to increase its infrastructure expenditure on labour intensive projects (especially on preventive and routine road maintenance works) in the rural areas (i.e. local districts), as well as, other local municipalities that constitutes large proportion of unemployed or working age poor, for the growing public spending on EPWP to have positive influence on economic growth, poverty incidence, skill development and unemployment rate.

Box 1: Operational Framework of GundoLashu (GL) and Zibambele EPWP Initiatives

Both Gundo Lashu and Zibambele are infrastructure-based expanded public works programme implemented in Limpopo and KwaZulu-Natal (KZN) provinces, but with different strategies in terms of funding, targeting criteria and operational design. These programmes are the earliest types of PWP in South Africa. Since their inception in the 2000s, Gundo Lashu and Zibambele are the most widely researched EPWP programmes in many regional and international literature (see, e.g., McCord and Wilikinson, 2009; McCutcheon and Farrington, 2009; McCord et al., 2008a; McCord, et al., 2008b; McCord, 2007b amongst others).

Even though, both EPWP initiatives are widely recognised, Zibambele EPWP initiative implemented in deep rural areas of KZN is considered as a best-practice PWP with the potential to generate far reaching positive externalities in response to high unemployment and poverty rates as a result of its funding strategies (McCord and Farrington, 2008a), explicit targeting criteria to attract the most impoverished and female-headed households (see McCord and van Seventer, 2004; McCord et al., 2009) and specific objectives designed on maintenance of infrastructure road networks that yields significant labour intensity (see, e.g., NDPW, 2012a).

By design, Gundo Lashu generate employment opportunities through the use of labour-intensive work method such as construction of drainage structures and reshaping, gravelling and low-cost sealing of rural roads with the primary objective of providing good quality, cost-effective rural roads. This programmes solely focused on developing small contractors in the rurals with a secondary objective of stimulating self-employment in entrepreneurial activities (i.e. creation of SMMEs). Emerging contractors were given extensive formal training and a series of practical on-site training projects in labour-intensive road works over 21 months in the contractor development programme (CDP), and obtained accredited Construction Education and Training Authority (CETA) registered learnership. From 2003 to 2009, total expenditure of R 293 million was spent on road works projects during, with almost R 42 million recorded as wages expenditure. Over the total duration of the programme, expenditure on wages constituted 18 percent of the construction costs. When including the costs of consultants, the wage component amounted to 14 percent. The programme improved more than 370 km of rural roads up to RAL standards (207 km of sealed roads and 170 km of gravel roads), as well as, generated 1.3 million workdays of employment (5,600 FTEs) of which 47% were provided to women and 44% to youth (see DPW, 2012).

In contrast, the Zibambele programmes offered annually renewable contracts to selected households not individuals using a recurrent budget, with each contract requires a maximum of 60 hours of work per month to maintain a specific length of road. Due to the prevalence of acute poverty amongst women, and higher proportion of female-headed households in the country, the selection criteria entails (i) the poorest of the poor in a community identify by the council elders, and (ii) female-headed households. To improve the livelihoods of participant after exiting the programme, households are organised into savings clubs to encourage savings. A typical work contract include activities such as maintaining the road drainage system, ensuring good roadside visibility, maintaining the road surface in good condition and clearing road shoulders and reserves of litter and weeds. In 2010/11, the total annual expenditure in the Zibambele programme was R 225 million, of which 206.9 million was spent on wages, which in turn, generating about 45,000

7. A Summative Discourse of Findings

The findings of the extensive analytical evaluation in paper flows from general (national EPWP) to specific (i.e. focusing on Free State).

7.1. General Findings on EPWP Initiatives at National Level (Cross-Provincial Analysis)

After a critical evaluation of the performance of EPWP during the past decade, through phase 1 (2004/05 - 2009/10) and phase 2 (2010/11-2013/14), our analysis calls attention to an overwhelming evidence of persistent low labour intensity and high cost of creating jobs (especially in the Infrastructure sector), which is an indicative of technical and administrative constraints in terms of adequate managerial skills in critical areas such as project management, financial management, supply chain management and technical support for public implementing bodies of expanded public works programmes at national level.

Particularly, by employing the constructed evaluating indicators in this study to examine the meta-data on EPWP projects at the national level, results shows that: First, the current EPWP design and framework creates sizeable negative externalities or dead weight loss. Secondly, in terms targeting criteria, the disabled working-age poor are generally marginalised from employment opportunities, thus, indicating the need to re-design EPWP initiatives purposely to incorporate social related programmes that are not physically demanding or labour-intensive in nature. In fact Mothapo (2011) reported an identical finding in his case study on Bushbuckridge municipality in Mpumalanga⁹³. Thirdly, the evidence of low labour intensity across the four main sectors (in most cases, in the Infrastructure sectors), not only reflect non-adherence to EPWP guidelines and legislation by contractors, but also weakens the objective of EPWP to reduce unemployment by employing both unskilled working age poor.

Fourthly, although the Infrastructure sector is central to the conceptualisation of EPWP, results shows that established EPWP projects habitually have large operational costs not concomitant to jobs created compared to lower costs and sizeable job opportunities generated in other sectors (mainly in the Social and Non-State sectors). Fifth, even though Infrastructure sectors often generates the highest number of job opportunities, still, employment duration remains extremely short (maximum of 2 months) in contrast, to the slightly long duration of about 4 months in other sectors (e.g. Social sector). Resultantly, this short employment duration prevent adequate skill development through work experience or informal/formal trainings. On this basis, there is a little evidence to support the view that EPWP equipped beneficiaries with skills that enhance self-employment or employability in the labour market⁹⁴. Undeniably, the NDPW shared this worrying concern on the deficiency of EPWP training – the key channel for skill development by noting that:

⁹³ Several works of McCord (*ibid*), McCutcheon (*ibid*) and Meth (*ibid*) including Heradien (2013) and Gehassi-Razavi (2012) in-depth studies strongly emphasised the priority to re-design EPWP framework to become more inclusive.

⁹⁴ This findings is consistent with the inference of: Sultan an Slater (2005), Ndoto and Macun (2005), McCord and Farrington (2008a), McCord and Wilkinson (2009a), McCord and Meth (2007); McCutcheon and Parkins (2009). Case studies focusing on EPWP programmes adopted in different provinces and municipalities in South Africa reported similar findings, for example Moyo (2013) for Modimola Integrated (infrastructure) programme in North West, Mfusi and Govender (2014) for KwaZulu-Natal, Khanyinle (2008) for Zulu land District and Ghiassi-Razavi (2012) for road construction projects in Gauteng.

“...job creation without skills development, upgrading and training, does not lend itself to sustainable employment and will have no long-term economic impact on the lives of the unemployed...” (NDPW, 2004)

Obviously, the confirmation of short employment duration of EPWP projects weakens both the sustainability of the programme and employability of beneficiaries after exiting the programmes. In other words, the likelihood of participants becoming unemployed and worse off financially is high leading to the insignificant impact of EPWP on the existing chronic unemployment and poverty rate at national and household level. This inference is in line with Sultan et al.(2005) and Ndoto et al.(2005).

Further empirical results shows that the main benefits of EPWP initiatives is consumption smoothening, rather than asset accumulation and/or graduation out of poverty apart from the temporary and steady wage payment inherent to these programmes. Even so, this wage benefit as a component of social protection, is linked to the duration of executed projects. In this context, the likelihood of EPWP participants experiencing long unemployment spell and abject poverty conditions after exiting EPWP programmes is highly plausible. In particular, in there is a little evidence that physical assets created by EPWP benefits the unemployed poor in the same spirit with Haddad and Adato (2001:9). In fact, this deduction is supported by the persistent low labour intensity, which could be attributed to the common perception (by contractors and engineers) about the poor quality of labour intensive work method to create poor infrastructure assets with tangible public value (see, e.g., NDPW, 2014b; McCutcheon, 2014; McCord and Meth, 2007).

Conversely, another evidence from the analysed meta-data on EPWP at national level, indicates that provinces with Zibambe-type EPWP infrastructure programmes generate large number of (both full time and transient) jobs and reduces poverty gap than other provinces (e.g. KwaZulu Natal and Mpumalanga) owing to the explicit poverty selection criteria, recurrent funding strategy and the long-nature of these programmes.⁹⁵ Adding to this, results of the analysed data strongly support the notion of lack of private sector participation via public-private-partnership (PPP) network to stimulate job creation, provides administrative expertise to drive implemented projects and promote transfer of technical skills.

Finally, on technicality, this paper argued that it is erroneous to utilise the “net work opportunities created” as evaluation indicator when evaluating the actual performance of EPWP initiatives as widely practiced by the National Department of Public Works, public implementing bodies and policy makers, given the tendency to over-estimate achievement expanded public works programmes by ignoring alternative evaluation indicators (e.g. labour intensity, employment duration, effectiveness of wage transferred to beneficiaries, daily wage rate relative to ongoing market wage rate, and so on) that are noteworthy as constructed in this study and other related empirical works. (for example, see McCord et al., 2009a, 2007; Meth, 2011; NDPW, 2012a).

⁹⁵ McCord maintained that the sustained poverty reduction potential and long-term benefit transferred to beneficiaries common to Zibambe-type infrastructure projects is associated with the stability or sustainability of these projects (*Ibid*). Notably the *stabilisation* benefits of PWP initiative refers to its social protection components safety net or insurance function, by providing stream if income during crisis, which allows consumption smoothening and avoid distress sale of asset.

7.2. Specific Findings on the Performance of EPWP Initiatives in Free State Province - Cross- Municipal and District Analysis

Generally, the provincial governments are tasked with the rapid expansion of EPWP initiatives by re-orientating fiscal expenditure and EPWP incentives (i.e. PIG and MIG) towards labour intensive projects to actively reduce unemployment directly by absorbing large chunk of unskilled labour supplied by mostly the unemployed poor; provide income relief (minimum wage payment) to improve general welfare and create useful assets, but, the **evidence of importunate low labour intensity rate at the provincial (departments), municipal and local district levels in Free State strongly affirmed the use of mainly conventional techniques in many (if not all) EPWP projects** in the province documented in Tables 26 to 33. Even so, **the use of conventional construction techniques violate the outlined pre-requisite conditions stipulated in the EPWP logFrame (2005), the Code of Good Practice for SPWPs and the DoRA.** It is worth mentioning that, the 'business as usual' practice of using capital intensive work approach in EPWP initiatives diminish the national government efforts to reduce unemployment and alleviate poverty by attracting both the unskilled and poor unemployed working age groups into active employment.

Besides, the extensive evaluation analysis of EPWP projects created over the past ten years (both Phase 1 and Phase 2) presented in Tables 26 to 33 confirmed the following findings. First, **evidence from this study finds evidence of serious lack of capacity to spend (under-expenditure) to create jobs and public assets.** This is common to all public implementing bodies/departments at provincial, municipal and district levels. For instance, budget expenditure on EPWP projects, on average, was below 68 percent in the Infrastructure sectors (made up of core provincial departments, viz: Public Works, DPRT, Education, DETEA and Health). However, the Social and Environment sectors are the best performing sectors in terms of budget spending relative to created jobs. In fact, within the Infrastructure sector, significant provincial departments such as DETEA, Health and Social development performed poorly by spending about 55 percent of allocated budget on EPWP projects. Interestingly, these provincial departments had better performance in the Social and Environment and Culture sectors. Refer to Table 26.

Second, analysed results validates that, in most cases - across all sectoral components, provincial departments and sub-national spheres of government, **the disabled unemployed poor are generally marginalised from participating in EPWP projects** due to low employment rate less than 0.8 percent (contrary to the recommended 2 percent stipulated in programme's logFrame, whilst the target criteria for youths and women as prescribed by NDPW are met. Refer to Table 2 for recommended employment targets. Notably, the 2 percent employment target for disabled was only achieved in Phase 1, by Infrastructure sector.

Thirdly, results suggest **disproportionate implementation of EPWP projects in favour of only the Metro (i.e. Mangaung) and few local municipalities.** For example, among the five (5) district municipalities, bulk of EPWP projects (including infrastructure projects) are implemented in Mangaung, equivalent to about 88 percent during Phase 1, and 55 percent in the recently completed Phase 2 of EPWP. Hypothetically, this type of unevenly distributed projects leads to high inter-municipal migration, since unemployed workers in search for minimum wage paying jobs migrate to the Mangaung. This type of employment opportunity induced migration may create direct and indirect adverse effect, for example, over population in Mangaung can directly constrain provincial output growth, exert immense pressure on the provincial fiscus owing to service delivery and provision of additional assets, whereas, possible indirect effect could be associated with an increase in crime and social unrest due to insufficient jobs and/or quality service delivery

in fact, in spite of the slight improvement in projects distribution in Phase 2, this distribution was insignificant since sizeable number of EPWP projects were implemented in only two district municipality (i.e. the Mangaung Metro) and four local municipalities. Specifically, in Table 32, out of the 72 EPWP projects created during phase 2 of EPWP, 40 projects were implemented in Mangaung, while 24 projects were implemented in Xhariep, while, Fezile Dabi, Thabo-Mofutsanyane and Lejweleputswa only benefitted from 1, 1, and 6 projects respectively. Equally, **across the 19 local municipalities, out of 133 implemented projects during phase 2, only 4 local districts account for about 52 percent of all projects!**, this includes: Kopanong (19), Setsoto (16), Maljthabeng (12) and Moqhaka (11).

Fourthly, apart from uneven distribution of EPWP projects in favour of a single urban area (Mangaung Metro) in the past decade, the fiscal allocation trend firmly suggests a unbalanced allocation of EPWP budgets to districts than local municipalities, where poverty and unemployment rates are prevalent in the rural areas. In particular, about 65 percent of infrastructure budget was allocated to Mangaung, even so, lack of capacity to spend (i.e. under-expenditure) remains a widespread problem in the entire province.

Furthermore, analytical results confirmed a **steady decline in the length/duration of job opportunities created in Free State through implemented EPWP projects between 2004 and 2014**. Looking at the analysed meta-data presented in Tables 27 - 29 (representing EPWP performance in phase 1 across sectoral components/provincial departments and local municipalities, as well as, results documented in Tables 31- 33 on the recently phase 2 programme in March 2014. First, evidence shows that, at sectoral level, the Social sectors created employment opportunities for beneficiaries, on aggregate, about four times the number of jobs generated in the Infrastructure sector. Second, across provincial departments, an in-depth analysis revealed **extremely short employment duration between 0.9 months and 3.2 months** in some provincial departments, for instance, Agriculture, DETEA and Health have. Meanwhile, long employment opportunities were generated by provincial departments such as Social Development (7months), Education(8 months) and Sports, Arts, Culture and Recreation (10.73 months).

By interpretation, the inference of long employment duration suggests, a well designed and properly supervised EPWP initiatives, can reduce poverty gap, unemployment rate and enhance skill development in Free State, nonetheless, **the evidence of low labour intensity and high cost to create one job opportunity will prevent the positive distributive effects of EPWP initiatives in Free State province**. This insignificant impact of EPWP initiatives is worsened by apparent lack of sense of project-ownership, inadequate supervisory and monitoring capacity including deficient technical skills of EPWP implementing officials (e.g. project managers, project supervisors and contractors).

Third, taking into consideration the life span of projects implemented at districts and local municipalities, during phase 1 of EPWP (refer to Table 27), on average, **projects lasted for about 5 months in municipalities such as Maluti-a-Phofung and Mangaung, whilst Setsoto has the longest work duration of 7 months, whilst, projects in other municipalities (e.g. Dhlabeng, Maljthabeng and Naledi) lasted for about 3 months on average**. Nonetheless, during phase 2 (see Table 33), a considerable fall in duration of projects completion is evident across both municipalities and local districts, where EPWP projects only lasted for about minimum of 2 months (on average) or the longest period of 3 months (e.g. Tokologo, Metsimaholo, Nketona and Nala).

By weighing the short duration of EPWP projects in the Free State against the programme's core objectives to directly alleviate poverty (by enhancing skill development), reduce unemployment, and indirectly create public assets, and stimulate provincial economic growth, on this basis, there

is a little evidence that EPWP initiatives responds to socioeconomic challenges in the Province evidenced by widening poverty gap and the prevailing highest rate of unemployment at 34.6 (official definition or 40.9 percent by expanded definition) in SA. In other words, potential of EPWP schemes to provide both transient and long-term benefits to participants in the province, as well as, the sustainability and stability the programme remains severely limited and doubtful.

Moreover, another remarkable finding is that, on aggregate, local municipalities created significant number of job opportunities (i.e. in terms of temporary jobs and full time work – FTE) three times than the five municipal districts combined (see Table 33). This is consistent with the reported in NDPW(2012a). For example, while Mangaung created the largest proportion of job opportunities during both phase 1 and 2 of EPWP timeline, unexpectedly, a local municipality such as Malut-ti-Phofung created about 2,640 temporary jobs and 422 full time job opportunities during the recently completed phase 2 of EPWP, compared to some 1,687 transient and 347 full time jobs created by Mangaung (refer to Table 33). Yet, if the aggregate jobs created by Malut-ti-Phofung (i.e. 2,640 jobs) is excluded from the net work opportunities of 6,595 created by the end of Phase 2, the poor performance of EPWP initiatives becomes evident in the remaining 18 local districts, in this context, the number of jobs created is obviously insufficient to address soaring poverty and unemployment rate in the province. In fact, similar inference holds true for Mangaung and other four districts.

Also, considering the average cost to create job opportunities, our results proves that at both sectoral (i.e. provincial departments) and municipal levels, **it is expensive to create jobs per beneficiaries in district/local municipalities with characteristically low employment-creating potential**. Indeed, this inference is common amongst local municipalities owing to high operational cost, average project costs and higher daily wage rate to attract the unemployed poor. For example, in Table 29, Naledi created one full time job using R180, 344, in contrast, Mangaung created one job per beneficiary at lower cost of R11,821 during 2013/14. Evidently, the observed high operational costs of EPWP projects at local municipalities could be associated generous daily wages that significantly above the recommended minimum wage of R50 during Phase 1. For instance, Naledi offered a daily wage of R72 to EPWP beneficiaries whilst the average daily wage rate in other municipalities was R65 (refer to Table 29).

Finally, the analysis of the final evidence focused on the **self-targeting impact of Free State’s EPWP programme based on principle of “less eligibility”**. That is, is there any evidence of *dead weight loss* linked to the variability of daily wage rates paid to beneficiaries in the province by setting daily wage rate below or at the level of market wage rate to explicitly attract only unemployed or working age poor?

As cited in the literature, several evaluation studies have reported that generous (high) daily wage rate paid to PWP beneficiaries above the ongoing market wage rate induce considerable dead weight loss and increase dependency on these programmes with two major consequences; high daily wage rate: **(i)** erodes the effectiveness of the public works programmes, exacerbates job rationing (as selection criteria) due excess demand for available work opportunities, and **(ii)** diminish the poverty-reduction effect of PWP on targeted beneficiaries since the able bodied unemployed/ working age poor are explicitly excluded from participation due to intense competition or lobbying for PWP jobs by workers in less predictable paying or casual jobs.⁹⁶

⁹⁶The adverse effects (i.e. dead weight loss) created by high daily wages rate paid to PWP participants have been reported by, e.g., Hough and Prozesky (2013) on Working for Water in Cape Town; ESAU(2004) on Zibambele EPWP programme in KwaZulu-Natal; Subbarao (1997) for PWPs in Philippines, Kenya, Botswana and Tanzania, and Datts and Ravallion (1992) for Maharashtra Employment Guarantee Scheme in India.

Against this backdrop, in comparison to the homogeneous daily wage rate of R50 paid to beneficiaries in the earlier phase of EPWP projects (2004-2009), the analysed results from Phase 2 depicts non-uniformity of daily wages, which is a co-operand factor for a distorted labour market and high intra-provincial migration. A glance at Table 32, shows that amongst the district and local municipalities, with exception of Lejweputswa that paid very low daily wages of R30, the daily wage rates paid to workers in other four district municipalities which includes the Mangaung Metro, on average, was above R87, in comparison to, the average market wage of R76 with Mangaung Metro and Thabo Mofutsanyane paying the highest wage of R91. In contrast, in spite of the close correlation in daily wage rate paid to workers across the nineteen (19) local municipalities, yet, daily wage rate in these municipalities are more generous (considerably high) than that of the five (5) district municipalities.

By interpretation, the observed higher daily wage rates across local municipalities in Table 33, may discourage intra-provincial over population and intra-provincial migration of unemployed poor searching for jobs in the Metro to some extent, yet, the evidence of daily wage rate greater than the prescribed minimum EPWP of R50, and the estimated ongoing market wage rate unequivocally suggests the amplification of deadweight loss effects (e.g. labour market distort, high job substitution, strict application of job rationing criteria and a growing dependency on EPWP projects without searching for alternative jobs, which in turn, exert upward pressure on provincial fiscus) as predominant negative externalities undermining the increasing fiscal allocation channelled to EPWP initiatives or infrastructure projects.

On one hand, the emergence of intra-municipal migration is highly possible across the local municipalities, as beneficiaries / workers in municipalities with lower daily wage rate (e.g. Fezile Dabi, Mafube, Masiloyana, Metsimaholo, Mantsopa, Tokologo) migrate to municipalities paying higher wage rates on EPWP projects (e.g. Mangaung Metro, Lejweleputswa, Dhlabeng, Nala, Nketona and Maluti-a-Phofung). In addition, the evidence of wage variability and generous wage rate across municipalities in the Free State remains a critical factor preventing the effective performance of EPWP in the province including the insignificant impact of the growing provincial investment in infrastructure projects on economic growth, unemployment rate and poverty incidence, because the targeted unemployed poor are explicitly excluded from participation in the implemented projects as workers in temporary employment elsewhere voluntarily substitute their jobs, and lobbied for steady paying EPWP jobs. On the other hand, the payment of low wages of R50 could be a disincentive for some unemployed poor to actively participate in EPWP projects (in particular in the Infrastructure sector) given the physical demand of tasks involved in lieu of a better social grants without supplying any labour input.

Hitherto, the positive externalities associated with public works programmes remain elusive and unsuccessful to address current socioeconomic challenges in Free State, as a result of *critical institutional weakness* to compelled contractors to adhere to the use of labour-intensive work method or encouraged skill transference to potential contractors (via Contractor Development programmes) on applicability of labour-intensive work method, lack of consistent project site visitation together with political interference on the selection of participants without an inclusive community participation leads to reported episodes of gross nepotism, non-transparency and accountability. **(insert the article of violence in FS due to EPWP works)**

8. Policy Recommendations

To quickly close the gap between policy design and implementation, the following recommendation are put forward to policy makers and executives in the provincial government for thorough consideration:

- *Shift fiscal allocations towards rural developments and Assets Maintenance*

In the light of strong evidence validating disproportionate implementation of projects in favour of the urban area (especially the Mangung Metro) with less attention on other municipalities and local districts, where poverty and unemployment rates are prevalent, and (b) road maintenance works used high labour input (high labour intensive rate), and generate more jobs than constricted works, it is imperative for policy makers to accelerate rural area infrastructure development through routine maintenance work projects, and adopt the Zibambele-type EPWP model for infrastructure projects purposely to directly reduce unemployment rate (skill development), ameliorate poverty incidence (wage transfer), and indirectly boost provincial economic growth and improve the life span of public assets (through routine and preventive maintenance work)

This recommendation is relevant because large proportion of unemployed/ able bodied working age poor are living in [deep] rural areas in the local municipalities, where poverty incidence and unemployment rate remain pervasive. As supported by empirical results, the unemployed poor are yet to benefit from EPWP projects implemented in the province because many of these projects are concentrated in one or two municipalities, with Mangaung metro benefitting the most. For public works programmes to be effective, geographical targeting is a key factor to ensure that these programme reach the poorest areas and poorest people (see Chakwizira, 2010; Clay, 1986), for instance, the targeting criteria of several successful large scaled PWP's explicitly focused on rural areas or most-impooverished locations, e.g. the Trabajar in Argentina, Temporary Employment Programme in Mexico and the EGS in Maharashtra in India - all are widely recognised as successful employment generating programmes for the poorest of the poor (World Bank, 2001, 2003).

Based on the evidence of short employment duration (at most 3 months), low labour intensity created by EPWP projects and scarce implementation of infrastructure and/or EPWP projects in the some district and majority of local municipalities, the unemployed poor in the rural area are yet to benefit implemented projects in Free State. As such, there is an urgent need for policy maker to reach the poorest of the poor in the rural areas who desperately need skill upgrade and access to income to tackle the high unemployment and poverty rate. Municipalities that require immediate attention to promote infrastructure development are⁹⁷: Fezile-Dabi, Letjweleputswa, Thabo-Mofutsanyane, Naledi, Phumelela, Letsemeng, Dhlabeng, Mafube, Mohokare, Tokologo, Ngwathe and Mantsopa.

- *Conduct Quality Impact assessment and Poverty incidence Studies of EPWP projects*

Cited literature underscored the perception that in-depth research not only add value to the credibility of EPWP initiatives, but also contributes to the success of these programmes such as Zibambele in KwaZulu-Natal and Gundo Lashu in Limpopo (see McCord et al. 2004;

⁹⁷ Refer to Tables 32 and 33 for more detail. Selection criteria entails municipalities with implemented projects less than 7.

McCord, 2008a,2008b; NDPW, 2012a; Subbarao, 1997; World Bank, 2001). Therefore, to draw the attention of relevant national government departments (e.g. National department of Public Works, and National Treasury) to upscale EPWP projects in the province, the provincial government need to commissioned the following studies:

1. Cross-sectional and longitudinal surveys,
2. Poverty incidence analysis, and
3. Economic wide impact assessment analysis preferably using computable general equilibrium (CGE) model.

Most importantly, the highlighted quantitative studies are compulsory to clearly identify: the impact of EPWP initiatives and related performance based on effectiveness, stabilisation effects on beneficiaries, the extent of labour intensification, and so on. Particularly, to quantify the 'value-for-money' of EPWP projects, the prescribed studies ideally should focus on examining the: (a) **direct impact** associated with the job creation capacity and income relief provided to beneficiaries, and, (b) **indirect impacts** of implemented programmes, with a specifically assessing: **(i)** the capacity to improve employability of beneficiaries through skill development (i.e. informal or formal training and/or work experience); **(ii)** aggregation of wage rate and wage rate setting in the existing local labour markets; **(iii)** the magnitude of income multipliers (through links with the local economy); and **(iv)** how the creation of infrastructure and community assets influence poverty incidence and job creation.

- *Encourage long-term projects and self-employment by providing access to financial resources and accredited technical trainings*

An effective turn-around strategy to improve skill development entails the extension of projects duration for up to 2 years, as well as, introduce a transparent job rationing criteria to provide useful work experience to beneficiaries by improving their employability in the main stream labour market. Equally, adequate self-employment can be facilitated amongst beneficiaries participating in the Contractors Development programme, if the provincial government (through, e.g. DETEA, Department of Treasury and Public Works) act as a direct link between trained contractors (on labour intensive work method) and financial institutions for easy access to funding /financial resources. In this context, the role of DETEA becomes paramount for SMME development and driving provincial growth.

- *Increase accessibility of EPWP incentive grants to augment fiscal allocations.*

Given the findings of Crosswell et al.(2011:10) on the poor expenditure compliance of Free State province and dispiriting efforts to access additional incentive EPWP grants at both provincial and municipal sphere of governments. Evidently, it is necessary for policy makers in the provincial government and core departments (e.g. Treasury, Public Works and DETEA) to develop concrete administrative strategy through generic workshops to train responsible officials and/or public bodies, on how to apply for the additional EPWP incentive to augment allocated funds for projects. It is worth mentioning that Free State access to the provided incentive is because of the poor performance of EPWP schemes in the province since the accessibility to the incentive grant is based on performance (e.g. numbers of cumulative jobs created in a year), compared to province with high incentive accessibility percentage owed to ample job creation capacities, e.g. KwaZulu-Natal (234%), Limpopo (80%) and Gauteng (80%).

Meanwhile, Free State have accessed about 17 percent of the available EPWP incentive grant by the 3rd quarter of the 2010/11 financial year.

- *Upscale and Consolidate EPWP initiatives and Integrate Operation Hlasela Work as a Parallel Programme into the Provincial Employment-Generating Work Programmes.*

Anecdotal international evidence on improving the influence of public works programmes, its stability effects (social function) sustainability suggest massive expansion of these programmes, especially in local municipalities (rural areas).⁹⁸ Therefore, the Free State government must utilize its autonomy to adopt and actively implement best-practice public works programme to create Zibambele-type infrastructure initiatives using the Kenya's lengthman system, a model widely researched and benchmarked as best practice PWP (see Box 1).⁹⁹ Additionally, based international evidence that many successful large PWPs are incorporated into parallel poverty-reducing and employment creation programmes (e.g. The NREGP in India) or other programmes with training and retraining components linked to skills demanded in different sectors in the mainstream labour market (e.g. Argentina's Jefes and the U.S. New Deal programmes),¹⁰⁰ thus, a greater opportunity to amplify the positive impact of implementing a Zibambele-type EPWP projects through a province's main infrastructure flagship programme such as *Operation Hlasela*. Undoubtedly, the integration of *Operation Hlasela* projects into EPWP road work projects, to a great extent, facilitate creation of more temporary jobs, provide basic skills for the unemployed poor to seek for employment in the local labour market, reduce sale of assets and poverty incidence due to access to regular stream of income.

- *Improve technical skill of Public Implementing bodies and officials.*

To ensure successful outcome of EPWP projects, all project managers and implementing bodies official responsible for public works projects should be encouraged to acquire technical sufficient training on Cost Benefit and Multi-criteria decision analysis including the use of basic CGE models for project appraisal, selection and have a pre-emptive insight of expected returns (or losses) on investment, number of jobs to be created, expected provincial revenues and income transferred to household, as well as, to quantify spillover effects (i.e. forward and backward linkages). In this way, the quality of created public assets are enhanced while the demand of quality service delivery are met, also fruitless expenditure are effectively curbed since only feasible and productive projects are implemented reducing high operational costs and backlogs.

- *Enhance adequate monitoring and evaluation Practice.*

Furthermore, supervision of projects executed by core departments driving economic growth and development in the province such as DETEA, Public Works, CoGTA and Social development should be forcefully monitored to create sufficient jobs, provides training (skill development) and suitable exit-strategies for EPWP participants.

⁹⁸ For example, see, ILO (2007) McCord (2008b), McCord (2007b), Subbarao (1997), World Bank (2001).

⁹⁹ Ibid.

¹⁰⁰ McCord (2008a:28) emphasised that training within Jefes was intended to promote the ability of participants to engage in the open labour market once the economic recession lifted (see Harvey 2007b)

9. Concluding Remarks

This study fills the research gap in existing evaluation studies examine the performance of EPWP initiatives in South Africa since its inception in 2004. By and large, the plethora of empirical results in this study confirmed most of the commonly cited critiques in extant evaluation studies on myriads of EPWP initiatives (at national level) since 2004. Over the past decade, EPWP programmes initiated in provinces such as KwaZulu-Natal (Zibambele) and Limpopo (Gundo Lashu) have enjoyed extensive qualitative and empirical research in extant international literature, even as recent case-studies continue to focus on provinces with emerging successful outcomes, till now, no evaluation studies have attempted to analysed the performance of EPWP schemes in the Free State province or examine the impact of these programmes at provincial and municipal levels.

To make a major contribution to literature, this paper is the first research study that comprehensively evaluate EPWP initiatives since its inception in 2004 to 2014, unlike earlier studies that employed “network opportunities created” to gauge the performance of EPWP projects (see NDPW, 2009a), the analytical technique in this paper closely followed the works of Meth (2011), McCutcheon et al.(2004) and NDPW (2012a), albeit, this study differs considerably by, first, constructing several performance evaluation indicators (e.g. factor intensity of labour, mean estimate of project duration, costs of creating full time jobs in a year, number of generated workdays per year, average market wage rate). Second, by disseminating the performance of EPWP over ten years sample period covering both the first and second phase of EPWP programmes completed in March 2014, with specific focus on performance at sectoral, national, provincial (implementing public bodies) and municipal levels.

To the best of our knowledge, this is the first empirical study to explore the impact of EPWP initiatives from 2004 – 2014 in a cross-sectoral, - provincial, and -municipal analysis. Although, appraisal of EPWP projects at the national level presents a robust comparative benchmark with the Free State province, further microscopic analysis of meta-data on Free State province and local municipalities provides insight into the co-operant factors hampering the macroeconomic distributive impact of EPWP projects (especially within the Infrastructure sector) on socio-economic dynamics in the province.

To close policy design and implementation gap, this study answered the following key questions: What is the performance of Free State province to create temporary jobs, promote skill development and mitigate poverty incidence through EPWP initiatives in comparison to other provinces? Second, what is the extent of labour intensification of implemented projects in the province to offer both direct (create jobs, improve skills) and indirect benefits (stimulate economic growth and enhance asset creation)? Put differently, are EPWP projects in the province satisfying labour intensive requirements? Third, what are the underlying factors choking the positive externalities of an increasing fiscal allocation to EPWP initiatives without concomitant increase (temporary and full time) job creation and/or reduction in poverty incidence to improve the general livelihoods in the province? Fourth, what are the feasible and practical policy strategies to amplify the gains of EPWP initiatives in the province to enhance economic growth, reduce the prevailing unemployment and poverty rates?

By drawing inference from the analysed meta-data, results confirmed that the poor performance of EPWP schemes in Free State province is exacerbated by variability in daily

wage rates, low labour intensity – an indicative of diminutive wage transferred to beneficiaries, and high operation costs per FTE across-the-board. However, the observed weak performance from the provincial departments such as DETEA and Public Works is unsettling, since the key objective of this provincial department such as DETEA, is to initiate cost effective projects that stimulates provincial economic growth by facilitating the establishment of small business enterprises (SMMEs) and infrastructural-related projects. In fact, the evidence of severely low labour intensity in core departments such as DETEA, Public Works, Health, Education and department of Police, Roads and Transport (DPRT) in Free State, is an indicative that small fraction of fiscal allocation to implement EPWP projects are transferred to beneficiaries as a wage payment (functioning as income relief component of social protection). Similarly, the pervasive low labour intensity validates the perverse practice of “business as usual” in all implemented infrastructure projects by contractors as result of using conventional construction techniques, rather than the prescribed labour-intensive work method within EPWP framework, to attracts large proportion of unemployed/working-age poor. The implication of this entails explicit exclusion of large number of unemployed poor to participate in EPWP projects.

Furthermore, consistent with international critique of EPWP, this study finds limited evidence that improves livelihood of beneficiaries, create socially valuable assets and offered sufficient income relief to the unemployed poor to graduate from acute poverty state due to explicit exclusion of able bodied working age poor from active participation associated with generous daily wage rate, marginalisation of potential disabled beneficiaries from benefiting from EPWP schemes, short duration of implemented projects, low intensity of labour, high operational cost to create jobs, disproportionate implementation of projects concentrated in few urban/rural areas – all these creates substantial *dead weight losses* that outweighs the anticipated positive impacts of these programmes.

Additionally, to present an empirical analysis suitable for policy formulation, further dissemination of the reported results in NDPW (2012a) suggests that channelling substantial public investment/fiscal allocations that promotes the intensification of routine preventive road maintenance works in the disadvantaged local municipalities (or rural areas) have the largest potential to boost job creation in EPWP infrastructure projects. Also, it is evident that road maintenance projects are more cost effective whilst generating significant labour intensity, unlike the large project costs with low labour intensity derived from (road) construction projects both in the urban and rural areas. On the other hand, to accelerate rural infrastructure development in the Free State province, policy makers urgently need to initiate substantial construction of road networks and valuable public assets in deficient local municipalities to address infrastructure bottle necks, service delivery protests and link under-developed municipalities to urban areas within/ outside the province. This indirectly can boost domestic growth and factor productivity.

Based on the empirical evidence, this study offer practical policy recommendation. First, mitigate administrative problems, the Free State government need to create dedicated units across district and local municipalities to monitor the planning and management of all existing and anticipated EPWP projects to ensure adherence to labour-intensive work methods. programme More so, strong support from local communities within the municipalities to select valuable public assets and selection of EPWP beneficiaries is essential to enhance significant buy-in. Second, easy access to funding and accreditation of training with CETA, would guarantee sizeable self-employment opportunities to beneficiaries involved in EPWP’s

Contractor Development programmes. Whereas, establishment of a long-term projects will provides sufficient skill development opportunities for unemployed poor participating in EPWP initiatives.

Third, to ameliorate dead weight loss undermining the impact of EPWP, there is a need for the Free State government to set appropriate guidelines for wage payment and compulsory quality training. For example, formal training for contractors (or contacted engineers) is necessary to assimilate and have deeper understanding on the applicability of labour-intensive construction work methods, a point argued by McCutcheon (2014). Moreover, the provincial government needs to set appropriate design standards and work methods conducive to labour-intensive construction method, as well as, outline detailed guidance for consultants and project managers on design options for labour intensive work method.

Fourth, based on irrefutable empirical evidence presented in this study, particularly of plausible over-population in Mangaung Metro, which could raise crime rate and social unrest/ violence linked to service delivery protests and improved livelihoods in the absence of well functioning labour market, steady provincial output growth, and sizeable fiscal allocation (provincial equity share) from the National government. It is advisable, for policy makers in the Free State government structure to shift policy attention on rural development, equitable implementation of infrastructure projects with more investment on maintenance of existing assets to create more work opportunities and utilize the autonomy to implement projects **adopting the best practices - internationally recognized Zimbabwe-type EPWP model.** Fifth, **since EPWP initiatives implemented in Free State are under-researched, to fully assess the impact of these programmes at macro and micro-levels, this paper strongly recommends that the government undertake cross-sectional and longitudinal surveys, poverty incidence analysis, and economic wide impact assessment analysis.**

Finally, by relying on irrefutable large body of evidence in line with international findings, Free State government will continue to face high unemployment and poverty rate, labour market distortion and rigidity problems linked to racial and skills levels, if labour intensity of EPWP projects and the widespread gross under-spending across implementing bodies are not eradicated, also, if private sectors participation in active job creation is not encouraged through private-public-partnerships (PPP).

Going forward, lessons from successful international large-scaled PWPs similar to EPWP provides concrete support to incorporated these programmes into other parallel poverty reducing and job creation policy programmes or other public initiatives, where training and retraining components are linked to skills demanded in different sectors in the mainstream labour market, in this light, the Free State government needs to integrate its provincial flagship infrastructure programme, that is, the *Operation Hlasela* into EPWP road work projects, to accelerate creation of more temporary jobs, provide basic skills for the unemployed poor to seek for employment in the local labour market, reduce sale of assets and poverty incidence due to access to regular stream of income.

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Appendix I

Table 36: Analytical Framework for Public Works Programmes

Overall objectives	Poverty Relief ↔ Welfare or Financial transfer	Poverty Reduction
	Asset Creation	Asset Creation
Nature of Employment Deficit	Acute crisis and natural disaster	Chronic or structural shift in economy
Time scale	Short term	Long term
Beneficiaries	Targeted	Universal
Economic Objectives	Microeconomic	Macroeconomic
Programme Concept	Multiple job creation projects	Increase labour intensity of government expenditure

Adapted from McCord, 2002

Table 37: Labour-Intensive Work Components of EPWP Infrastructure Sector (Work Types)

WORK TYPES	Tot. Expend.	% of Total Expend. to total allocation	No. of Projects	LI (%)	FTE	Work opportunities	Avg. Employment (months)	Expenditure per FTE	% of Employment Created
Buildings	13,815,171,893	60.5%	894	2.6	21,523	71,321	3.6	641879	26%
Electricity	222,593,366	1.0%	574	23.1	2,011	8,971	2.7	110688	2%
Roads	6,429,835,937	28.1%	1262	11.1	46,089	142,898	3.9	139509	57%
Sanitation	815,884,302	3.6%	235	8	3,586	13,118	3.3	227519	4%
Stormwater	343,805,346	1.5%	79	3.7	573	1,879	3.7	600009	1%
Waste Mgt	51,484,479	0.2%	55	38.5	1,188	3,925	3.6	43337	1%
Water Supply	1,175,064,748	5.1%	391	11.6	6,474	24,547	3.2	181505	8%
Total	22,853,840,071	100.0%	3490	14.1	81,444	266,659	3.4	280608	

Extracted from NDPW (2012a: 19), Data source: EPWP MIS database 2010/11 financial year.

Table 38: Analysis of EPWP Road Networks Projects By Province: Construction vs. Maintenance

Province	CONSTRUCTION / UPGRADING			MAINTENANCE			TOTAL			Work Opport.	Exp per FTE
	Expenditure	FTE	LI	Expenditure	FTE	LI	Expenditure	FTE	LI		
EC	483,643,994	1072	2.9	146,029,516	8801	84	629,673,510	9873	23.8	31054	63,777
FS	522,667,057	782	3.5	140,542,022	1536	28.3	663,209,079	2318	8.8	4801	286,113
GT	753,967,618	4017	6.7	118,818,489	1884	21.7	872,786,107	5901	8.4	12883	147,905
KZN	1,224,198,532	2963	4.2	290,322,439	16101	74.3	1,514,520,971	19064	17.7	56216	79,444
LIM	170,624,501	904	8.4	59,193,311	1489	30.1	229,817,812	2393	13.5	13202	96,038
MP	554,147,693	822	3	482,029,180	1973	6.4	1,036,176,873	2795	4.5	6769	370,725
NC	35,607,374	224	9.2	29,827,985	293	8.9	65,435,359	517	9.1	4006	126,567
NW	236,406,174	518	5.3	175,403,155	392	3.1	411,809,329	910	4.4	4919	452,538
WC	634,510,787	1244	5.6	371,896,110	1075	8.2	1,006,406,897	2319	6.6	9048	433,983
Total	4,615,773,730	12,546	5.42	1,814,062,207	33,544	29.44	6,429,835,937	46,090	10.76	142,898	139,506

Extracted from NDPW (2012a: 21), Data source: EPWP MIS database 2010/11 financial year.

Table 39: Analysis of EPWP Road Network Projects by Provinces: Urban vs. Rural Roads

Province	URBAN				Total Expenditure	RURAL				Total Expenditure
	MAINTENANCE		CONSTRUCTION			MAINTENANCE		CONSTRUCTION		
	Expenditure	FTE	Expenditure	FTE		Expenditure	FTE	Expenditure	FTE	
EC	134,596,651	8,127	66,682,684	189	201,279,335	17,433,420	676	369,206,214	320	386,639,634
FS	23,265,000	403	483,089,339	652	506,354,339	116,963,582	1,111	39,577,718	130	156,541,300
GT	72,211,889	583	658,714,659	1,381	730,926,548	13,119,638	58	8,413,525	44	21,533,163
KZN	144,554,114	8,041	305,030,422	1,265	449,584,536	145,768,325	8,060	918,896,778	1,688	1,064,665,103
LIM	15,379,127	348	33,350,572	101	48,729,699	34,239,554	570	130,126,235	520	164,365,789
MP	117,134,435	265	60,585,846	185	177,720,281	364,894,744	1,707	492,563,847	632	857,458,591
NC	3,579,519	38	5,308,610	34	8,888,129	22,216,367	58	29,519,585	147	51,735,952
NW	11,138,006	118	75,299,063	177	86,437,069	161,944,569	131	160,598,711	319	322,543,280
WC	31,170,476	251	277,225,854	697	308,396,330	340,133,299	795	356,015,692	502	696,148,991
Total	553,029,217	18,174	1,965,287,049	4,681	2,518,316,266	1,216,713,498	13,166	2,504,918,305	4,302	3,721,631,803

Extracted from NDPW (2012a: 24), Data source: EPWP MIS database 2010/11 financial year.

Table 40: Analysis of EPWP Road Network Projects by Provinces: Large vs Small Projects

Province	LARGE ROAD PROJECTS								SMALL ROAD PROJECTS							
	MAINTENANCE				CONSTRUCTION				MAINTENANCE				CONSTRUCTION			
	Total Expenditure	FTE	LI	No of Projects	Total Expenditure	FTE	LI	No of Projects	Total Expenditure	FTE	LI	No of Projects	Total Expenditure	FTE	LI	No of Projects
EC	7,682,711	18	9.2	1	294,480,858	145	1.5	7	144,347,360	8,785	88.0	23	137,451,459	361	5.9	74
FS	-	-	-	-	329,684,281	303	2.4	5	140,228,582	1,514	28.3	58	192,982,775	479	5.3	53
GT	214,775,19	33	6.1	2	570,626,327	1,098	6.2	15	63,854,008	577	26.9	10	96,501,857	327	10.1	39
KZN	286,949,795	3,513	74.9	5	1,155,478,363	15,034	3.4	20	3,372,644	37	25.7	24	67,877,060	470	17.9	63
LIM	-	-	-	-	23,067,287	28	4.0	3	47,671,296	847	28.9	20	140,409,520	593	9.1	75
MP	-	-	-	-	416,869,164	293	1.4	8	482,029,180	1,973	6.4	128	136,280,530	524	7.7	86
NC	-	-	-	2	377,916	1	15.6	1	25,795,886	96	8.9	20	34,450,278	180	9.1	31
NW	154,902,699	48	1.2	8	95,720,685	89	3.0	3	18,179,876	202	18.7	10	140,177,089	408	6.9	42
WC	139,998,130	156	3.9		422,017,474	656	4.9	15	231,305,645	889	10.8	97	211,224,072	543	7.2	76
Total	611,010,854	3,768	10.6	18	3,308,322,355	17,647	4.7	77	1,156,784,477	14,920	27.0	390	1,157,354,640	3,885	8.8	539

Extracted from NDPW (2012a: 26), Data source: EPWP MIS database 2010/11 financial year.

Table 41: Analysis of EPWP Road Networks Project by Province: Provincial Roads vs. Municipal Roads

Province	PROVINCIAL ROADS								MUNICIPALITIES							
	MAINTENANCE				CONSTRUCTION				MAINTENANCE				CONSTRUCTION			
	Total Expenditure	FTE	LI	No of Projects	Total Expenditure	FTE	LI	No of Projects	Total Expenditure	FTE	LI	No of Projects	Total Expenditure	FTE	LI	No of Projects
EC	132,846,805	8,600	92.8	9.0	272,072,421	136	1.2	13	13,182,711	201	31.3	17	211,571,574	936	13.2	133
FS	140,228,582	1,514	28.3	58.0	4,018,475	56	33.4	3	-	-	-	-	518,648,582	726	3.3	55
GT	0	-	-	-	51,247,990	538	26.8	4	85,331,527	610	21.7	12	615,862,641	887	5.1	49
KZN	290,184,844	16,100	74.3	28.0	1,128,596,382	689	1.8	68	8,614,810	622	98.3	1	95,330,817	2,264	32.9	16
LIM	44,997,930	913	33.1	18.0	22,852,562	25	3.7	2	4,620,751	6	0.9	3	140,624,245	596	9.2	76
MP	466,175,847	1,955	6.5	122.0	471,310,139	551	2.3	45	15,853,333	17	1.8	6	81,839,554	265	7.0	49
NC	20,387,203	63	6.4	14.0	11,126,259	69	11.4	9	5,408,683	33	18.4	6	23,701,936	112	8.2	23
NW	166,430,228	161	2.0	6.0	107,477,535	132	4.5	6	11,296,096	123	17.9	6	123,776,489	331	6.2	38
WC	362,446,421	949	7.7	86.0	470,972,818	751	4.8	31	8,857,354	96	26.9	18	162,268,728	448	8.0	61
Total	1,623,697,860.0	30,255	27.9	341.0	2,539,674,581	2,947	10.0	181	153,165,265	1,708.0	24.1	69	1,973,624,566	6,565	10.3	500

Extracted from NDPW (2012a: 25), Data source: EPWP MIS database 2010/11 financial year.

Appendix II: Econometrics Modelling

[Optional: Ongoing modelling process due to data paucity]

Appendix III: Summative Expanded Public Works Programmes Adopted in Free State

Table 42: FS (National Govt) EPWP Programmes Per Sectors And Provincial Departments

EPWP Core Sectors	Programme	Responsible Provincial Department
Infrastructure	FS Contractor Development	Public Works (PW), DPRT
	Facilities & Infrastructure Dev. Prog.	PW, Education, DETEA, DPRT, SACR
	EPWP Provincial	PW, DPRT
	Labour Based Construction Prog.	DPRT
	Labour Intensive Prog. Housing Delivery	Education, Health, DPRT,PW,SACR CoGTA, Human Settlement
Environmental & Culture	Cemetery Maintenance	Public Works
	Food for Waste	Public Works
	People and Parks	Public Works
	Land Care	Dept of Agriculture& Rural Dev
Social	Community Based Service	Health, Public Works, Social Dev.,
	Food Handlers	Health, Education
	Household Profiling	Social Development
	Youth Development	Social Development
	Izolabantwana Child Care Centre	Social Development
	Teachers' Assistance	Social Development
	Victim Empowerment	Social Development
	Early Child Development, Out of Centre Model	Dept of Social Development
	HIV Counselling and Testing	Education
	Diagnostic Radiographer	Dept of Health
	Child and Youth Care Worker	Dept of Health
	Enrolled Nursing Assistants	Dept. of Health
	Home Community Based Care	Dept. of Social Development
	Home Community Based Care-Learn	Health, Social Dev, No Name Dept
	Isbindi	Social Development
	Security Guards	PW
	Substance Abuse Incentive Grant	Social Development
	Siyakha ECD Centre	Social Development
	Volunteer Social Crime Prevention	Social Development
	Community Development Workers	Social Development

Source: NDPW, EPWP 4th Quarter - 2012/13 Reports, cumulative data from 1 April 2013 to 31 March 2014 (Annexure E1)

Table 43: EPWP Phase 2 Target for Mangaung Metropolitan

Phase 2	Targeted Work opportunity	FTE
2009/10	2,367	810
2009/11	2,703	974
2009/12	3,478	1,273
2009/13	4,521	1,643
2009/14	5,691	2,047
Total	18,760	6,747

Source: EPWP Policy Implementation Plan document, 06 Feb 2013

APPENDIX IV: Additional Explanation on Constructed EPWP Performance Evaluation Indicators

1. **Labour intensity (LI):** The study gives a considerable attention to degree of labour intensity as a key indicator in evaluating EPWP's performance given that the centrality of the programmes framework is contingent to the degree of using labour-intensive work approach to absorb the unemployed poor by generating work opportunities. Moreover, a high labour intensity is an indicative of how much proportion of labour is used in a particular project relative to conventional capital based technology, also, what proportion of wages is transferred to beneficiaries to offer adequate income relief by reducing poverty incidence.
2. **Daily wage payment per programme relative to average-market-wage rate:** Another key indicator employed in this study, is wage payment per programme relative to average wage rate. This indicator is crucial, since evidence from international literature suggests that higher wage rate than the market wage rate increases the dependency of beneficiaries on EPWP projects, causes job substitution (i.e. labour market disruption) by attracting employed workers in casual labour into EPWP programmes, thereby excluding the unemployed poor. In effect, eroding unemployment and poverty-reducing effects of EPWP programmes to create work for only the working age poor. Most commentators believe that it is best to set wages at or below the market level so that self-selecting participants are almost certain to be poor (World Bank, 2001:155)
3. **Mean numbers of days worked (absolute term):** Based on the criticism about using the number of job created as a measure of performance in EPWP programmes (see, e.g., Chakwizira,2010:247), by following Meth (2010), this indicator is computed to provide a basic estimate of person years of work per job opportunity (assumed to be filled by one person). Notably, this performance evaluator is estimated on the basis of the assumption that a work year consists of 230 day's work according to the Guideline Framework of EPWP.
4. **Total expenditure used for the payment of labour wages:** Another main indicator to assess the extent to which labour-intensive methods are applied. The degree to which a project is carried out using labour-intensive methods. A higher wage cost implies significant social protection benefit is transferred to participants. This indicator measures the effectiveness of the programme to alleviate poverty for the participants in the short term as labour market intervention instrument.
5. **Number of Person days or full-time equivalent work years (FTEs):** A full time equivalent job (FTE) refers to one person-year of employment. One person-year is equivalent to 230 person days of work.