

A formative evaluation of the recovery public works programme in Blantyre City, Malawi



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ABSTRACT

Public works programmes (PWP) are popular social protection instruments in the context of chronic poverty but very little has been published in the way of implementation and outcomes of these programmes. This paper presents a formative process and outcome evaluation of the recovery PWP in Blantyre City, Malawi. The evaluation used longitudinal household survey data of PWP beneficiaries, programme records and interview responses from programme staff and community leaders. Largely, the process evaluation findings showed an agreement between actual and planned activities. The outcome evaluation found indications that the PWP community assets offered some potential benefits to the communities, and that PWP wages allowed the beneficiaries to purchase some food. This however, did not translate into more meals per day, nor did the earnings prevent the decline in household assets as expected. Given a plausible PWP theory and high implementation fidelity, the PWP wage rate or number of days was either just enough to smooth participant income, or insufficient altogether, to enable achievement of more distal outcomes.

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1. Introduction

In Sub-Saharan Africa, unemployment levels stand at 7.5% and about 80% of the labour force is employed in the informal sector (Mo Ibrahim Foundation, 2013). Living standards in the region are also very low with 48.5% of the population living on less than \$1.25 a day, and 69.9% on less than \$2.00 a day (Mo Ibrahim Foundation, 2013). Consequently, the majority of the population are undernourished (FAO, 2013), and the condition of public infrastructure is also poor. In 2010 for instance, less than one-fifth of roads in the Sub-Saharan region were recorded as paved compared to the global average of almost three-fifth (Mo Ibrahim Foundation, 2013).

Public works programmes offer the promise of an attractive solution to these problems by providing temporary labour-intensive employment opportunities as a means to both transfer cash incomes to very poor households and develop public infrastructure. But PWPs suffer from a mixed reputation in the

development literature. On one hand, PWPs are often lauded as strong social protection instruments that economically uplift the status of poor and unemployed populations whilst providing social benefits to the whole community (Subbarao, del Ninno, Andrews, & Rodríguez-Alas, 2013). On the other hand, PWPs are said to be prone to corruption and often viewed as both administratively demanding and expensive ways of transferring resources to the poor (Grosh, 2008; Zimmermann, 2014). As a result, there is still considerable confusion as to what types of PWP interventions are most likely to bring about positive livelihood change, and how best these interventions might be delivered in different contexts.

In light of these challenges, effective programme evaluation is increasingly understood as critical to ensuring improvement-oriented reflection and learning in pro-poor development programmes (ÖIR, 2012). Within PWPs, credible monitoring and evaluation systems have been highlighted as being critical to allow for midcourse corrections and to respond to sudden changes which can inhibit effective implementation (del Ninno, Subbarao, & Milazzo, 2009). The challenge however is that most poor countries including those in Sub Saharan Africa do not have programme monitoring and evaluation systems that track information about the outcomes of the PWPs (Subbarao et al., 2013). This therefore poses problems for programme evaluators in their attempts to conduct systematic evaluations of PWPs.

Abbreviations: PWP, public work programme.

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As far as documented PWP evaluations go, much of the emphasis has been placed on summative evaluations (those that examine overall programme merit when it comes to an end) with a focus on assessment of the targeting efficiency and programme impact (del Ninno et al., 2009). Literature about formative evaluations is very limited, more especially when it comes to examining the actual PWP implementation process. A formative evaluation is an assessment that takes place before or during a project's implementation to improve its design and performance (<http://evaluationtoolbox.net.au>). This paper fills that gap of knowledge with a formative evaluation that combines both process and outcome assessments of a community-based public works programme in Blantyre City, Malawi. The process evaluation employs measures to assess programme implementation and thus provides detailed information about how PWPs work as well as the level of fidelity with which PWPs are implemented. Uniquely, this formative evaluation provides a comprehensive conceptual framework to aid systematic evaluations of both the implementation process and outcomes of PWPs.

1.1. Evaluations of PWPs

While previous research has explored elements of programme success, regional variations in the effectiveness and the specific systems of monitoring and evaluation required to support implementation of PWPs are less well understood (del Ninno et al., 2009). Most evaluations of PWPs have shown them to offer short-term benefits as safety-nets to participants, but emphasise that PWPs cannot be seen as a long-term solution to poverty (Davies, Guenther, Leavy, Mitchell, & Tanner, 2009; Subbarao et al., 1997; del Ninno et al., 2009). Some evaluations have shown a positive relationship between PWPs and food security or general livelihood improvement. For instance, an evaluation of the national PWP in Malawi showed an improvement in the number of meals per day among participants when compared to non-participants

(Mvula, Chirwa, Zgou, & Kadzamira, 2000). Similarly, Galasso and Ravallion (2004) found that the 2002 Jefes programme in Argentina allowed 2% of Argentina's population to rise above the country's food poverty line. In the same vein, final reports of several livelihood and food security projects have also shown some livelihood related benefits in terms of household income increases and higher agricultural productivity (Coupe & Pasteur, 2009; Innovative Resources Management, 2005; VSO, 2011)

In Latvia, the national PWP increased the short-term incomes of beneficiaries by 37% relative to non-beneficiaries (Azam et al., 2012). Consequently, beneficiaries were 7.3% less likely to cut down consumption on staple foods than non-beneficiaries. These food security gains are collaborated by Berhane, Hoddinott, Kumar, and Taffesse (2011) who found that the PWP in Ethiopia significantly reduced the period of food shortages by 1.05 months.

In a multi-country review of PWPs in Sub-Saharan Africa, McCord (2012) reports that PWPs prevent distress sell off of assets and also check depletion of productive assets. In some cases, there have actually been reports of increase in asset holdings among participants to a record of 58% (Haushofer & Shapiro, 2013). On utilisation of PWP wage earnings, Mattinen and Ogden (2006) found that the largest proportion of earnings from Somalia's Action Contre la Faim PWP went to repayment of debts, and purchase of food and livestock. Similarly, McCord (2004) found that more than three-quarters of the PWP participants in South Africa (KwaZulu Natal and Limpopo) spent their wages on food. Furthermore, the participants reported an increase in material household assets as well as financial assets like savings.

Despite the anti-poverty gains, evidence as to the impact of community asset projects on livelihoods is comparatively thin. This is due to the fact that the socioeconomic outcomes of the community assets are often overlooked therefore not monitored (McCord, 2005). Most of the available studies only mention the assets created and how participants felt about them. Subbarao (2003) for instance, reports that the Maharashtra Employment

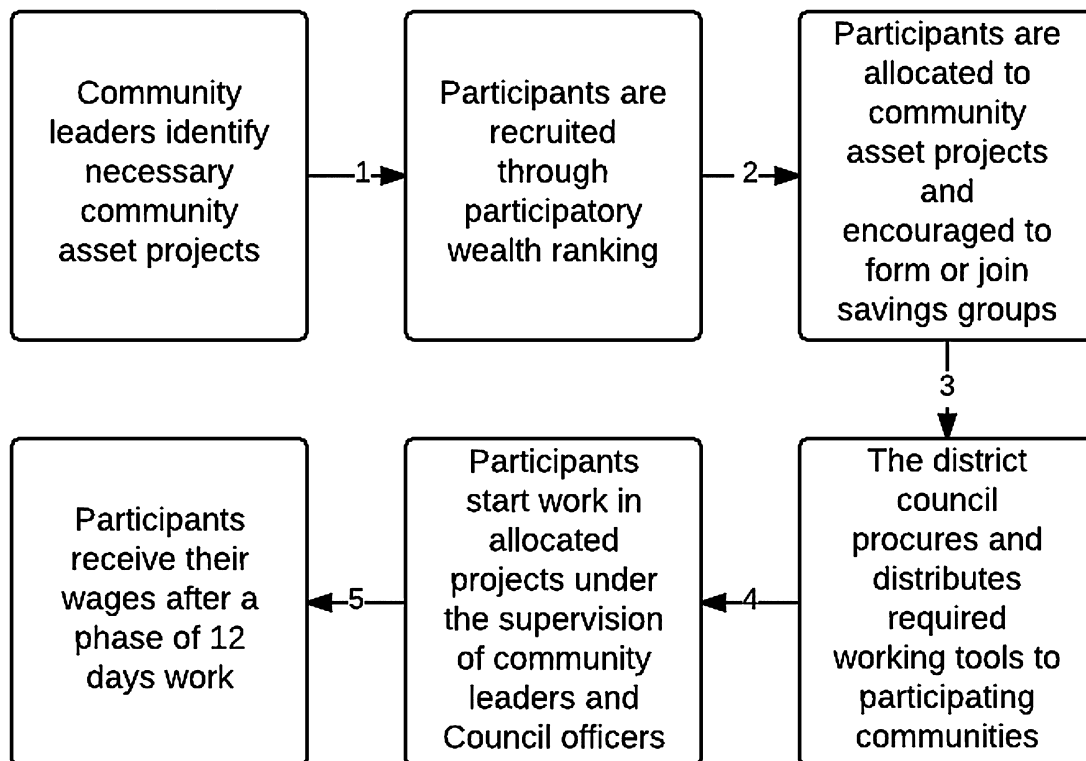


Fig. 1. The PWP service utilisation chart.

Guarantee Scheme in India created irrigation infrastructure and roads in Maharashtra. Similarly, PWP participants in South Africa stated improved transportation as the main benefit of community assets (McCord, 2004). This was also the case in Zambia where Subbarao et al. (2013) details that the PWP improved access to markets by connecting previously disconnected road networks.

In this article, we present a detailed example of a formative, theory-based evaluation we conducted of a public works programme in Malawi. A theory-based evaluation examines the explicit conceptualization of a programme as a theory to explain the conditions and mechanisms in which a programme translates inputs into desired effects or outcomes (Fitz-Gibbon & Morris, 1996; Weiss, 1997a). The emphasis placed on programme theory in developing programme evaluation approaches is in keeping with the assertion as to the usefulness of theory-based approaches for evaluating social development programmes (Bickman, 1987; Chen, 1990; Coryn, Noakes, Westine, & Schröter, 2011; Weiss, 1997b). However, theory based evaluations can be limited if premised upon

policy makers' conception of a programme in that they can be skewed towards intended programme effects, leaving out the side effects or unintended consequences of a programme. In our review, we found very little literature that employs a theory-based approach to evaluating PWPs.

1.2. The blantyre city council PWP

The goal of the PWP is to make poverty-stricken households food secure and economically self-reliant. The programme has been implemented by Blantyre City Council with funding from the Malawi Local Development Fund (LDF) since 2008. In 2012, there were about 25,000 beneficiaries who participated for 48 days in a year and got wages of \$8.50 after every 12 days (0.71 per day). The 48 days' period was split into two cycles of 24 days: the first one to run in October (onset of maize growing season) and the last one to run in May of the following year (after the harvest period).

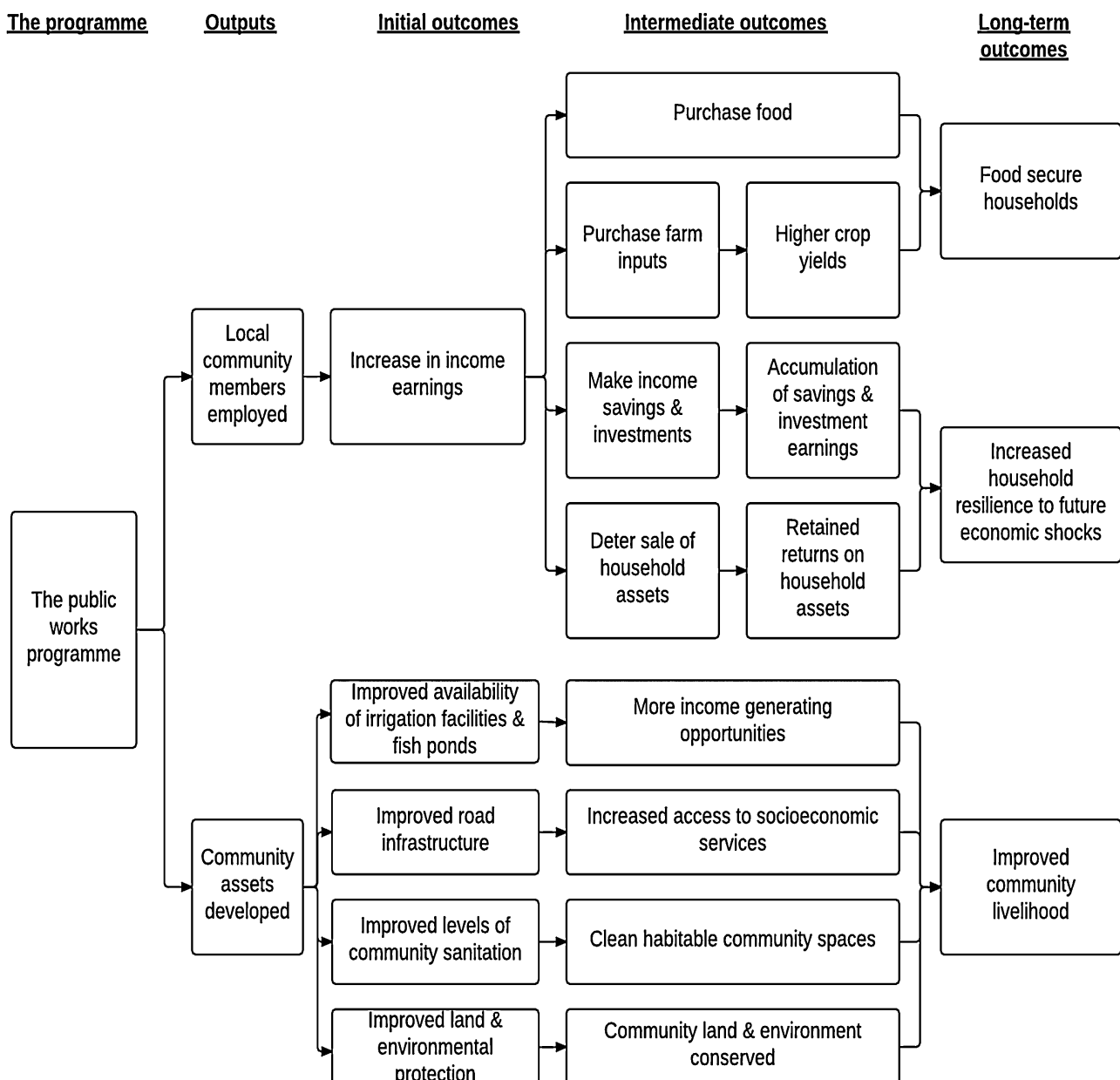


Fig. 2. Programme theory of the PWP.

It is worth noting that the 2012 PWP wage rate of \$0.71 per day was below Malawi’s minimum wage of \$0.75 per day during the same period. This was deliberately done to render the PWP unattractive to the employed. This wage earning however was quite low when compared with the prevailing cost of the 2012 Basic Needs Basket of a household in Blantyre City which averaged \$4.07 per day during the same period (Centre for Social Concern, 2012).

1.3. Implementation arrangement

Blantyre City is demarcated into eight constituencies and the PWP is administered in all eight sites. The role of Blantyre City Council in the PWP is to facilitate the programme’s activities by procuring working tools, supervising and paying the beneficiaries their wages. The participating communities (represented by constituency leaders) on the other hand, are responsible for identifying the community asset projects, recruiting beneficiaries through participatory wealth ranking exercise at local community meetings, and carrying out the activities. Priority is given to households headed by females, the elderly, people with a disability or households with orphans. The type of PWP community asset projects include: afforestation; land resource management; solid waste disposal; aquaculture; rehabilitation or construction of village roads and small scale irrigation facilities.

Fig. 1 summarises the stages that recruited beneficiaries pass through whilst engaging with the PWP.

1.4. Programme theory

A programme theory is a conceptualization of how the intended objectives of a programme are realized (Rossi, Lipsey, & Freeman, 2004). A programme theory is vital in evaluation because it helps to identify programme components that should be measured in an evaluation (Funnell & Rogers, 2011). The theory behind the PWP is depicted in Fig. 2.

The upper arm shows how PWP wages offer beneficiaries more income to meet basic household food needs, purchase farm inputs, and accumulate income savings or invest their wages.

The PWP logic also assumes that beneficiaries will not be compelled to sell their household assets in times of economic hardships.

The lower arm shows how the community asset projects improve community livelihoods through various improved infrastructure. The communities also achieve higher levels of environmental conservation stemming from the afforestation and land resource management projects.

Although the PWP was generally designed to address short-term needs, it does address some long-term outcomes. For instance, the purchase of farm inputs would take quite a period time to lead to higher crop yields and ultimately food secure households. Other community assets like trees or fully rehabilitated roads are also more long-term investments. This combination of both short-and long-term impacts implies two different approaches of evaluating the impact of the PWP.

1.5. Evaluation level

The evaluation was initiated because the programme sponsor (Malawi Local Development Fund) and Blantyre City Council were interested to know how the programme was implemented and whether the intended objectives were achieved. These stakeholder interests were made known to evaluators from the University of Cape Town (the authors) who recommended a formative evaluation that combines process and outcome evaluation levels. A process evaluation verifies if a programme was delivered as intended whilst an outcome evaluation gauges the extent to which the programme is delivering on its intended outcomes (Rossi et al., 2004). To carry out the evaluation, the authors interviewed the programme staff and community leaders, explored existing household survey data of PWP beneficiaries, and accessed programme records. The authors expected to find the programme delivered according to plan, resulting in the outcomes outlined in its programme theory.

1.6. Evaluation framework

Fig. 3 is a theory-based conceptual framework developed to guide the formative evaluation of the PWP, modelled after Carroll et al.’s (2007) implementation fidelity framework. The framework

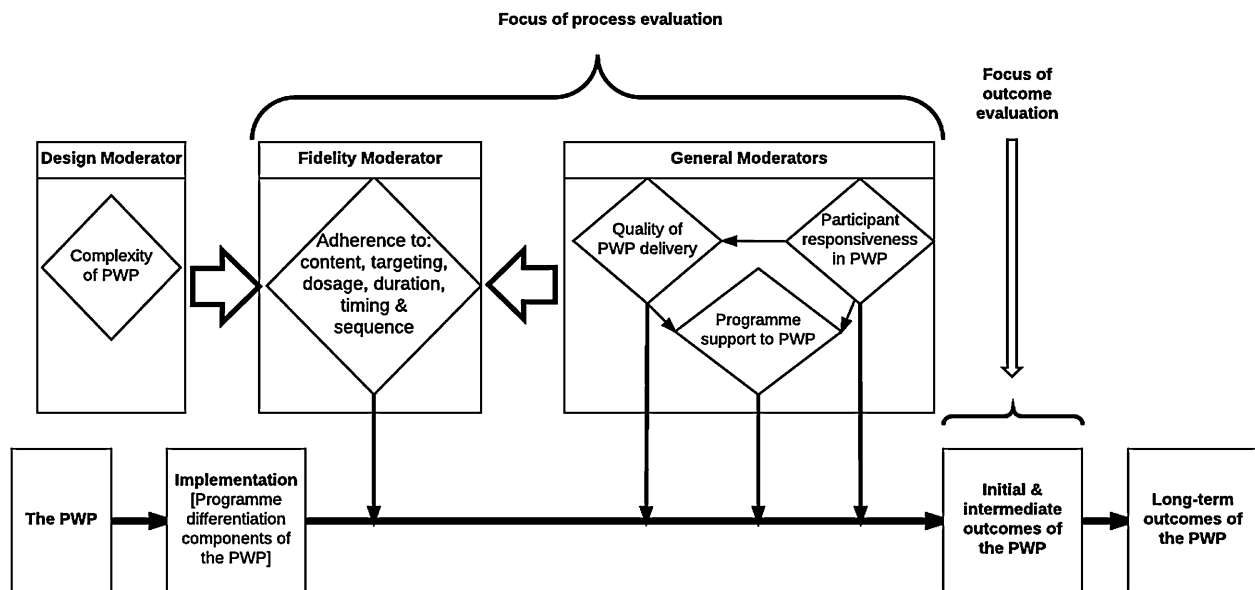


Fig. 3. Framework for evaluating the PWP.

highlights the critical components that moderate and mediate both implementation fidelity, and the relationship between the PWP and its outcomes. Implementation comprises programme differentiation components such as the development of community assets and wage payment.

The relationship between the PWP and its outcomes is strengthened by design, fidelity and general moderators. The design moderator relates to the complexity of the programme. If the PWP is very complex in its design, it is very unlikely that it will be adopted or implemented properly.

The fidelity moderator entails adherence to the content, targeting, dosage, duration, timing and sequence of the PWP. Adherence to content is about staying on course with the PWP design features whilst adherence to targeting relates to getting the right participants. Adherence to duration and dosage on the other hand, is about aligning implementation with the planned time span and the amount of PWP service (phases) respectively. With regard to timing and sequence, the focus lays on programme implementation at the intended time and in the designated sequence. If the PWP is not delivered according to its intended programme content, target population, duration, dosage, timing and sequence, few or no outcomes will be realized.

For general moderators, greater PWP outcomes are expected if; 1) the programme is delivered with high quality, 2) the participants are highly involved during implementation and 3) the programme is well supported with necessary resources. There also exist some interrelationships among the individual general moderators, for instance, a programme support strategy to provide competent human resources would influence the quality of delivery and participant responsiveness.

1.7. Evaluation questions

Twelve evaluation questions were formulated with reference to the programme theory and the evaluation framework.

1.7.1. Fidelity moderator questions

1.7.1.1. Targeting.

1. Were beneficiaries the intended programme recipients?

1.7.1.2. Dosage.

2. What proportion of beneficiaries participated in all four phases of the programme? What proportion of beneficiaries dropped out? What were their characteristics?

1.7.1.3. Content, duration, timing and sequence.

3. Were expenditures made according to programme guidelines?

4. Were the actual activities the intended programme activities in terms of content, duration, timing and sequence?

1.7.2. General moderator questions

1.7.2.1. Participant responsiveness.

5. To what extent were participants involved in community asset selection, beneficiary recruitment, and actual programme implementation?

1.7.2.2. Quality of service delivery.

6. Were beneficiary wage payment procedures carried out effectively?

7. Were the activities adequately supervised to assure quality service delivery?

1.7.2.3. Programme support questions.

8. Were administrative and organisational functions of the programme handled well?

1.7.3. Outcome questions

9. Did the community assets lead to:

- More income generating opportunities.
- Increased access to socioeconomic services.
- Clean habitable community spaces.
- Land and environmental conservation.

10. Did the beneficiaries use their wages to meet basic food needs, purchase farm inputs and make savings?

11. Did the livelihoods of beneficiaries improve with respect to:

- Total earnings.
- Expenditure on food.
- Number of meals a day.
- Asset wealth.
- Income savings.

12. Did the livelihoods of beneficiaries who received wages in two phases do better than those who received wages only in one phase with respect to:

- Expenditure on food.
- Number of meals a day.
- Asset wealth.
- Income savings.

2. Methodology

The evaluation employed a descriptive research design to describe how the beneficiaries were engaged in the PWP, how Blantyre City Council delivered and supported the programme, and the outcomes of the programme. An exploratory research design was also used to explore the level of beneficiary participation and the extent to which implementation was aligned with PWP guidelines. For evaluation question 11, a repeated measures design with a single group was used. The design is shown in Fig. 4 where O_1 is the baseline, O_2 is the first follow-up, O_3 is the second follow-up, and X_1 represent first two PWP phases whilst X_2 is the third PWP phase.

For question 12, a quasi-experimental design with two non-equivalent groups was used to compare outcomes of a group that received wages in two phases (called a full programme group) with a group that received wages only in one phase (a partial group). The groups are referred to as non-equivalent because participants were assigned to the groups non-randomly. The design is shown in Fig. 5 where F is the 'full programme' group, P is the 'partial programme' group, X is the 'two-phase' wage, O_1 and O_2 are baseline and first follow-up observations respectively.

Clearly, the methodology employed was limited in that there was no proper control group with which to compare the actual participants. This may have had a bearing on the reported group differences/similarities in the outcome results because an evaluation approach with non-equivalent comparison groups is prone to the influence of **extraneous** factors. In addition, the intervention

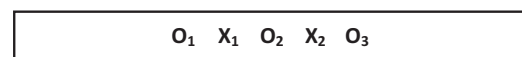


Fig. 4. Repeated measures design with single group.

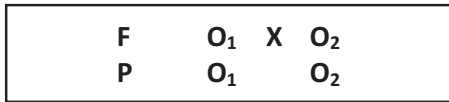


Fig. 5. Quasi-experiment.

group (full programme group) and control group (partial programme group) were only differentiated by a dosage of one-phase wage and that might have been insufficient to distinguish the two groups.

2.1. Participants and sample size

To answer question 1, the evaluation used pre-existing baseline data of 2309 participants. For question 2, data were derived from a stratified random sample of 320 participants as listed in the PWP beneficiary wage sheets and as determined by Watson's (2001) sample size calculation formula (See Appendix A).

Pre-existing data of 587 and 200 participants as tracked at first and second follow-up respectively were also employed to answer question 6. For questions 10 and 11, the evaluators analysed data of 200 participants for which baseline, first and second follow-up data were collected. For question 12, the evaluation used a partial programme group of 45 participants captured at first follow-up as having received wages only in one phase (either first or second) and a full programme group of 542 participants who received wages in both first and second phases. It is worth noting that the City Council had a capacity deficiency in monitoring and evaluation which could have affected the quality of the secondary data used in the study.

Programme officers and the community leaders were engaged through face-to-face interviews (using questionnaires) to provide answers to some of the evaluation questions. This also may have affected the quality of the study results since both the programme officers and community leaders were well versed with the PWP guidelines, and might have tailored their responses to match what they know about the programme.

2.2. Data analysis

The interview responses of programme officers and the community leaders were manually coded into categories and themes. The participants' baseline and first and second follow-up data were cleaned and analysed in SPSS version 22 by the authors. Missing cases were excluded from the analysis.

3. Findings

Question 1: Were beneficiaries the intended programme recipients?

Table 1 displays the demographics of the beneficiaries

Fig. 6 shows the representation of vulnerable groups (n = 2205).

From Table 1, the 73% participation of females was way above the minimum 40% stipulated in the guidelines. In addition, the high participation of a productive age group between 22 and 38 years old may signal the success of the PWP in employing people's physical human capital. Similarly, the participation of the widowed (10.30%) underscores some effectiveness in targeting those without spouses to complement household income generation efforts. Furthermore, the fact that almost half of the participants only had primary education whilst 39.07% were educated up to secondary school (or higher) may indicate their inability to enter the competitive formal job market.

The participants' monthly median earning from various sources was \$113 which was almost 100% less than the monthly Basic

Table 1 Demographic characteristics.

	% (n = 2301)
Gender	
Male	27
Female	73
Marital status	
Widowed	10.3
Divorced	6.3
Single	16.1
Married	67.3
Age	
Up to 21	15.4
22–38	52.6
39–60	25.1
Over 60	6.9
Educational level	
Never gone to school	9
Adult literacy	2.3
Primary	49
Secondary and higher	39.7
Median earnings per month (\$)	113

Needs Basket of \$207.61 for average households in Blantyre City during the data collection period (Centre for Social Concern, 2012). This mismatch may show that the PWP targeted participants who could not meet their basic food needs.

On another hand, the combined representation of households with orphans and households headed by the elderly, the chronically ill or someone with a disability was only 2.2% (Fig. 6). This did not compare well with just the percentage of households with double orphans (orphans without both parents) in Blantyre City which was at 5.1% (NSO, 2011).

Question 2: What proportion of beneficiaries participated in all four phases of the programme? What proportion of beneficiaries dropped out? What were their characteristics?

Fig. 7 illustrates participant dropout in the PWP.

As shown in Fig. 7, a dropout of half of the beneficiaries by the last phase of the programme indicates that the programme could not retain participants. This goes against the PWP design where participants are supposed to be exposed to four wage phases.

Dropout levels however did not affect the sum total of beneficiaries per phase as they were immediately replaced with new participants, to an extent that 16.26% and 6% of the second phase dropouts re-joined the programme in the third and fourth phase respectively. Dropouts tend to under-achieve given the positive relationship between higher dosages of wage and PWP outcomes (Gilligan, Hoddinott, & Taffesse, 2009; McCord, 2013; Subbarao, 2003).

A chi-square test to determine if there was a relationship between dropping out and project site (constituency) was significant, $\chi^2(7, N=320)=125.61, p < 0.001$. Fig. 8 displays the project sites of the dropouts (those who missed two or more phases). It is unlikely that high PWP outcomes were achieved in constituencies which had the highest proportion of dropouts-Blantyre City East and Blantyre City Kabula.

To examine if the odds of dropping out of the programme were different across gender, education level, age, marital status and participants' total earnings, a logistic regression analysis (simultaneous) was performed. Diagnostic tests for linearity of the logit and multicollinearity were insignificant. The results of the analysis are presented in Table 2.

The results show that no independent variable (gender, education level, age, marital status and total earnings) was

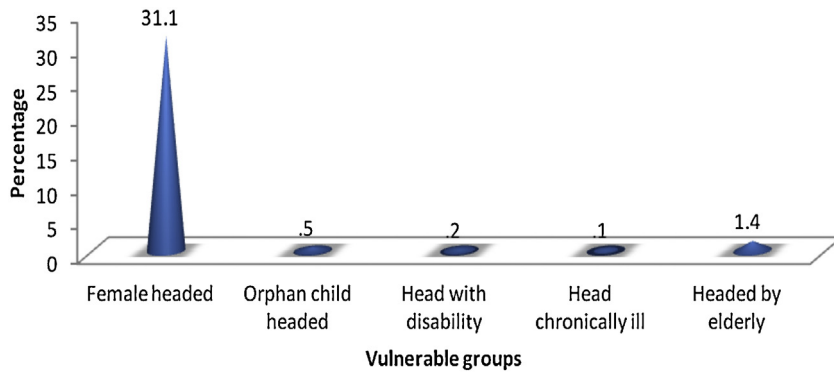


Fig. 6. Participation of vulnerable groups.

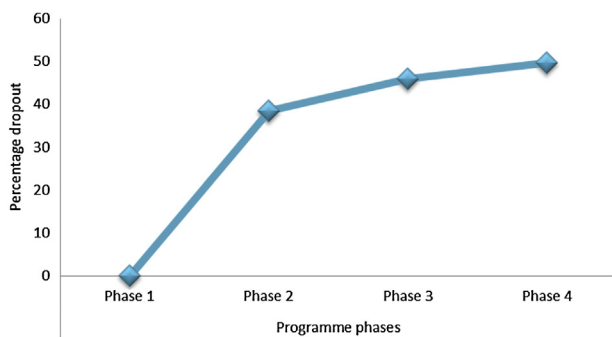


Fig. 7. Levels of dropouts.

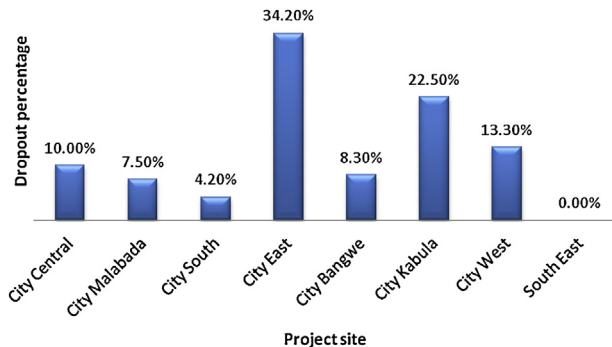


Fig. 8. Project sites vis-à-vis dropouts.

statistically significant in predicting the odds of participant dropout, $p > 0.05$. In addition, the combination of the predictor variables yielded a statistically non-significant regression model, $X^2(14) = 16.74$, $p = 0.27$. This indicates that the dropouts were not significantly different from the continuing participants in terms of socioeconomic characteristics.

Due to the inherent limitations of the research methodology (use of secondary data) and constraints of time and resources, the evaluators were not able to engage the actual participants or dropouts. This presents an information challenge as to the exact reasons why the participants dropped out of the programme. A possible explanation hinted by programme staff during interviews was mainly administrative problems caused by the community leaders who seemed to have been alternating participants (as shown by re-joining of dropouts in later phases) in order to spread wider the blanket of PWP wages to more community members.

Question 3: Were expenditures made according to programme guidelines?

Table 3 presents utilisation levels of funds in the PWP.

Table 3 shows an underutilisation of funds meant for tools. This would negatively affect the quality of the labour intensive works and the subsequent outputs. Nevertheless, the PWP expenditures were generally in line with the guidelines.

Question 4: Were the actual activities the intended programme activities in terms of content, duration, timing and sequence?

3.1. Content

3.1.1. Participant recruitment procedures

Interview responses from all the eight sites indicated that meetings to rank potential beneficiary households for the most part did not take place. Instead, community leaders met with various leaders in their community and allotted to them a quota figure for recruitment. This goes against the premise that participatory wealth ranking can “achieve an accuracy of 70 to 79%” in identifying persons in extreme poverty (Zeller, Feulefack, & Neef, 2006).

3.1.2. Type of labour intensive activities

An examination of PWP projects records did not show any deviation from the normal PWP community asset projects of afforestation, aquaculture, land resource management, solid waste management and village access roads.

3.1.3. Formation of savings and investment groups

Interviews with the community leaders revealed that 35 savings and investment groups were formed as a result of the PWP in only one out of the eight sites. This may demonstrate poor conceptualisation of the savings group intervention or the fact that there were already similar groups in operation and participants saw no need for new groups.

3.2. Dosage and duration

The PWP guidelines stipulate four ‘12-days’ phases of labour intensive works, which was confirmed by an examination of beneficiary wage sheets, expenditure reports and interviews.

3.3. Timing and sequence

3.3.1. Timing of first and second cycles

The intended time for rolling out the first cycle of 24 days was “August–September” (prior to the general maize planting season) whilst the second cycle was supposed to run within two months of the general harvesting period (April and May). Interviews with programme staff revealed that the first cycle was rolled out in the

Table 2
Predictors of dropouts, with 95% Confidence Intervals.

Predictor	b (SE)	p	95% CI for Odds Ratio		
			Lower	Odds Ratio	Upper
Gender (0 = male)	0.092(0.348)	0.792	0.554	1.096	2.176
Age (0 = less than 21 years)					
22–38 age group	–0.370(0.561)	0.509	0.230	0.691	2.075
39–60 age group	–0.532(0.641)	0.407	0.167	0.588	2.064
Over 60 years	–0.523(0.790)	0.509	0.126	0.593	2.782
Marital status (0 = married)					
Single	–1.050(0.629)	0.095	0.102	0.350	1.201
Divorced	–0.319(0.609)	0.061	0.220	0.727	2.400
Widowed	–0.989(0.533)	0.064	0.131	0.372	1.057
Education (0 = never gone to school)					
Primary	0.927(0.972)	0.340	0.430	1.152	3.088
Secondary	0.142(0.503)	0.778	0.892	0.315	2.521
Adult literacy	–0.115(0.530)	0.829	2.526	0.376	16.968
Total earnings	–0.001(0.001)	0.380	0.999	0.997	1.001
Constant	0.120(0.734)	0.870		1.128	

Note. Note. $R^2 = 0.076$ (Cox & Snell), 0.103 (Nagelkerke). $\chi^2 (14) = 16.74$, $p = 0.27$.

Table 3
Funds utilisation.

Category	Absorption rates	
	Expenditure guidelines	Actual expenditure
Administration	5%	5.15%
Tools	15%	7.39%
Wages	At least 80%	87.46%
Total	100%	97%

December–January period. Late receipt of programme funds was cited as the main reason for the delay. This may imply that crop farming participants could not use the PWP wages to obtain farm inputs in time. The second cycle however was implemented in the May–June period and coincided with the general post-harvest period in which agricultural produce is cheap and beneficiaries can buy food and accumulate savings.

3.3.2. Sequence of activities

Fig. 9 presents the intended PWP activity sequence and the actual programme sequence from the perspectives of community leaders, and demonstrates high levels of adherence to intended sequence of PWP activities in all eight project sites.

Question 5: To what extent were the participants involved in project selection, beneficiary recruitment, and actual programme implementation?

3.3.3. Community asset project selection

Interviews with programme staff and the community leaders from all the sites revealed that the selection of projects was totally in the hands of the community leaders as designed by the programme. This level of autonomy would not only help to ensure that the PWP addressed the real needs of the community but also cultivate a sense of ownership in the assets created.

3.3.4. Beneficiary recruitment

Interviews with all the community leaders and programme staff showed that the recruitment of beneficiaries was the sole responsibility of the leaders as stipulated in PWP guidelines. This is advantageous because community leaders have more knowledge of destitute people in their community than City Council staff.

3.3.5. Actual programme implementation

Table 4 shows the task sharing ratios of the PWP labour intensive activities from the perspective of the community leaders and the programme staff.

The average task sharing ratio of almost 2 to 1 between the communities and the City Council signals high community participation. This would provide a high sense of ownership and work effort among participants.

Question 6: Were beneficiary wage payment procedures carried out effectively?

The efficacy of the wage payment process was verified with an analysis of the first and second follow-up data (See Table 5). The results showed that there were participants (1.2% to 5.6%) who did not receive their wages due to some administrative inefficiencies in the wage payment system. The situation was worse in the second phase where about 5.6% of the participants did not receive wages. This could certainly diminish the programme's effects, particularly in Blantyre City East where about 15% of the participants did not receive wages.

Question 7: Were the activities adequately supervised to assure quality service delivery?

Both City Council staff and the community leaders acknowledged supervising the labour intensive activities on a daily basis to check participant attendance, quality of work done and the allocation of tasks. Both teams also supervised the wage payment process. This kind of supervision formed a strong quality assurance tool in the 2012 PWP.

Question 8: Were administrative and organisational functions of the programme handled well?

Interviews with programme staff revealed that there were adequate facilities and resources to successfully implement the PWP (See Table 6). The deficit in monitoring and evaluation office however may signal some problems in tracking PWP outputs and outcomes.

Information about the organisational functions of the PWP is presented in Table 7.

The findings in Table 7 show that the 2012 PWP was generally well organised and managed. This would positively contribute towards the achievement of PWP outcomes.

Question 9: Did the community assets lead to: more income generating opportunities; increased access to socioeconomic services; clean habitable community spaces; and conservation of land and environment in the community?

Interview responses of community leaders revealed that aquaculture projects presented some income generating opportunities, and the road construction projects increased access to socioeconomic services like markets and hospitals. Waste management projects were reported to have brought short-lived sanitation gains in the form of clean public places whilst the afforested trees were said to have offered potential environmental conservation benefits to be enjoyed in future. Land resource management projects involving bush clearing along the roads were also reported to have enhanced safety or access to socioeconomic services.

Even though the evaluation did not focus on long-term impacts, the development of community assets such as fish dams, roads and forests were likely to yield future socioeconomic benefits if properly utilised and maintained as found by McCord (2004) and Subbarao (2003). Figs. 10 and 11 show some of the projects.

Question 10: Did the beneficiaries use their wages to meet basic food needs, purchase farm inputs and make savings?

Fig. 12 shows a tally of items which participants purchased with wages from the first and second phase ($n = 116$) as well as the third phase ($n = 100$). The majority of the beneficiaries spent their wages on food and groceries.

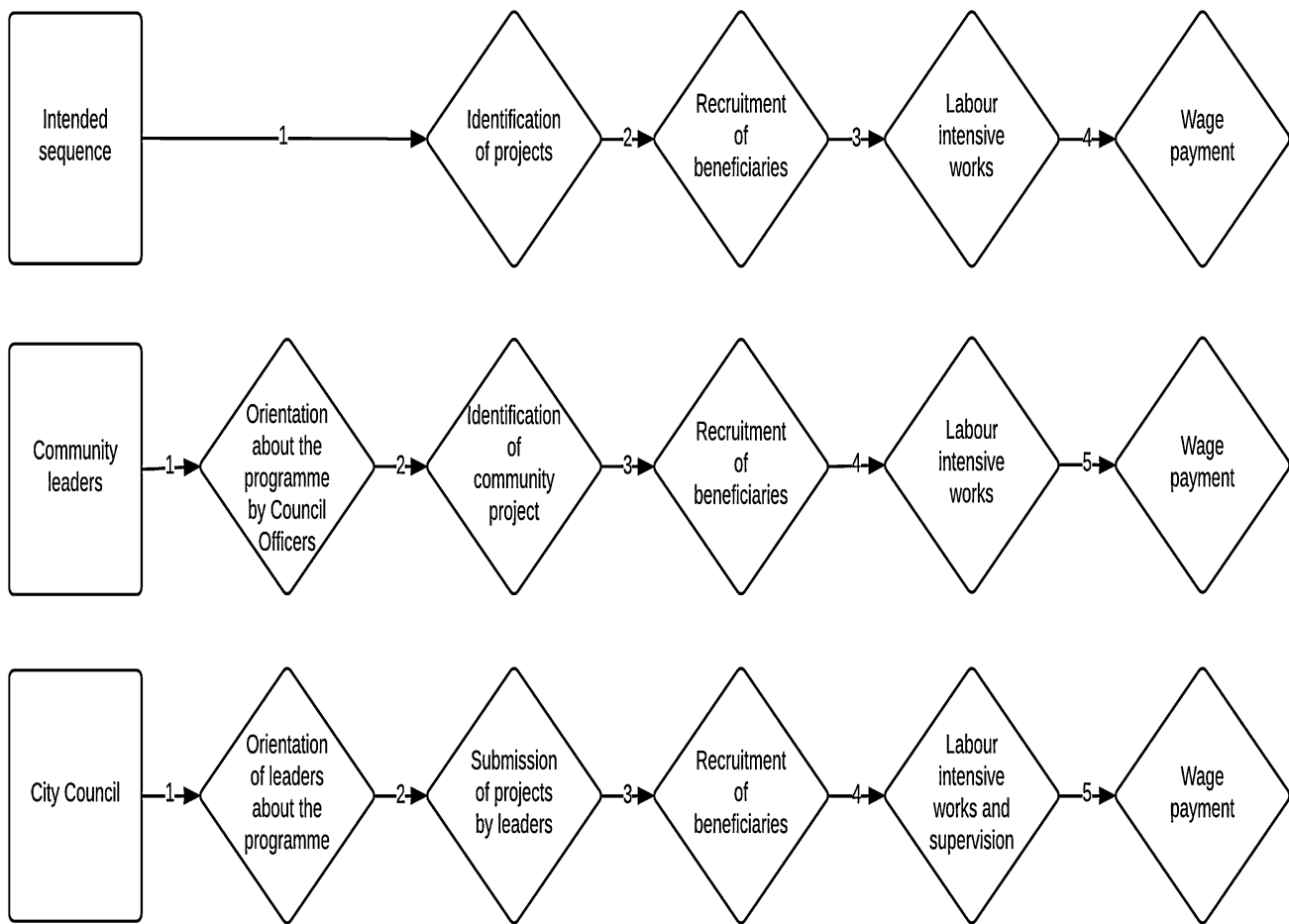


Fig. 9. Sequence of PWP activities.

Table 4
Task sharing ratios.

Project site (Constituency)	Community leaders' perspective		Perspective of programme staff	
	Communities	City Council	Communities	City Council
City Central	50%	50%		
City Malabada	80%	20%		
City South	60%	40%		
City East	70%	30%		
City Bangwe	50%	50%		
City Kabula	60%	40%		
City West	60%	40%		
South East	80%	20%		
Average (all 8 sites)	65%	35%	60%	40%

In order to gauge how much of the wage income was spent on the items displayed in Fig. 12, expenditure-wage proportions were calculated (See Table 8).

Table 8 indicates that the beneficiaries used much of their wages to meet their basic food needs as expressed in the programme theory. Although the mean proportion of wages spent on both fertilizer and seeds was about 50%, only 8% and 3% of the beneficiaries purchased fertiliser and seeds respectively (See Fig. 12). This is slightly contrary to the programme theory and could probably be attributed to the delayed timing of the first cycle of the PWP. Overall, the expenditure pattern of the beneficiaries is consistent with the expenditure patterns of beneficiaries from

other PWPs (Azam et al., 2012; Chirwa, Zgovu, & Mvula, 2002; Mattinen & Ogden, 2006; McCord, 2004).

For savings, an average of 8% of the beneficiaries saved between 14% (\$1.18) to 56% (\$4.73) of their PWP wage income in each phase of the programme. Although the PWP theory assumes that participants will accumulate savings from the wage earning, the average value of 8% is unlikely to comfortably ensure the savings route was a success. Nevertheless, the fact that some participants accumulated savings does somewhat align with the implicit assumption of the PWP theory that participants will make savings. Table 9 shows the proportion of beneficiaries who made savings.

Table 5

Percentage of participants who received wages.

Group	%		
	Phase 1 (n = 498)	Phase 2 (n = 446)	Phase 3 (n = 190)
Blantyre City Central	100.0%	96.1%	94.0%
Blantyre Malabada	100.0%	96.9%	94.0%
Blantyre City South	98.2%	96.7%	100.0%
Blantyre City East	100.0%	85.0%	100.0%
Blantyre Bangwe	97.8%	89.2%	100.0%
Blantyre Kabula	100.0%	98.0%	100.0%
Blantyre City West	99.0%	96.0%	100.0%
Blantyre City South East	95.1%	97.1%	100.0%
Total	98.8%	94.4%	98.4%

Table 6

Availability of facilities and resources.

Facilities and resources	State of adequacy	Support explanation
Qualified staff to implement activities.	Inadequate	Understaffed in monitoring and evaluation office.
Qualified staff to pay wages.	Adequate	
Stability of implementing team.	Stable	With the exception of monitoring and evaluation office.
Time to implement activities.	Adequate	
Technology (computers, phones) for the activities.	Adequate	
Vehicles for the activities.	Adequate	
Funds for administration	Adequate	

Table 7

Organisational functions.

Organisational functions	Response	Support explanation
Availability of work plans for the implementing team.	Available	The implementation team adhered to the work plans.
Management support for the programme.	Available	Through approval of payments, use of Council vehicles, support staff etc.
Morale of the implementing team.	High	
Reports of conflicts among team members.	Few	Irregular conflicts on logistical matters such as composition of the team
Motivation techniques for implementing team.	Available	Per diems for the exercise. Learning visits to other district councils.

**Fig. 10.** Launch of a 2012 PWP road project in Blantyre City by former president of Malawi, Dr. Joyce Banda.

The most common reasons that were given by participants for not saving income were “insufficient to save”, and “too many needs to meet”.

Question 11: Did the livelihoods of beneficiaries improve with respect to total earnings, expenditure on food, number of meals a day, asset wealth, income savings?

Table 10 presents repeated measures ANOVA results with respect to total earnings, expenditure on food, number of meals a day, asset wealth, income savings from baseline to second follow-up.

The ANOVA result for total earnings as shown in **Table 10** is in contrast with the PWP logic that participants use the PWP wage to make investments and earn more income. This could be attributed



Fig. 11. Trees planted under the 2012 PWP in Sanjika forest (left) and a fish pond constructed in the same PWP (right). The pictures were taken in July 2014—about 2 years after the programme.

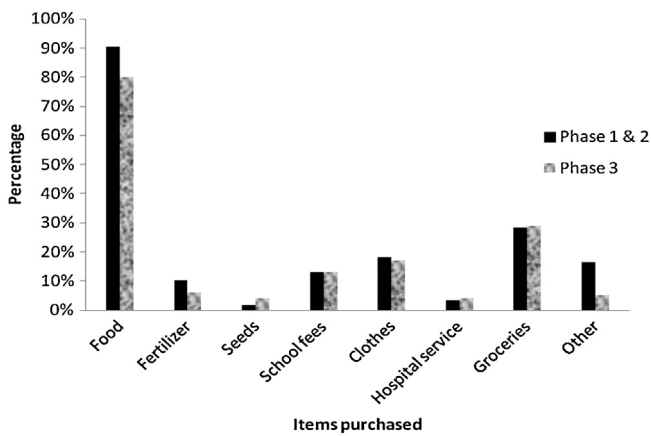


Fig. 12. Tally of expenditures from the PWP wages.

Table 8
Expenditure as a proportion of wages.

Expenditure item	Expenditure-wage proportion	
	Phase 1 and 2 (n = 110)	Phase 3 (n = 100)
	Mean	Mean
Food	64%	73%
Fertilizer	52%	48%
Seeds	52%	38%
Fees	44%	74%
Clothes	35%	42%
Hospital	43%	39%
Groceries	27%	49%
Other items	53%	42%

to the fact that consumables (food and groceries) got the lion’s share of wages as opposed to business ventures.

The increase in food expenditure as proxied by expenditure on maize (staple food) was however in line with the PWP theory

Table 9
Proportion of participants with savings.

Savings	Percentages		
	Phase 1 (n = 181)	Phase 2 (n = 177)	Phase 3 (n = 176)
Saved something	9%	6.5%	7%
Saved nothing	91%	93.5%	92%

which assumes that the wage income helps participants to purchase food thereby register higher expenditures on food. However, these high food expenditures did not translate into higher numbers of meals per day as expected. This could be due to the fact that the first follow-up was conducted just after the general harvesting season when maize is affordable whilst the second follow-up took place at a time when prices of maize had started rising.

Table 10 also shows that the asset wealth of the PWP participants did not improve, contrary to findings that PWPs either improve asset wealth or prevent participants from selling their assets (Berhane et al., 2011; McCord, 2012). An explanation for this could probably be that the wage income was not enough to prevent distress sale of household assets.

The proportion of participants with savings at baseline, first and second follow-ups were 23.9% (n = 188), 19.4% (n = 191) and 27.3% (n = 183) respectively. Chi-square goodness of fit tests showed the baseline and first-follow up proportions of participants with savings to be no significantly different, $X^2(1, N=183)=2.15, p=0.142$. This is against a priori PWP logic that PWPs enhance savings. A possible explanation could be the fact that the baseline to first follow-up period spanned the lean season therefore participants eroded or could not build up savings. There was however a significant increase from the proportion of participants with savings at first follow-up to the proportion of participants with savings at second follow-up, $X^2(1, N=183)=7.35, p=0.007$. This concurs with McCord’s (2004) evaluation in which PWP participants were reported to have accumulated savings.

Various direct and interactive models regressing the baseline measure of some of the continuous outcomes (expenditure on food and total earnings) on the second follow-up measures were carried out to ascertain if there were significant differences between the two timeframes whilst controlling for the pre-test level of education, programme location and gender. The results were insignificant.

Question 12: Did the livelihoods of beneficiaries who received wages in two phases do better than those who received wages only in one phase with respect to: expenditure on food, number of meals a day, asset wealth and income savings?

Table 11 presents statistically insignificant independent t-test results for the mean difference between baseline and first follow-up measures on: expenditure on food, number of meals a day, asset wealth, income savings for the full and partial beneficiary groups.

Table 12 presents the proportion of participants who had savings at baseline and first follow-up in both the full and the partial beneficiary groups.

Table 10
ANOVA results.

Response variable	Baseline		First follow-up		Second follow-up		F-value (ANOVA) <i>n</i> = 200
	<i>M</i>	<i>S</i>	<i>M</i>	<i>S</i>	<i>M</i>	<i>S</i>	
Total earnings ^a	120.46	211.42	127.61	168.18	113.59	191.92	<i>F</i> (2398) = 0.29
Food expenditure ^b	60.67	48.61	54.98	41.13	79.25	56.22	<i>F</i> (1.8,198.2) = 8.28*
Meals a day	2.77	0.46	2.81	0.44	2.64	0.55	<i>F</i> (1.93,369.77) = 8.64*
Asset wealth (Index scores ^c)	2.97	1.28	2.28	1.34	2.19	1.33	<i>F</i> (2398) = 37.35*

**p* < 0.001, ** *p* < 0.05.

^a Total earnings capture the income earnings from the beneficiaries' income generating activities other than the PWP.

^b Food expenditure was proxied by expenditure on maize because it is the main staple food crop in Malawi (www.nsomalawi.mw) and 99.8% (*n* = 2271) of the participants surveyed at baseline indicated the same. The price of maize in 2012 was approximately \$0.16/kg and an average household of 5 people would spend about \$0.60 per day on maize.

^c Asset ownership index was constructed by summing up the number of assets owned by participants with respect to the hoe, radio, bicycle, phone and furniture.

Table 11
t-test results.

Response variable	Full		Partial		<i>t</i> -value
	<i>M</i>	<i>S</i>	<i>M</i>	<i>S</i>	
Expenditure on food	-3.89	63.83	-0.62	43.25	<i>t</i> (61.8) = 0.59, <i>p</i> = 0.56
Number of meals a day	0.00	0.51	0.05	0.53	<i>t</i> (531) = 0.61, <i>p</i> = 0.823
Asset wealth (Index scores)	-0.19	0.77	-0.27	0.54	<i>t</i> (61.8) = 0.59, <i>p</i> = 0.56

Table 12
Group participants with savings.

Beneficiary group	Data collection wave	
	Baseline	Follow-up
Full beneficiary group	25% (<i>n</i> = 472)	21.4% (<i>n</i> = 477)
Partial beneficiary group	25% (<i>n</i> = 29)	25% (<i>n</i> = 44)

The results for a chi-square test of independence for a relationship between having savings and whether a participant belonged to a full or a partial beneficiary group at baseline were insignificant, $\chi^2(1, N = 501) = 0.53, p = 0.510$. At first follow-up, the results also did not show any significant relationship between having savings and whether a participant belonged to a full or a partial beneficiary group, $\chi^2(1, N = 521) = 0.31, p = 0.569$.

Overall, the full beneficiaries did not do better than the partial beneficiaries with respect to: expenditure on food; number of meals per day; asset wealth and income savings. This may mean that the one-phase wage difference was not enough to distinguish the two groups. This is against the assumption that more dosages of wage income lead to better PWP outcomes (Azam et al., 2012).

4. Discussion and recommendations

Table 13 presents a summary of the PWP components, the steps, approach and findings of the evaluation.

Despite its limitations, the evaluation resulted in a number of key findings and recommendations. To a large extent, the process evaluation findings showed a match between actual and planned activities. The only major variations observed included delayed roll-out of the programme, breach of participant recruitment procedures, inefficient administration of the wage payment system, high dropout levels and inconsistent participation of beneficiaries. Corresponding recommendations to put the programme on track included prompt disbursement of funds by the programme sponsors, improved programme planning, apt administration of the wage payment system including setting proper payment modalities, PWP sensitization campaigns targeting the

dropouts and recruitment of beneficiaries by participatory wealth-ranking.

For the outcome evaluation, there were indications that the community assets may have offered the communities some potential income generating opportunities and increased access to socioeconomic services. Furthermore, there were also signals that the assets may have led to clean habitable community spaces, at least in the short term (a few weeks within completion of the programme), and some benefits of environmental conservation through afforestation projects (probably after a number of months). There is however a need for future research to look at the cost efficiency and the long-term impacts of the community assets created.

For the beneficiaries, the employment wage income allowed them to purchase food. In addition, there were meagre indications that some participants, though few, managed to buy farm inputs and also accumulate some income savings as assumed in the programme theory. This however, did not translate into more meals per day or higher earnings from the beneficiaries' other income generating activities. In addition, the PWP wage did not help to prevent the decline in household assets as expected. The evaluation also did not find any difference between the beneficiaries who received wages in two phases and those who received wages in one phase with respect to expenditure on food, number of meals per day, asset wealth and income savings. Given a plausible PWP theory and substantial levels of implementation fidelity, it is possible that the PWP may have only smoothed income earnings, not bolstered them. It is recommended that future research be focused on a comprehensive assessment of the smoothening role of PWP at hand.

Finally, when wage earnings were compared to the Basic Needs Basket of the beneficiaries, the 2012 PWP wage (\$0.71 per day) was found to be slightly below the minimum wage and very low when compared with the beneficiary's household Basic Needs Basket (averaging \$4.07 per day) during the same period (Centre for Social Concern, 2012). The intermediate outcomes may thus have been unrealised because of the very low PWP wage rate. This is confirmed by McCord (2004) who states that pinning a PWP wage rate to the minimum market wage in a setting like that of Malawi where the market wage is extremely low is unlikely to have any significant impact on poverty. In addition, the number of days for

Table 13
PWP components, the steps, approach and findings of the evaluation.

Programme activity	Evaluation question	Approach	Findings
Beneficiary recruitment (Targeting)	1. Were beneficiaries the intended programme recipients?	Assessment of participant records	Mostly poor people as intended. Limited representation of vulnerable groups
Labour intensive works (Activity dosage)	2. What proportion of beneficiaries participated in all four phases of the programme? What proportion of beneficiaries dropped out? What were their characteristics?	Assessment of participant records	Inconsistent participation and a degree of dropouts
Labour intensive works (Content)	3. Were expenditures made according to programme guidelines?	Assessment of expenditure records	Largely planned expenditure matched actual expenditure
Labour intensive works (Content, duration, timing, sequence)	4. Were the actual activities the intended programme activities in terms of content, duration, timing and sequence?	Assessment of programme records and interviews	High level match between intended and actual content, duration and sequence of activities. Slight deviations on timing of some activities.
Labour intensive works (Participant responsiveness)	5. To what extent were the participants involved in community asset selection, beneficiary recruitment, and actual programme implementation?	Assessment of participant records and interviews	Participants highly involved in activities
Payment of wages (Quality of service delivery)	6. Were beneficiary wage payment procedures carried out effectively?	Assessment of participant records	About 1.2% – 5.6% did not receive wages
Quality of service delivery in implementation	7. Were the activities adequately supervised to assure quality of service delivery?	Interviews	The activities were well supervised
Programme support	8. Were administrative and organisational functions of the programme handled well?	Interviews	Most administrative and organisational functions were handled well
Programme Outcomes	9. Did the community assets lead to: a. More income generating opportunities b. Increased access to socioeconomic services c. Clean habitable community spaces d. Land and environmental conservation	Assessment of records, interviews and sight walk-throughs	There were indications that assets were developed. Their potential benefits were however theoretically assumed from the programme theory and responses of community leaders
Programme Outcomes	9. Did the beneficiaries use their wages to meet basic food needs, purchase farm inputs and make savings?	Examination of participant records	Most beneficiaries were recorded to have spent the earnings on food. Few made some savings and also purchased inputs
Programme Outcomes	11. Did the beneficiaries improve with respect to: a. Total earnings b. Expenditure on food c. Number of meals a day d. Asset wealth e. Income savings	Repeated measures design with single group	Generally no indications of significant improvement in the variables
Programme Outcomes	12. Did the beneficiaries who received wages in two phases do better than those who received wages only in one phase with respect to: a. Expenditure on food b. Number of meals a day c. Asset wealth d. Income savings	Quasi experiment	There were no indications of any difference between two- and single-phase wage recipients

the PWP may have also been very few to allow for accumulation of high wage earnings. It might therefore be advisable to deliver the programme to fewer participants, but at a higher wage rate or longer number of days. Future evaluations should attempt to determine whether the optimal PWP wage should be based on the Basic Needs Basket or the minimum wage, more especially in a setting where the minimum market wage is lower than the Basic Needs Basket.

5. Conclusion and lessons learnt

This evaluation sought to provide an example for future theory driven evaluations of PWPs and other social protection programmes. A lesson for evaluators intending to carry out a formative evaluation of PWPs is the need to exhaustively articulate both the action and the impact theory of the PWP given the complexity and

multifarious nature of PWPs. Secondly, for all impact evaluations of cash-for-work social security programmes, it is necessary to conduct an initial programme evaluability assessment to check if the beneficiary cash earnings compare well with the beneficiaries' prevailing cost of living. This would assist evaluators in assessing the likelihood as well as the extent to which economic livelihood gains can be attributed to the programme. It is the discrepancy between the prevailing cost of living and the PWP beneficiary earnings (either due to a low wage rate or short duration of the PWP) that also help explain the lack of impact evidence for the Blantyre City PWP programme. Lastly, it is essential for a programme that involves multiple sites and a diversity of participants to be analysed across those sites whilst controlling for participant characteristics because implementation is likely to vary by site.

Appendix A. SAMPLE SIZE DETERMINATION

Watson's (2001) sample size determination formula

$$n = \frac{p(1-p)}{\frac{A^2}{Z^2} + \frac{p(1-p)}{N}}$$

Where:

n = Sample size required,

N = Total number of subjects in the population,

P = Estimated variance in population, as a decimal: 0.5 for 50-50; 0.3 for 70-30,

A = Precision desired, expressed as a decimal (i.e., 0.03, 0.05, 0.1 for 3%, 5%, 10% respectively),

Z = Based on confidence level: 1.96 for 95% confidence, 1.6449 for 90% and 2.5758 for 99%,

R = Estimated response rate as a decimal.

In this evaluation,

N = 25,131, which is the total population of participants in the 2012 PWP.

P = 0.3, given that about 70% of the randomly sampled participants were female.

A = 0.05, which gives a reasonably large sample size and sample values that do not deviate much from the actual values in the population. Higher precision rates give large sample sizes which are expensive to manage, hence, 0.05 was used.

Z = 1.96, for 95% confidence level, which is reasonable and widely used in literature.

R = 1, since this evaluation does not involve interviewing the actual participants. The rate of response is therefore 100%.

n = 320*, the required sample size.

*After calculations using Ms Excel, the required sample size was found to be 318.60. To equally divide the sample size in eight constituencies, the number was adjusted up to 320 to make it divisible by eight.

References

- Azam, M., Ferré, C., & Ajwad, M. I. (2012). *Did Latvia's public works programme mitigate the impact of the 2008–2010 crisis?* Policy Research Working Paper). Retrieved from World Bank Open Knowledge Repository: <http://hdl.handle.net/10986/11999><http://hdl.handle.net/10986/11999>.
- Berhane, G., Hoddinott, J., Kumar, N., & Taffesse, A. S. ([102_TD\$DIFF]2011). *The impact of Ethiopia's productive safety nets and household asset building programme: 2006–2010*. Washington, DC, USA: IFPRI.
- Bickman, L. (1987). Using programme theory in evaluation. In L. Bickman (Ed.), *New directions for programme evaluation*, no. 33. San Francisco: Jossey-Bass.
- Carroll, C., Patterson, M., Wood, S., Booth, A., Rick, J., & Balain, S. (2007). A conceptual framework for implementation fidelity. *Implementation Science*, 2, 1–9.
- Centre for Social Concern (2012). *Basic needs basket report*. Centre for Social Concern (December 2012) Retrieved from: <http://www.cfscmalawi.org/>.
- Chen, H. T. (1990). *Theory-driven evaluations*. Sage.
- Chirwa, E. W., Zgouva, E. K., & Mvula, P. M. (2002). Participation and impact of poverty-oriented public works projects in rural Malawi. *Development Policy Review*, 20(2), 159–176.
- Coryn, C. L. S., Noakes, L. A., Westine, C. D., & Schröter, D. C. (2011). A systematic review of theory-driven evaluation practice from 1990 to 2009. *American Journal of Evaluation*, 32(2), 199–226. <http://dx.doi.org/10.1177/1098214010389321>.
- Coupe, S., & Pasteur, K. (2009). Food and livelihood security lesson learning study including community extension. *Bangladesh country study report*. Unpublished Practical Action Project Report. Retrieved from [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwipudOM-qbKAhWFqW4KHJYxCOIQFggeMAE&url=https%3A%2F%2Fpracticalaction.org%2Fmedia%2Fdownload%2F14497&usg=AFQjCNHdQiflrKm5tj6KMgOe5pZBhouiLw&bvm=bv.111677986,d.ZWU](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwipudOM-qbKAhWFqW4KHJYxCOIQFggeMAE&url=https%3A%2F%2Fpracticalaction.org%2Fmedia%2Fdownload%2F14497&usg=AFQjCNHdQiflrKm5tj6KMgOe5pZBhouiLw&bvm=bv.111677986,d.ZWUhttps://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwipudOM-qbKAhWFqW4KHJYxCOIQFggeMAE&url=https%3A%2F%2Fpracticalaction.org%2Fmedia%2Fdownload%2F14497&usg=AFQjCNHdQiflrKm5tj6KMgOe5pZBhouiLw&bvm=bv.111677986,d.ZWU).
- Davies, M., Guenther, B., Leavy, J., Mitchell, T., & Tanner, T. (2009). Climate change adaptation, disaster risk reduction and social protection: complementary roles in agriculture and rural growth? *IDS Working Papers*, 2009(320), 01–37.
- del Ninno, C., Subbarao, K., & Milazzo, A. (2009). *How to make public works work: A review of the experiences*. Retrieved from <http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Safety-Nets-DP/0905.pdf>.
- Evaluation Tool Box (2010). *Formative evaluation*. Retrieved from http://evaluationtoolbox.net.au/index.php?option=com_content&view=article&id=24&Itemid=125.
- FAO (2013). *The state of food insecurity in the world*. Rome: Food and Agricultural Organisation of the United Nations.
- Fitz-Gibbon, C. T., & Morris, L. L. (1996). Theory-based evaluation. *Evaluation Practice*, 17(2), 177–184.
- Funnell, S. C., & Rogers, P. J. (2011). *Purposeful programme theory: Effective use of logic models and theories of change*. San Francisco, CA: Jossey-Bass.
- Galasso, E., & Ravallion, M. (2004). Social protection in a crisis: Argentina's plan Jefes y Jefas. *The World Bank Economic Review*, 18(3), 367–399.
- Gilligan, D. O., Hoddinott, J., & Taffesse, A. S. (2009). The impact of Ethiopia's productive safety net programme and its linkages. *The Journal of Development Studies*, 45(10), 1684–1706.
- Grosh, M. E. (2008). *For protection and promotion: The design and implementation of effective safety nets*. World Bank Publications.
- Haushofer, J., & Shapiro, J. (2013). *Welfare effects of unconditional cash transfers: Evidence from a randomized controlled trial in Kenya*. Unpublished Working Paper.
- Innovative Resources Management (2005). *Congo livelihood improvement and food security project*. Innovative Resources Management, Inc. Retrieved from http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwN8Z_r-abKAhVIDA8KHcnuDtSfQfggMAA&url=http%3A%2F%2Fpdf.usaid.gov%2Fpdf_docs%2Fpdach746.pdf&usg=AFQjCNGKNxTIUfHO1a37h38McarbOnvqWw.
- Mattinen, H., & Ogdén, K. (2006). Cash-based interventions: Lessons from southern Somalia. *Disasters*, 30(3), 297–315.
- McCord, A. (2004). *Policy expectations and programme reality: The poverty reduction and labour market impact of two public works programmes in South Africa*. Economics and Statistics Analysis Unit, London, Overseas Development Institute.
- McCord, A. (2005). *Public Works in the Context of HIV/AIDS: Innovations in public works for reaching the most vulnerable children and households in east and southern Africa*. Nairobi: UNICEF.
- McCord, A. (2012). *Public works and social protection in Sub-Saharan Africa: Do public works work for the poor?* Cape Town: UCT Press.
- McCord, A. (2013). *Public works and resilient food systems*. London: Overseas Development Institute.
- Mo Ibrahim Foundation (2013). *Forum facts & figures: Africa ahead- the next 50 years*. Mo Ibrahim Foundation (2013, November) [website] Retrieved from <http://www.moibrahimfoundation.org/>.
- Mvula, P., Chirwa, E., Zgouva, E., & Kadzamira, E. (2000). *Second beneficiary assessment of the public works programme (Report by wadonda consult prepared for Malawi social action fund)*. Lilongwe: MASAF.
- NSO (2011). *Malawi demographic and health survey: 2010 report*. NSO Retrieved from NSO Publications: http://www.nsomalawi.mw/images/stories/data_on_line/demography/MDHS2010/MDHS2010%20report.pdf.
- ÖIR (2012). *Synthesis of mid-term evaluations of rural development programmes 2007–2013*. Vienna: Österreichisches Institut für Raumplanung.
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation. a systematic approach*, 7th ed. Thousand Oaks: Sage Publications.
- Subbarao, K. (2003). *Systemic shocks and social protection: Role and effectiveness of public works programmes (Social Protection Discussion Paper No 0302)*. Retrieved from World Bank website: <http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Safety-Nets-DP/0302Spanish.pdf>.
- Subbarao, K., Bonnerjee, A., Braithwaite, J., Carvalho, S., Ezemenari, K., Gram, C., et al. (1997). *Safety net programmes and poverty reduction Lessons from cross-country experience*. Washington D.C: The World Bank.
- Subbarao, K., del Ninno, C., Andrews, C., & Rodríguez-Alas, C. (2013). *Public works as a safety net: Design, evidence, and implementation*. Washington, DC: World Bank. <http://dx.doi.org/10.1596/978-0-8213-8968-3>.
- VSO (2011). *Improving livelihood and food security in kisumu Kenya*. Unpublished evaluation report. Retrieved from http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwipajj-qbKAhWEiQ8KHrFMCY0QFggcMAA&url=http%3A%2F%2Fwww.vsointernational.org%2Fsites%2Fvso_uk%2Ffiles%2Fdocuments%2FPartnerships%2FDiaspora%2Fimproving-livelihood-and-food-security-in-kisumu.pdf&usg=AFQjCNGxUHNqZdz6TmApTtEltKB8F-00w&bvm=bv.111677986,d.ZWU.
- Watson, J. (2001). *How to determine a sample size*. TipSheet #60, University Park, PA: Penn State Cooperative Extension Retrieved from <http://www.extension.psu.edu/evaluation/pdf/TS60.pdf>.
- Weiss, C. H. (1997a). Theory-based evaluation: Past, present, and future. *New Directions for Evaluation*, 1997(76), 41–55.
- Weiss, C. H. (1997b). How can theory-based evaluation make greater headway? *Evaluation Review*, 21(4), 501–524.
- Zeller, M., Feulefack, J., & Neef, A. (2006). How accurate is participatory wealth ranking (PWR) in targeting the poor? A case study from Bangladesh. *International association of agricultural economists*.
- Zimmermann, L. (2014). *Public works programmes in developing countries have the potential to reduce poverty*. IZA World of Labour.