## Africa Centre for Evidence

WOMEN IN WAGE
LABOUR:
A SYSTEMATIC
REVIEW OF EFFECTS
Summary report



This is the summary report based on the technical report of the Women in Wage Labour systematic review produced by the Africa Centre for Evidence. This report aims to summarise and communicate the main findings of the full systematic review. The technical report entitled 'What are the effectiveness and design features of interventions that aim to overcome barriers to women's participation in the labour market in higher-growth and/or male-dominated sectors in low- and middle-income countries?' can be found here: https://africacentreforevidence.org/outputs-2/

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#### **Executive summary**

In low and middle income countries (LMICs), women's participation in wage labour is significantly lower than that of men. In addition, women's participation is often clustered in particular sectors of the economy that are not well-remunerated and have lower prestige. The horizontal and vertical occupational segregation of wage labour markets in LMICs for women hinders both economic and social development (United Nations 2013; ILO 2016).

In response to this challenging gendered nature of wage labour markets in LMICs, a range of interventions and policies have been proposed to increase women's employment, but it is not clear what programme approaches and design features are most effective. In order to provide a reliable overview and synthesis of this diverse evidence base, we conducted a systematic review of all the available impact evaluation evidence on the effects of interventions aiming to support women's wage labour participation in higher-growth/male-dominated sectors. Our systematic review includes: (i) an interactive evidence map of research on labour market interventions in LMICs; (ii) a statistical synthesis to assess what interventions are effective; and (iii) an assessment of the intervention design features that drive programme effects using qualitative comparative analysis (QCA).

Screening 16,091 citations led to the inclusion of 19 impact evaluations of interventions aiming to support women's wage labour participation in highergrowth/male-dominated sectors. Overall, the evidence provided by these 19 studies can be described as of low quality. A range of biases challenge the attribution of observed labour market effects to the applied interventions and the overall quality of evidence identified in the review is low. We conducted five syntheses on five different homogeneous intervention categories in order to examine the overall effects of different interventions on women's wage labour outcomes. However, only a single synthesis is based on evidence of sufficient quality to allow us to state research results. This synthesis refers to the impact evaluation evidence on combined training and job placement interventions in

which the identified evidence was of higher quality than for the rest of the evidence base.

Synthesising the effects of nine combined training and job placement interventions using meta-analysis, we identified an increase in women's wage labour employment of 0.159 Standardised Mean Difference (SMD) (0.09, 0.23), which translates into a 7.8% greater increase in wage employment for women taking part in the training and placement programmes as compared to a control group. These interventions were further effective in increasing women's income (SMD 0.145; 0.07, 0.22). This effect size expressed a 7.2% greater increase of income for women taking part in the interventions. These findings are based on a **moderate quality of evidence** and therefore indicate cautious evidence that combined training and placement interventions are a promising programme approach.

There is insufficient evidence to investigate the aggregate effectiveness of combined training and placement interventions on women's economic empowerment or to assess the cost-effectiveness of these interventions.

There is currently a lack of evidence to comment on the effectiveness of the following interventions to support women's participation in wage labour in higher-growth/male-dominated sectors in LMICs: soft skills training to address vertical occupational segregation; job placement only interventions; national labour subsidies; and macro-level women's empowerment policies.

Lastly, our systematic review identified seven intervention design features of women's wage labour intervention in LMICs that can be described as the active ingredients of interventions supporting positive outcomes in women's wage employment (Figure 9):

- 1. Change to labour market norms
- 2. Labour demand-led intervention design
- 3. Gender-sensitive intervention design
- 4. Provision of soft/life skills and social empowerment training
- 5. Participant profiling and targeting
- 6. Clear governance structures
- 7. Flexibility and responsiveness.

#### 1. Introduction

## Why is women's economic empowerment important

Women's economic empowerment is both a means and an end in international development. Gender equality is one of the 17

Sustainable Development Goals (SDGs), with four of the nine targets of this goal directly related to women's economic empowerment (United Nations 2015). There is strong longitudinal evidence that increasing the inclusion and participation of

women in the labour market supports economic growth and development (IGC 2016; Kabeer 2012; World Bank 2012). For example, it is estimated that the full participation of women in labour forces can add multiple percentage points to most national economic growth rates, increasing aggregate socio-economic development (United Nations 2015).

The McKinsey Global Institute estimates that if all women were able to participate fully in the economy, it would contribute up to US\$ 28 trillion to annual global gross domestic product (GDP) in 2025 (McKinsey 2015). The potential benefits of women's participation in the labour market underlines that the economic empowerment of women is by no means a zero-sum game: society as a whole stands to gain from it. As much as women's economic empowerment has intrinsic value and benefits for individual females, it is equally a virtuous circle that benefits society as a whole socially and economically.

#### What is the problem?

Globally, only 50% of women participate in the labour force as compared to 76% of men. In addition to facing barriers to labour force participation, the quality and nature of women's labour market participation differs from that of men. Women participants in the labour market earn 24 % less than men do

globally (United Nations 2013). They represent the majority in non-standard, informal, temporary, part-time, and low-paid jobs (ILO 2016). For example, globally 57% of all parttime workers are female.

Much of this difference in the quality and nature of women's labour market participation

Despite the well-established positive relationship between women's economic empowerment and socioeconomic development, females in all regions of the world face significant barriers to their labour market participation (ILO 2016; UN 2013; World Bank 2012).

can be explained by sectoral and occupational segregation. Globally, women in employment are overrepresented and clustered in particular professions and sectors of the economy that offer lower salaries and less lucrative employment conditions. For instance, 60% of women in low-income and lower-middle-income countries are employed in the agricultural sector, taking up poorly paid but time- and labour-intensive jobs (ILO 2016). Likewise, women are overrepresented in running informal household businesses such as tuck shops and local garment businesses with little potential for growth and high market saturation (Vaessen et al 2014).

In contrast, women are underrepresented in many high-growth and well-paying professions. In most countries, men dominate the occupation of plant and machine operators and assemblers; law and legislation; business administration and management; finance; and information and communication technologies (ICTs) (ILO 2016). It is this specific challenge that this systematic review is concerned with: the participation of women in the labour force in higher-growth and/or male-dominated sectors only.

In addition to horizontal segregation in the labour market, women further experience vertical segregation within professions. For

instance, globally only five percent of the world's largest companies are managed by a female chief executive officer (ILO 2016). Vertical segregation can be one of the many barriers faced by women either obtaining a sufficient return on their labour or using wage employment as a means to improve their livelihoods.

## What are the barriers to women's labour market participation?

Five barriers can impede women's participation in higher-growth and/or male-dominated sectors¹: (i) discrimination by markets and work institutions against women; (ii) constraints in access to credit, finance and assets; (iii) disadvantages in their employability and entrepreneurship; (iv) restrictive social norms and a subsequent lack of social capital; and (v) behavioural biases that influence social and economic decision making that all human beings are subject to.

To be overcome, each of these five key barriers to women's labour market participation requires the use of a deliberate intervention implemented in the form of public policies and programmes. The list of possible interventions is long and underlines the urgency with which women's social and economic barriers have to be addressed. This review extends to any intervention likely to support women in LMICs to overcome any of the five barriers to their

labour market participation.

#### Why is the review needed?

There are currently no systematic reviews that address the question of which interventions work to improve women's participation in the labour market in higher-growth and/or maledominated sectors. While there is ample research evidence attesting to women's underrepresentation in such sectors, there is so far no rigorous synthesis of the interventions that can change the economic empowerment status of women in such sectors.

At a policy level in international development, women's economic empowerment is a high priority. The International Labour Organisation (ILO) has declared women's full participation in the labour market one of its centenary goals. In addition to being directly mandated by SDG 5, women's economic empowerment was the focus of a UN Foundation's report on the state



<sup>&</sup>lt;sup>1</sup> For a more detailed discussion on these barriers and the process for identifying them, please see the technical report, section 1.4.

of research on women's economic empowerment (UN 2013). This report, 'a roadmap for promoting women's economic empowerment', is based on a review and synthesis of 136 empirical evaluations of women's empowerment programmes and policies. The report was updated by the Center for Global Development (CDG 2016), which added 96 new evaluations that have been published since the launch of the 2013 Roadmap report. There is thus a rich and growing body of research evidence evaluating the effect of policies and programmes on women's economic empowerment.

However, the focus of this review is not on women's economic empowerment through labour market participation per se. Our review's scope is slightly different in that it focuses specifically on wage employment as a means to empowerment and employment only in highergrowth and/or male-dominated sectors. In addition, aside from the CGD and UN reports, little attention has been paid overall to the design features of interventions to improve women's economic empowerment, which limits our understanding of why some interventions work while others do not, and under what circumstances.

There is also a range of existing reviews of labour market interventions in LMICs (e.g. Kluve 2016; Tripney 2013; 2015), which point to the impact of training programmes on labour market outcomes, for example. However, these reviews are not focused on women's labour market participation, nor participation in higher-growth/male-dominated sectors. As a result, the impact of labour market interventions focused on increasing women's wage employment in specific higher-growth/male-dominated sectors has not been investigated yet.

Our systematic review aimed to fill this gap by answering the following review question:

'What are the effectiveness and design features of interventions that aim to overcome the barriers to women's participation in the labour market in higher-growth and/or maledominated sectors in low-and middle-income countries?'

In doing so, we addressed the following review objectives:

- To produce an interactive evidence map of research evaluating interventions aiming to overcome barriers to women's economic empowerment in LMICs.
- To provide a rigorous synthesis of impact evaluation evidence to identify the effects of interventions supporting women's participation in wage labour in higher-growth and/or male-dominated sectors in LMICs.
- To identify design features that influence the effects of interventions aiming to overcome barriers to women's economic empowerment in LMICs.

#### 2. Methods

We conducted an effectiveness systematic review (Snilstveit 2012) focused on: (i) the effectiveness of interventions that support women's participation in the labour market in higher-growth and/or male-dominated sectors, and (ii) the design features of such interventions. The review included studies that measured the effect of interventions and that reliably attributed observed effects to the applied interventions. Individual effects were synthesised into an overall estimate of treatment effects, and then disaggregated according to the identified design features of the interventions. These are the steps that we followed in this systematic review:<sup>2</sup>

#### **Inclusion criteria**

- We only included rigorous quantitative impact evaluation of women's wage labour interventions. Evaluations were required to apply a counterfactual-based design.
- Only studies conducted in LMICs were eligible for inclusion. Studies further had to target at least one of the identified higher-growth/maledominated sectors.
- At least more than half of the study sample had to be women and studies were required to investigate wage labour outcomes as a primary outcome.

#### Searching

- In order to identify relevant research studies, we conducted an exhaustive search of 74 academic and grey literature sources.
- The search strategy combined terms related to Women, Wage Labour and LMICs, which were combined using Boolean operators.
- The search was conducted by an information scientist.

### Data extraction and quality assessment

- We followed a transparent and structured approach to extract relevant data from the included studies using a predefined data extraction tool. A subset of studies was double-coded in order to ensure inter-reviewer reliability.
- We applied an explicit risk of bias assessment tool for randomised and non-randomised studies developed by the Cochrane Collaboration. Studies were judged as being of a low, moderate, high or critical risk of bias. No studies were excluded from the systematic review based on the risk of bias ranking.

#### **Synthesis**

- We used statistical metaanalysis in order to establish the overall effects of different labour market interventions, and narrative synthesis where the identified evidence-base did not allow us to statistically pool the results of the studies.
- For the statistical meta-analysis, we calculated standardised mean differences (SMD) as the most relevant effect size unit of analysis.
- In order to investigate what design features of interventions were associated with positive intervention effects on women's wage labour outcomes, we applied Qualitative Comparative Analysis (QCA) and narrative synthesis.

<sup>&</sup>lt;sup>2</sup> A full description of the methods used in this review can be found in the technical report and was published in a detailed review protocol (Langer et al 2017; 2018).

#### 3. Descriptive results

The descriptive results of the systematic review presented in this section are used to contextualise the synthesised review findings. This section outlines how the included studies were identified, and highlights key features of the included studies' settings, populations, interventions, outcomes, study designs and risks of bias.

#### How the included studies were identified

We identified a total of 16,091 citations when we searched for impact evaluations on the effects of interventions supporting women's labour market participation in LMICs (figure 1). Grey literature and academic databases were searched to access the evidence base. After screening on title and abstract, the large majority of citations were excluded as not relevant to the review question (n=15,590). We then retrieved the full texts of the remaining 501 studies and screened them against our inclusion criteria, which led to the exclusion of a further 482 studies. The two most common reasons for exclusion on full text were because studies did not evaluate the effects of interventions on wage labour outcomes (n=241), or because studies did not focus on a sector relevant to the review (n=112). As a result, our final included sample was 19 studies.

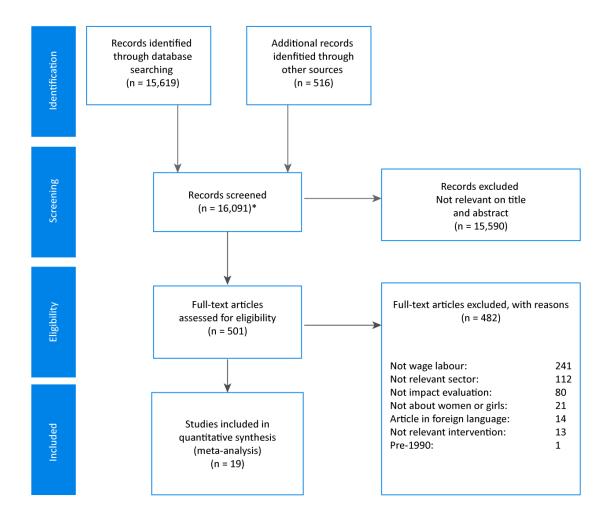


Figure 1: Flow chart of search results

#### Study type

Of the 19 studies included in the review, the majority were published as working papers (n=13), followed by journal articles (n=5), and a single evaluation report. The majority of studies were published between the years 2013 and 2015 (figure 2).

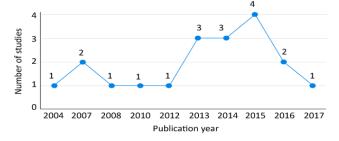


Figure 2: Years studies were published

#### **Study setting**

Figure 4 presents a summary of the settings in which studies took place. For each study it lists intervention name and effectiveness, gender gap index, level of freedom, and country wealth.

Nine studies were conducted in Asia, while five studies each were conducted in Latin America and Africa. The most researched country was India (n=4).

#### Socio-economic indicators

A variety of socio-economic indicators were investigated using different dimensions.<sup>3</sup>
According to the World Bank classification of economies, a majority (n=13) of our included evaluations were conducted in countries classified as LMICs, with an average GNI/per capita of USD 2,400. There was no clear trend among the included studies regarding urban and rural socio-economic categorisation; the majority of studies spanned both rural and urban areas (n=10), and only one study targeted employment in rural labour markets exclusively.

We used the Freedom House index to identify the political regime of the countries covered by the included studies. Only one study was conducted in a country rated as 'not free'. We used the World Economic Forum Global Gender GAP index to indicate the extent to which countries have closed the gender gap. The included studies' average GAP was 0.672 (the gender gap is 67% closed); see figure 3. This average among the included studies is close to the global average of 0.68. In terms of the economic sub-component of the GAP, the Economic Opportunity and Participation Index, the studies included in our review, on average, were conducted in countries with a lower economic participation of women (0.51 compared to the global average of 0.59).

#### Labour market settings

Manufacturing was the most frequently cited higher-growth sector (n=10). Figure 3 gives a detailed breakdown of the number of studies covering different sectors.

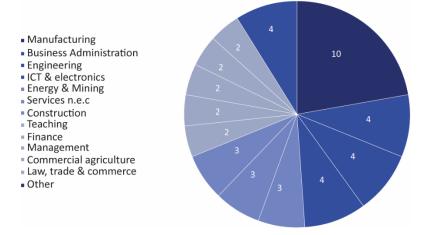


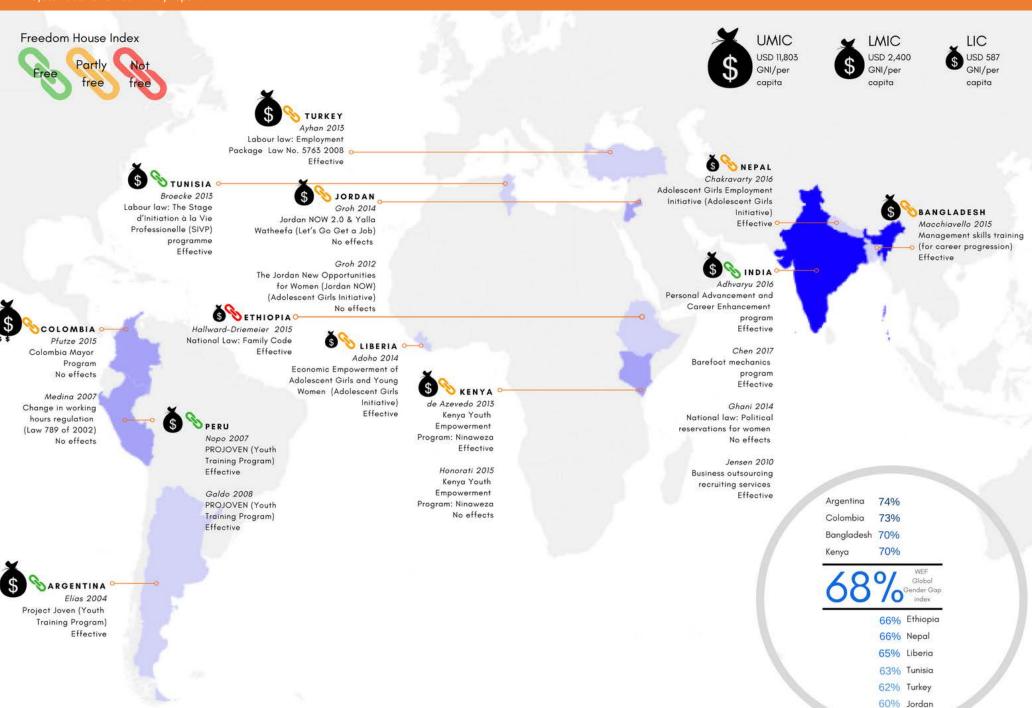
Figure 3: Economic sectors in which studies took place

*Political indicators* 

<sup>&</sup>lt;sup>3</sup> See the technical report for a description of all the socioeconomic and political dimensions investigated.

Figure 4: Settings in which studies took place

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#### Study population

The included studies featured a diverse group of women. When we averaged out the characteristics of female participants, we developed an idea of the average woman targeted in interventions that are part of this review. This woman is unmarried, 25.9 years old, out of work or has recently completed or dropped out of school, enjoys a higher than average level of schooling and lives in a disadvantaged setting. In summary, the reviewed labour market interventions therefore did target more economically mobile and skilled women and developed explicit participant profiling criteria in that regard.

#### **Study intervention**

Our systematic review covered 20 different interventions that support women's labour market participation that were reported in the 19 included studies<sup>4</sup>. In four studies, two different interventions were applied and evaluated (Adoho 2014; Chakravarty 2016; Honorati 2015; de Azevedo 2013) while Groh (2012) reported three interventions.

We divide the included interventions into five overall groupings of programmes: (i) interventions that combined job skills training with job placement support (n=9); (ii) interventions that only provided job skills training (n=2); (iii) interventions that only provided job placement support (n=3); (iv) macro-level gender empowerment policies (n=2); and (v) national labour subsidies<sup>5</sup>.

Three interventions were evaluated across different settings. These were the World Bank's Adolescence Girls Initiative, which was implemented and evaluated in studies from Liberia, Nepal, and Jordan; three studies evaluating the impacts of Jovenes programmes in Latin America (Peru and Argentina); and two



studies assessing the effects of the Kenyan Youth Empowerment Program Ninaweza.

#### Study outcome

There were two primary outcomes in this review: (i) women's participation in wage employment; and (ii) women's economic empowerment. While all the studies reported a measure of women's participation in wage employment, eleven also reported a measure of women's economic empowerment.

#### **Primary outcomes**

The first primary outcome – women's participation in wage employment – was most often measured as a change in the formal employment status of participants (n=17

<sup>&</sup>lt;sup>4</sup> Six of the interventions reported did not target women's wage labour employment and are therefore excluded from further consideration.

<sup>&</sup>lt;sup>5</sup> Note that this grouping differs slightly from the technical report, section 4.5. We split the macro-economic programme category here in two sub-categories for ease of summary and discussion.

studies). Additional measures of this outcome included a change in: career progression (n=2); the nature of employment (n=11); employment setting or employer (n=2); and underemployment (n=1).

The second primary outcome – women's economic empowerment – was measured by a variety of indicators. Seven studies used different indices of women's empowerment (such as women's self-perception of their confidence and self-esteem); four studies looked at women's income; and a single study measured women's well-being.

#### Cost effectiveness

Only nine of the 19 studies reported some form of cost data. Four of these merely reported the costs of the intervention, whereas the remaining five conducted formal cost-effectiveness calculations.

#### **Unintended outcomes**

Four of the 19 included studies indicated unintended outcomes: two reported adverse wage effects and two reported adverse employment effects.

#### Study design

Four types of impact evaluation designs were covered by the 19 included studies: RCTs, natural experiments, prospective quasi-experimental designs, and retrospective quasi-experimental designs. The average sample size of the included evaluations was 2,339, ranging from 100 to 8,695 participants (after the removal of outliers). The average period of follow-up was approximately eleven months. Most studies compared their intervention group with a no intervention group (n=15).

#### **Study trustworthiness**

The risk of bias of each of the 19 included studies reports the extent to which the studies were biased in different ways. Knowing the risk of bias is important because this shapes the trustworthiness of the evidence base. The

higher the risk of bias, the lower the trust that can be put in a study's findings.

In the evidence base on interventions to support women's wage labour participation, only five of the 19 included studies had an overall low risk of bias. <sup>6</sup> Seven methodological dimensions were used to determine the risk. The overall risk of bias rating for the studies, as well as the combined risk rating for each dimension, is shown in figure 5. <sup>7</sup>

#### Overall quality of the evidence base

In addition to the risk of bias assessment, we also conducted a formal assessment of the

Overview of risk of bias assessment

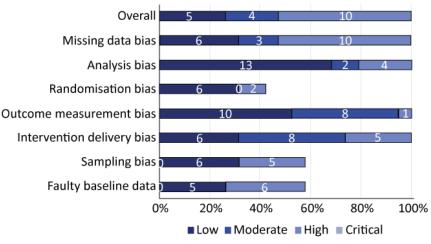


Figure 5: Overview of studies risk of bias

overall quality of the evidence included in the review and how this influenced the review's findings. For this purpose, we applied the GRADE strengths of the evidence assessment tool (Appendix 2). Applying the GRADE framework, we established that the overall quality of the evidence included in our five syntheses was low. Only the evidence included in the meta-analysis on combined training and placement interventions was of moderate quality. All the other syntheses were based on

 $<sup>^{\</sup>rm 6}$  No studies were found to have a critical risk of bias in any of the dimensions.

<sup>&</sup>lt;sup>7</sup> Each study's detailed risk of bias is provided in the technical report.

either low-quality evidence (n=1) or very low-quality evidence (n=3). In summary, the small size and heterogeneous, low quality nature of the evidence base limit the findings of our systematic review. Findings from syntheses based on intervention groupings with low-to very low-quality evidence have to be treated with particular caution.

#### 4. Synthesis results

Twenty interventions reported in the 19 included studies were assessed for their effectiveness on women's wage labour, income, and empowerment outcomes in the synthesis. We grouped these interventions into five homogeneous

facilitate a meaningful

synthesis (figure 6). We

discuss the findings on

the effects of each

Macro Job placement empowerment services only policies (n=3)National labour subsidies groups of programmes to (n=2)

Figure 6: Five programme groups

programme group on women's wage labour, income, and empowerment outcomes in turn.

> What are the effects of interventions that combine training with placement services on labour market outcomes?

The results of our meta-analysis of nine combined training and job placement interventions suggest that there is a small to moderate effect on women's wage labour participation in higher-growth/male-dominated sectors. This effect is statistically significant with a narrow confidence interval and consistent across the included studies. Given the homogeneity in the intervention design and observed outcomes, no moderator variables were found to be significant and neither are the results of the meta-analysis sensitive to the applied study designs. These findings are based on a moderate quality of evidence. We therefore present cautious evidence that combined training and placement interventions can improve women's wage labour employment outcomes.

#### Labour market programmes included in the meta-analysis

A total of nine studies evaluated the effects of combining training with job placement services to enhance women's participation in wage labour markets in higher-growth/maledominated sectors in LMICs.

> Roughly half of the evaluated interventions used quasiexperimental research designs (n=5), with the other half applying RCT evaluation designs. In terms of risk of bias, of the nine studies included in the metaanalysis, only two were of low risk of bias (Adoho 2014; Groh 2012). Three studies had a moderate risk of bias (Chakravarty 2016; Elías 2004; Ñopo 2007) and four studies had a high risk of bias (Chen 2017; de Azevedo

2013; Galdo 2008; Honorati 2015).

All but two studies assessed wage labour outcomes of women as a change in employment status as reported in survey data. Galdo (2008) relied on longitudinal survey and administrative data for measures of employment while Elías (2004) accessed administrative data sets to assess the wage labour outcomes of women.

We were able to calculate effect sizes for all studies except Ñopo (2007), which only reported frequencies and percentage change of employment rates without any measure of variance or significance being stated. The Galdo (2008) study is not included in this metaanalysis on employment outcomes as we were only able to calculate effect sizes for income outcomes, given a lack of statistical information on the disaggregated employment outcome for females. For de Azevedo (2013), we calculated two effect sizes, as the study compared the effects of two different types of training + job placement services interventions: first, a training that combined ICT and life/soft skills followed by job placement services (T1); and second, a training that only provided ICT skills followed by job placement services, but no life/soft skills (T2).

Overall, three types of labour market programmes are represented in this group of interventions: the Latin America Youth Training model Jovenes, the World Bank's Adolescent Girl's Initiative (AGI), and Kenya's Youth Empowerment Programme, Ninaweza. The outlier in this group was an evaluation of the Barefoot Mechanics programme in India, which differed from the rest of the interventions as it focused on elderly women, was conducted exclusively in rural areas and in one sector of the economy, and was applied at a significantly smaller scale than the remaining interventions.

### The Latin America Youth Training model Jovenes

Three studies (Elías 2004; Galdo 2008; Ñopo 2007) evaluated the effects of the Latin America Youth Training model Jovenes. These programmes combined technical and vocational skills training with subsequent internships and job placements for youth in a range of Latin American countries, and were thus deliberately designed to enhance youths' practical and employment-relevant skills as well as their work experience. The three studies included in this meta-analysis evaluated Jovenes programmes in Peru and Argentina.

### The World Bank's Adolescent Girl's Initiative (AGI)

Three studies evaluated the effects of programmes conducted under the World Bank's Adolescent Girl's Initiative, which included the Economic Empowerment of Adolescent Girls and Young Women (EPAG) programme in Liberia (Adoho 2014), the Adolescent Girls Employment Initiative (AGEI) programme in Nepal (Chakravarty 2016), and the Jordan New Opportunities for Women (Jordan NOW) programme (Groh 2012). AGI-inspired programmes built on the initial approach of the Jovenes programmes — combining practical skills training with work experience — but also

#### Kenya's Youth Empowerment Programme Ninaweza

Two studies evaluated the effects of Kenya's Youth Empowerment Programme Ninaweza (de Azevedo 2013; Honorati 2015). The studies evaluated the impact of the programme in different locations and at different times, with the programme design varying between the evaluations. Ninaweza's design was closely linked to the AGI model of female labour market programmes, but was not exclusively focused on girls and placed a special emphasis on ICT skills and employment.

### Combined effects of training + job placement interventions on labour market outcomes

Using a random effect meta-analysis model,<sup>8</sup> we identified the overall effects of the described training and job-placement services on women's wage labour market outcomes in higher-growth/male-dominated sectors in LMICs. The results of the different meta-analyses are graphically represented on forest plots (figures 7 and 8). The results from sensitivity and moderator analyses are discussed.<sup>9</sup>

Overall, we find that training + placement interventions lead to a positive combined effect size of 0.159 (0.09, 0.23). This identified effect can be described as small to moderate, representing a 7.8% difference in changes in employment rates in favour of the women taking part in these labour market programmes. The meta-analysis results are subject to a moderate degree of heterogeneity<sup>10</sup> and the

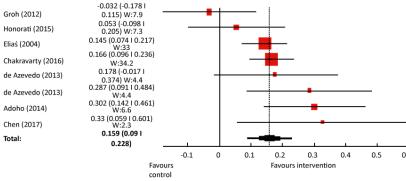
merged this programme design with livelihoodand empowerment-related programme components, such as soft skills and life skills training (Honorati 2013). In addition, the AGI model focused exclusively on young women, unlike the Jovenes programmes, which targeted both men and women.

<sup>&</sup>lt;sup>8</sup> The use of this model is justified as the true effect across studies is likely to differ related to various socio-economic backgrounds or intervention designs.

<sup>&</sup>lt;sup>9</sup> The detailed results from these analyses are available in tabular format in the technical report.

<sup>&</sup>lt;sup>10</sup> We took an observational approach to uncover possible sensitivities that we then formally assessed statistically

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Heterogeneity: Q=14.8; p=0,0393; i2=52,5%; tau2= 0,0045; total participants: 10,207

Figure 7: Meta-analysis of training + placement on wage labour outcomes

confidence intervals of all but one study overlap.

To assess whether the observed overall effect might be driven by variables other than the applied labour market intervention, we ran sensitivity and moderator analyses.

Our sensitivity analysis found that the effect sizes are not sensitive to the following variables:

- Applied study design
- Risk of bias
- Period of follow-up.

Since only one study did not use household survey data as an outcome measure of employment, we could not run a formal sensitivity analysis for this variable. However, on observation there does not seem to be a significant difference in results. In sum, we rule out the possibility that variances related to study design systematically influence the results of our meta-analysis.

Using our predefined list of potential moderator variables<sup>11</sup> (Langer et al 2017), we used the same structure as in the sensitivity analysis, based on an observational overview table

followed by a one-way random effects ANOVA model, and found no moderator variable that systematically influenced the results of our meta-analysis. The moderators considered included:

- Intervention design
- Population characteristics
- Intervention setting.

Lastly, due to a lack of diversity in intervention designs, we could not assess whether the meta-analysis results were moderated by the type of implementing organisation (i.e. public vs private provider) or whether younger women experienced significantly different labour market effects from older women.

In terms of the economic sector that the intervention targeted for women's wage labour employment, we observe that the effects of programmes in the ICT and electronics sector and the service sector showed the largest effects (g=0.195 and g=0.207). The finance and business administration sector showed the smallest effects (g=0.009 and g=0.135). We could not formally test these results as most interventions targeted employment in multiple higher-growth sectors simultaneously and the pooled effects per sector were therefore not based on independent effect sizes.

potential influence of these variables on the identified effects. These variables were the PROGRESS-plus categories (age, religion, social capital of female participants) and the UN categories of women (poor women vs extremely poor and non-poor).

using a one-way random effects ANOVA model. The same process applies to all sensitivity analyses reported in this review, the full description of which can be found in the technical report.

<sup>&</sup>lt;sup>11</sup> Two moderator categories were not reported in the included studies, and thus we were unable to assess the



# What are the effects of interventions that combine training with placement services on income?

Our meta-analysis on the effects of nine combined training and

placement interventions finds a small to moderate effect on women's wage labour participation. This effect is statistically significant with a narrow confidence interval and is consistent across the included studies. The effect is robust to a range of moderator and sensitivity analyses. These findings are based on a moderate quality of evidence. We therefore present cautious evidence that combined training and placement interventions can improve women's income; the positive gains of wage employment in higher-growth/maledominated sectors can translate into positive income effects of a similar scale.

### Combined effects of training and job placements on income

Following the meta-analysis on the effects of training combined with job placements on women's wage labour employment, we next investigated whether these employment outcomes translated into increased income for women. The results of this meta-analysis are presented in the forest plot in figure 8.

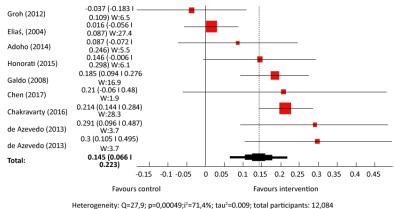


Figure 8: Meta-analysis of training + placement on income

The analysis indicated a positive effect of training combined with job placements on women's income of 0.145 (0.07, 0.22). This pooled effect size is slightly smaller than the effect identified in the meta-analysis on employment outcomes (cf g=0.159), and can similarly be described as a small to moderate effect size. Expressed in terms of percentage change, the pooled effect indicated a 7.2% difference in changes in income in favour of the women taking part in combined training and placement interventions. The meta-analysis results on income are subject to a larger degree of heterogeneity, which is driven by the inclusion of the Galdo (2008) study.

We assessed the sensitivity of our meta-analysis results against the same criteria relating to study design. Again, the meta-analysis results are not sensitive to the following variables:

- Applied study designs
- Period of follow-up
- Applied outcome measure.

There was, however, a statistically significant difference in the effects of studies of different risks of bias ratings. Studies with a high risk of bias reported a significantly higher average effect (g=0.204) than studies with a low risk of bias (g=0.021). There was no statistically significant difference between studies with a

low risk of bias and studies with a moderate risk of bias, and between studies of moderate and high risk of bias.

Our analysis of the effects of training and placement interventions on women's income finds no significant differences between the following moderator variables:

- Socio-economic setting
- Intervention design characateristics
- Programme design

Based on observation only, we find that the ICT and electronics, manufacturing and engineering sectors display larger than average income

effects, while the finance and services sectors display smaller than average income effects.

Due to a lack of diversity in intervention designs, we cannot assess whether the meta-analysis results are moderated by the type of implementing organisation (i.e. public vs private provider) and whether younger women experience significantly different labour market effects from older women.

The results from the sensitivity and moderator analyses allow us to be confident that our metaanalysis results are robust to a range of variables that could potentially influence intervention effects in a systematic manner.

## What are the effects of training and placements on women's empowerment?

There is insufficient evidence to investigate the aggregate effectiveness of combined training

and placement interventions on women's economic empowerment. On observation, we identified anecdotal evidence that combined training and placement interventions can support women's economic empowerment if the intervention is effective in also increasing wage employment and income outcomes.

We also investigated whether the observed positive changes in employment and income outcomes translated into women's empowerment. However, this was only measured as an outcome in five training + placement interventions: two AGI-modelled interventions, one Ninaweza programme, one Jovenes-modelled intervention, and the Barefoot mechanics programme.

Overall, the five studies included in this synthesis are subject to a range of biases: two studies each have a high and moderate risk of bias, and one study has a low risk of bias.

Applying the GRADE framework, the overall

<sup>12</sup> One study measured empowerment at a macro-economic level using the gender occupational segregation index.

quality of the evidence was rated to be of **low** quality.

Empowerment was measured at an individual level using measures<sup>12</sup> of economic empowerment (n=5) (control over household spending) and psychological empowerment (n=2) (e.g. confidence levels, outlook on life). In all studies where this theory of change was observed, the intervention design included a specific focus on the individual empowerment of women in the intervention design. Three out of the four studies identified positive effects on measures of economic empowerment, while a single study found no effects.

The AGI intervention in Nepal, as well as the Barefoot Mechanics programme in India, led to women having greater control over spending of household financial resources (Chakravarty 2016; Chen 2017), while the Ninaweza programme in Kenya led to an increase in women's reported confidence and positive attitude towards looking for a job in the ICT sector (de Azevedo 2013). Only in Chakravarty (2016) were these observed improvements in economic empowerment accompanied by improvements in psychological empowerment.

All interventions found to be effective in increasing wage labour participation and women's income also increased the indicators of women's economic empowerment, while ineffective interventions had no effect on women's empowerment. This is the case in Groh's (2012) RCT on the effects of the AGI-modelled Jordan NOW programme: the programme failed to support female employment or increase income, which directly translated to non-significant effects on the economic and psychological empowerment of women.

# Are training and job placement interventions for labour market outcomes cost-effective? We attempted to do a cost-benefit analysis to assess the cost-

We attempted to do a cost-benefit analysis to assess the costeffectiveness of training and job placement interventions for labour

market outcomes. However, out of the nine studies included in the meta-analysis only three conducted a formal cost-benefit analysis. We therefore cannot comment on the overall cost-effectiveness of interventions due to a lack of information reported in the included studies.

## What are the effects of soft skills training on occupational segregation?

There is insufficient evidence to investigate the aggregate

effectiveness of soft skill programmes aiming to address vertical occupational segregation in LMICs. On observation, our systematic review identified two studies in the garment sector that found that two individual training programmes were effective in increasing women's promotion to managerial posts and in changing male and female perceptions of women acting as supervisors. However, these results are based on a **very low quality of evidence**. Thus, we can only indicate the use of soft skill programmes to address vertical occupational segregation as a relevant concept which requires further investigation.

Two interventions applying an RCT design with a moderate and high risk of bias respectively provided soft skills training as the only intervention component in order to address vertical occupational segregation (Adhvaryu 2016; Macchiavello 2015). The studies focused on female factory workers in the garment sector in India and Bangladesh, where the majority of supervisors were male, and consisted of soft skills programmes to enhance

women's chances of being promoted to managerial posts.

Adhvaryu (2016) evaluated a training programme for female production line workers, focusing on a variety of life skills (e.g. communication, time management), while Macchiavello (2015) reported on a training programme for sewing machine operators, focusing on the skills necessary to become line supervisors (e.g. production planning and technical knowledge).

Three commonalities in the findings of each study exist. First, both programmes identified a positive effect on women's promotion to managerial posts, achieved through increased productivity and retention of female workers (which then led to their promotion). Second, both studies changed both men's and women's perceptions of females in managerial positions through exposure to women in management positions, which in the short term created conflict with men (Macchiavello 2015) but ultimately resulted in women reporting an increased sense of self-efficacy, accessing a greater range of professional development opportunities, and investing more in the education of their children (Adhvaryu 2016). Finally, both studies found that investment in females to assume managerial positions was beneficial to the factories themselves: it led to increased productivity and retention rates (Adhvaryu 2016) and in the long term to a more diverse managerial base (Macchiavello 2015). 13

<sup>&</sup>lt;sup>13</sup> Questions about whether entering a low-value sector is a rational choice for some women due to a greater chance of promotion were not assessed in the review.

What are the effects of job placement services only on women's wage labour participation?

Job placement services only (n=3)

There is insufficient evidence to determine the aggregate effectiveness of job placement

services as the sole labour market programme component. On observation, our systematic review identified three studies, which reported that the effects of a range of job placement programmes were mixed. However, these results are based on a **low quality of evidence**.

Three studies investigated the effects of placement services as the only intervention component (Groh 2012; Groh 2014; Jensen (2010). These covered heterogeneous types of placement services. As part of the Jordan New Opportunities for Women (Jordan NOW) labour market interventions, Groh (2012) provided women with job vouchers (valid for six months only, equal to the minimum wage of 150 JD / USD 210 per month) that they could take to a firm while searching for jobs. In a follow-up experiment under the Jordan NOW programme, Groh (2014) also tested the effectiveness of a screening and matching service to pair employers with prospective employees. Lastly, Jensen (2010) provided recruiting services for employment opportunities in the business outsourcing industry in India, where women in rural communities were visited by recruitment agents over the course of three years and informed about employment opportunities and how to access them.

In terms of the underlying programme mechanisms, Jensen (2010) and Groh (2014) both attempted to overcome a lack of information and matching between employers and prospective employees. Groh (2012), in contrast, attempted to overcome a barrier in the price and rigidity of women's labour.

The identified effects of the three job placement programmes varied greatly. First, Groh's (2014) screening and matching service was found to be ineffective and did not influence any of the three assumed outcomes.

Women were held back by a strong reservation prestige and rejected the vast majority of matched employment opportunities. However, Jensen's (2010) evaluation of addressing informational and matching barriers through recruitment services found significant positive effects on women's employment and empowerment. Three years after the intervention commenced, women were 2.4% more likely to be employed in the business outsourcing industry, and this increase in wage employment further translated into increased investment in girl children in the rural communities.

Third, Groh's (2012) wage vouchers were found to have large, short-term effects on women's employment in higher-growth sectors such as finance and business administration which had disappeared by four months after the vouchers had expired; the long-term employment gains were not significant. Within Groh's voucher experiment were two additional interventions arms: (i) a soft skills programme and (ii) vouchers combined with soft skills. The vouchers-only intervention design outperformed soft skills training and a combination of vouchers and soft skills; it is unclear why these results are observed.

What are the effects of national labour

National labour subsidies (n=2)

subsidies on wage labour participation?

There is insufficient evidence to determine the aggregate effectiveness of national labour subsidies to support women's wage labour employment in higher-growth sectors in LMICs. On observation, our systematic review identified two studies that found that two national subsidy policies led to positive effects of women's wage labour in higher-growth sectors in the short term. However, these results are based on a very low quality of evidence.

Only two studies, using a retrospective regression design and rated as having a high risk of bias, evaluated the effects of national labour

subsidies on women's wage labour participation in higher-growth/maledominated sectors (Ayhan 2013; Broecke 2013), both of which were implemented in the context of macro-economic crises. <sup>14</sup> In Turkey, this was a national labour stimulus referred to as the 'Employment Package Law', while in Tunisia, it was the labour law enacting the SIVP programme. The employment package can be described as a national-level demandside labour subsidy, while Tunisia's SIVP programme is best described as a mix between demand- and supply-side labour subsidies.

Both studies identified positive effects on women's wage labour participation in highergrowth/male-dominated sectors following the introduction of the labour subsidies. Ayhan (2013) reported that per quarter over a two-year period, women were 1.4% – 3% more likely to be hired in the industry and construction sector than men. Broecke's (2013) finding overlaps with this: the study established that women's employment in professions related to the natural sciences and engineering increased by 11% following the introduction of the graduate subsidy.

The studies recommend that in future design of the subsidy programmes those graduates most at risk of unemployment should be targeted, the subsidy should be combined with other labour market interventions such as training (Broecke 2013), and clear governance structures to be in place (Ayhan 2013).

Macro
empowerment
policies
(n=2)

#### What are the effects of macrolevel policies targeting women's empowerment?

There is insufficient evidence to determine the aggregate effectiveness of macro-level women's empowerment interventions on women's wage labour outcomes. On observation, our systematic review identified two studies that found mixed wage labour outcomes from two macro-level policies, but positive long-term effects on women's empowerment, such as increased aspirations and economic participation. However, these results are based on a very low quality of evidence.

Two interventions aimed to alter macro structures to support women's labour market participation and empowerment through a change in state-level implementations of political reservations for women in India (Ghani 2014) and a revision of the national family law in Ethiopia (Hallward-Driemeier 2013).

In India, the 73rd and 74th Constitutional Amendment Acts legislated a large-scale devolution and decentralisation of power to local government bodies, amongst which a third of all seats at each local governance level were reserved for women. In Ethiopia, the 2000 revision of the national family law legislated spouses' shared decision making regarding marital property as well as removing restrictions that prevented females from working outside the home.

Both interventions were evaluated using retrospective regression designs that relied on longitudinal survey and labour market data, and were judged to have a moderate (Hallward-Driemeier 2013) and high risk of bias (Ghani 2014) respectively.

Both studies identified positive long-term effects on women's participation in the economy; only the change in family laws

 $<sup>^{14}\,\</sup>mbox{The 2008/09}$  global financial crisis leading to a contraction of employment in Turkey (Ayhan 2013) and

persistent high graduate unemployment in Tunisia (Broecke 2013).

<sup>&</sup>lt;sup>15</sup> French: The Stage d'Initiation à la Vie Professionelle.

(Hallward-Driemeier 2013) led to an increase of women's employment in higher-skills sectors. The political quota (Ghani 2014) led to an increase in women's ownership of businesses in higher-growth sectors, but not in female wage employment.

#### **Qualitative comparative analysis**

Our systematic review applied narrative synthesis and QCA in order to identify the design features of interventions aiming to support women's wage labour participation in higher-growth/male-dominated sectors in LMICs. Given the heterogeneity of the included interventions in our review, we limit our investigation of intervention design features to a homogeneous sub-set of studies: combined training and job placement interventions. Zooming in on this sub-set of women's wage labour interventions, the narrative synthesis led to the identification of seven design features reported in the included studies (Figure 9)

Following the identification of these seven intervention design features associated with programme effectiveness, we further attempted to unpack the specific configurations of these design features and their correlation with programme effects. The subsequent attempted QCA, however, was inconclusive and we therefore cannot comment on specific configurations of design features. All in all, this leaves us to conclude that the seven individual intervention design features constitute the active ingredients of combined training and placement programmes to support wage labour participation in higher-growth/male-dominated sectors in LMICs. Further research is required to assess the specific configurations and combination of individual design features and their resultant effects.

Exposure to labour market enhancing social norms

Includes conducive norms at work and affirmative action programmes

#### Labour demandled intervention design

Includes consultation on private sector need and employer contributions / advance commitments

## Provision of soft skills & social empowerment

Includes non-cognitive skills and subjective empowerment such as self-reliance and aspiration building

### Gender-sensitive programme design

Includes considering the opportunity costs of women's attendance through gendered incentives like stipends to cover childcare

## Participant profiling and targeting

Includes clear systems and criteria as to who is eligible to enrol and how awareness is

## Clear governance for intervention providers

Includes competitive bidding to identify intervention providers and performancebased pay

## Responsive intervention implementation and design

Includes information management systems, piloting and experimentation, and iteration

Figure 9: Intervention design features

#### Conclusion

This systematic review provided an evidence map and structured synthesis on the effects of interventions aiming to support women's participation in wage labour in highergrowth/male-dominated sectors in LMICs. We identified a small evidence base that was heterogeneous in terms of the applied labour market interventions and of low quality in terms of the methodological trustworthiness of the studies and consistency of effects. Using statistical meta-analysis, we found that combined training and placement interventions increased women's wage labour participation by 7.8% and women's income by 7.2% compared to women not receiving these interventions. There is insufficient evidence to investigate the overall effect of combined training and placement interventions on women's economic empowerment.

There is currently a lack of evidence to comment on the effectiveness of the following interventions to support women's participation in wage labour in higher-growth/male-dominated sectors in LMICs: soft skills training to address vertical occupational segregation; job placement only interventions; national labour subsidies; and macro-level women's empowerment policies.

Our systematic review identified the following seven intervention design features of women's wage labour intervention in LMICs that can be described as the active ingredients of interventions supporting positive outcomes in women's wage employment: (i) exposure to labour market participation enhancing social norms; (ii) labour demand-led intervention design; (iii) gender-sensitive intervention design; (iv) provision of soft/life skills & social empowerment training; (v) participant profiling and targeting; (vi) clear governance structures for intervention providers; and (vii) flexibility and responsiveness in intervention implementation and design.

#### Implications for decision makers

- At this stage, the overall evidence base on interventions supporting women's wage labour participation in higher-growth/maledominated sectors is limited. The evidence base does not provide a clear picture of interventions that could be recommended for scale-up.
- Of all the reviewed interventions, training programmes combined with placement services show the most promise. The best evidence in this regard comes from two intervention models: the World Bank's AGI and the Jovenes approach. These two intervention models for combining training and placement services come closest to a design template for promising programmes.
- In terms of more granular intervention design implications, seven promising design attributes were identified.
- In general, the evidence map indicates that a focus on interventions supporting formal wage employment is lagging behind efforts to promote self-employment as a pathway to poverty reduction.

#### Implications for future research

- There is a strong need to improve the reporting of labour market intervention impact evaluations in terms of disaggregation of outcome data by gender and sector of employment.
- Future research should also collect more detailed data on intervention costs and conduct formal cost-effectiveness analyses.
- More research is required to compare the effects of wage labour interventions against self-employment interventions.
- Existing research on cross-overs of women into higher-growth/male-dominated sectors should be integrated into research on programme design and impacts. This includes research on vertical rather than horizontal occupational segregation.
- Research on social norms and behavioural insights and women's labour market participation would be of benefit too.

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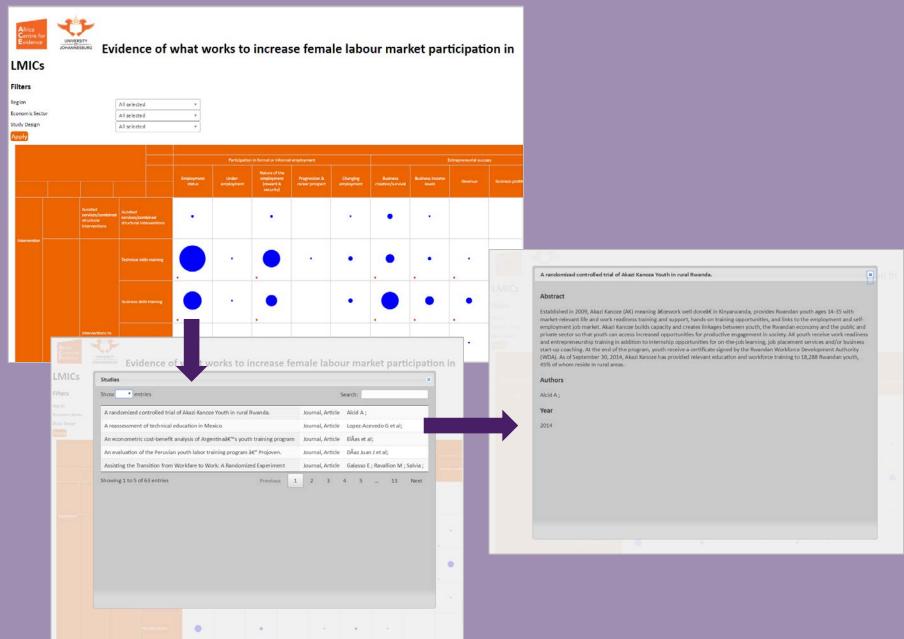
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#### Appendix 1: Stakeholder engagement and evidence map

The screenshot below provides an illustration of the functionality of our interactive evidence mapping software developed as part of the systematic review. The interactive evidence interface can be accessed at: <a href="https://africacentreforevidence.org/outputs-2/">https://africacentreforevidence.org/outputs-2/</a>



Appendix 2: GRADE evidence profile

	Quality assessment						<b>GRADE Result</b>
Intervention category	No of studies	Limitations	Inconsistency	Indirectness	Imprecision	Pooled effect	Quality
(outcomes)	(design)						
Combined training & placements	5						
Wage Labour	8	Serious risk of	No serious	No serious	No serious	0.159	$\oplus \oplus \oplus \bigcirc$
	(5 RCTs)	bias	inconsistency	indirectness	imprecision	(0.09, 0.23)	Moderate
Income	9	Serious risk of	No serious	No serious	No serious	0.145	$\oplus \oplus \oplus \bigcirc$
	(5 RCTs)	bias	inconsistency	indirectness	imprecision	(0.07, 0.22)	Moderate
Empowerment	5	Serious risk of	No serious	Serious	No serious	Narrative	$\oplus \oplus \bigcirc \bigcirc$
	(2 RCTs)	bias	inconsistency	indirectness	imprecision	synthesis	Low
Soft skills training on promotion							
Career progression	2	Very serious	No serious	Serious	No serious	Narrative	$\oplus$
	(2 RCTs)	risk of bias	inconsistency	indirectness	imprecision	synthesis	Very low
Empowerment	2	Very serious	No serious	Serious	No serious	Narrative	$\oplus$
	(2 RCTs)	risk of bias	inconsistency	indirectness	imprecision	synthesis	Very low
Job placement services only							
	3	No serious	Very serious	No serious	No serious	Narrative	$\oplus \oplus \bigcirc \bigcirc$
Wage Labour	(3 RCTs)	limitation	inconsistency	indirectness	imprecision	synthesis	Low
	3	No serious	Very serious	No serious	No serious	Narrative	$\oplus \oplus \bigcirc \bigcirc$
Income	(3 RCTs)	limitation	inconsistency	indirectness	imprecision	synthesis	Low
	3	No serious	Very serious	No serious	No serious	Narrative	$\oplus \oplus \bigcirc \bigcirc$
Empowerment	(3 RCTs)	limitation	inconsistency	indirectness	imprecision	synthesis	Low
National labour subsidies							
Wage Labour	2	Very serious	No serious	No serious	Serious	Narrative	$\oplus$
	(0 RCTs)	risk of bias	inconsistency	indirectness	imprecision	synthesis	Very low
Macro-level empowerment polic	ies						
Wage Labour	2	Very serious	Serious	No serious	No serious	Narrative	$\oplus$
	(0 RCTs)	risk of bias	inconsistency	indirectness	imprecision	synthesis	Very low
Empowerment	2	Very serious	Serious	No serious	No serious	Narrative	$\oplus$
	(0 RCTs)	risk of bias	inconsistency	indirectness	imprecision	synthesis	Very low

#### **About the Africa Centre for Evidence**

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