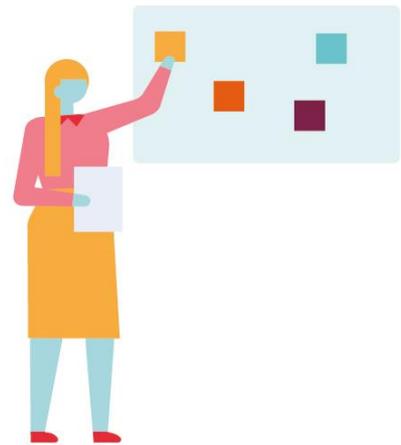


# The impact of wage subsidies on the employment of disadvantaged and/or marginalised young people

Rapid evidence assessment technical report

Alexandra Nancarrow, Dan Muir,  
Beatrice Rosolin, Cristiana Orlando,  
Becci Newton (IES)  
Jamie Rowland, Ellie Ott (CEI)  
Aron Shlonsky (Monash University)



## The impact of wage subsidies on youth employment

- Youth Futures Foundation is the What Works Centre for youth employment. We aim to narrow employment gaps for young people facing the greatest challenges by identifying what works and why and investing in evidence generation to improve policy and practice.
- This rapid evidence assessment was conducted to support the development of the Youth Employment Toolkit, a free, online resource presenting summaries of high-quality research and evidence on key interventions to support youth employment.
- For more information about this research, please contact Anna Round at the Youth Futures Foundation ([anna.round@youthfuturesfoundation.org](mailto:anna.round@youthfuturesfoundation.org)).



# About the research team

- The **Institute for Employment Studies (IES)** is an independent, apolitical, international centre of research and consultancy in public employment policy and organisational human resource management. It works closely with employers, government departments, agencies, and professional and employee bodies. For over 50 years IES has been a focus of knowledge and practical experience in employment and training policy, the operation of labour markets, and human resource planning and development. IES strives for excellence in its work, and aims to be collaborative, and to bring curiosity to what we do. We work with integrity and treat people respectfully and with compassion.
- The **Centre for Evidence and Implementation (CEI)** is an independent not for profit organisation, made up of a global team of research, policy and practice experts located in the UK, Australia, Norway, and Singapore. CEI works with a wide range of clients to understand the evidence of ‘what works’, to develop methods to put that evidence into practice and to conduct rigorous evaluations of policies and programmes to drive more effective decisions and deliver better outcomes. CEI uses its focus on high quality and transparent methods, and its unique expertise in implementation science, to fulfil its mission to improve the lives of children, families and communities facing adversity.
- The **research team** were:  
Alexandra Nancarrow, Dan Muir, Beatrice Rosolin, Cristiana Orlando,  
Becci Newton (IES)  
Jamie Rowland, Ellie Ott (CEI)  
Aron Shlonsky (Monash University)
- The **research lead** for this project was Becci Newton
- She can be contacted at [becci.newton@employment-studies.co.uk](mailto:becci.newton@employment-studies.co.uk)

# Inclusive terminology

The terminology used to define ethnicity continues to evolve, and greater awareness has arisen about gender, cognitive differences as well as of disability. IES seeks to be a learning organisation; as such we are adapting our practice in line with these shifts. We aim to be specific when referring to each individual's ethnicity and use their own self-descriptor wherever possible. Where this is not feasible, we are aligned with Race Disparity Unit (RDU) which uses the term 'ethnic minorities' to refer to all ethnic groups except white British. RDU does not use the terms BAME (black, Asian, and minority ethnic) or BME (black and minority ethnic) as these terms emphasise certain ethnic groups and exclude others. It also recommends not capitalising ethnic groups, (such as 'black' or 'white') unless that group's name includes a geographic place. At the time of this publication, we have opted to use the RDU terminology where appropriate. We understand that individuals may have impairments but it is society that disables them, hence we refer to disabled people. Not all people identify with male or female and we reflect their self-descriptions in our work and use the term non-binary should abbreviation be necessary. We value neurodiversity. We again where possible always use people's self-descriptors rather than impose categories upon them.

## Abbreviations

ALMP – Active Labour Market Programmes

CJRS - Coronavirus Job Retention Scheme

DfE – Department for Education

DID – Difference in difference

DWP – Department for Work and Pensions

EET/NEET – (Not in) education, employment or training

EGM – Evidence and Gap Map

NMA – Network meta-analysis

PICOSS – Population, Intervention, Comparison, Outcomes, Settings, Study design

PSM – Propensity score matching

REA – Rapid evidence assessment

RDD - Regression discontinuity design

RCT – Randomised controlled trial

QED – Quasi-experimental design

YFF – Youth Futures Foundation

# Executive Summary

### Background

Wage subsidies aim to assist disadvantaged jobseekers into employment (Crichton and Maré, 2013). They are typically provided by public employment services and supplied at times of employment shocks and for groups who compared to others are struggling to access the labour market. They can take numerous forms including transfers of money to employers, and reduction in employer social security contributions. Their role is to partially or completely cover employee wages or non-wage employment costs. They can be used to cover competitive vacancies, or to create vacancies for the group supported including vacancies for on-the-job training and apprenticeships as well as employment.

Although substantial evidence exists regarding the effect of wage subsidies on employment outcomes, their effects specifically on young people's employment have yet to be examined using a specific, robust evidence synthesis.

### Objectives

The main aim of this review was to examine the impact of wage subsidies on youth employment, and particularly the employment of disadvantaged or marginalised young people, in high-income countries. In line with Youth Futures Foundation's mission of enhancing employment outcomes for young people from marginalised backgrounds, the focus was on determining the impact of wage subsidies on supporting young people to enter non-subsidised, paid employment. Wage subsidy programmes are intended to provide participants with opportunities to improve and hone work-related and employability skills and to build networks,

in order to support and accelerate their entry into non-subsidised, paid employment.

### Search methods

A rapid evidence assessment was used to examine wage subsidy programmes targeted at unemployed young people. The review consisted of four steps: (1) searching the appropriate literature using specified search terms, (2) selecting relevant papers based on inclusion and exclusion criteria, (3) extracting relevant evidence, and (4) synthesising and interpreting the evidence.

### Selection criteria

Studies were included if they met the following criteria:

- Young people aged between 16 and 30.
- Policies or programmes that included wage subsidies, in part or whole.
- Comparison group consisted of treatment as usual, another intervention, or waitlist control.
- Examined employment post-subsidised phase of work, improvements to employability, and/or quality of work outcomes.
- Used study designs that were randomised controlled trials (RCT), including individual RCTs and cluster RCTs; step-wedge designed with random time allocation; non-equivalent control group designs using parallel cohorts that adjust for baseline equivalence; difference-in-difference estimation; interrupted

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time-series; synthetic control group methods; studies based on covariate matching, propensity score-based methods, doubly robust methods, regression adjustment, regression discontinuity designs, and instrumental variable estimation.

- Studies undertaken in high-income countries.
- Published in English.
- Published in the Youth Futures Foundation's Evidence and Gap Map (which spans lower, middle- and high-income country examples between 2000 and 2022), or studies published between 2020 and 2022 (generated through novel searches of databases including the Pathways to Work Evidence Clearinghouse).

into education. However, it must be stressed that these findings are based on a small number of studies (four for the employment outcome and two for the education outcome).

The ability for wage subsidy programmes to help young people enter employment appears to depend on factors, including the areas in which young people live (e.g., high versus low unemployment), young people's prior work experience, current labour market conditions and whether young people experience challenges when applying for jobs.

### Results

A meta-analysis of four studies which examined respectively the New Deal for Young People (UK), Future Jobs Fund (UK), subsidised employment programmes in the Netherlands, and Youth Practice (Sweden) revealed a significant positive impact on participants' likelihood of entering non-subsidised employment ( $d = 0.04$ ,  $p < .05$ ). Thus, if 1,000 young people receive a wage subsidy, 330 will find employment and 300 of these would have found this employment without the subsidy. Hence the subsidy (and any accompanying support package) makes a difference to 30 people.

However, wage subsidies did not have a significant impact on participants' likelihood of entering education ( $d = 0.02$ ,  $p = .56$ ). Thus, results suggest that programmes using wage subsidies improve employment outcomes for young people but do not improve young people's entry

# I Introduction

Youth Futures Foundation (YFF) commissioned this report to inform the development of a toolkit of effective practices for improving employment outcomes among young people, particularly those who face marginalisation in the labour market. Evidence shows achieving this would bring a range of individual and societal economic and social benefits and avoid substantial costs (Coles et al., 2010; Nafilyan and Speckesser, 2014; Centrepont, 2016). Extensive international analysis shows that young people see poorer outcomes in the labour market, relative to older workers (OECD, 2015). In addition, tracking employment in the UK labour market since 2010, Marmot and colleagues (2020) found that while overall employment levels have increased, this has not represented progress in access to good quality work. It is therefore unsurprising that over 20 years between 1999-2018, relative to older adults, a declining trend in the quality of work young people access is observed (Papoutsaki et al., 2019). Since Marmot and colleagues (2020) also found being in poor quality work is potentially more detrimental to health than being unemployed or inactive, employment quality must be a parallel concern to access to work.

In the UK policy context, improving young people's preparedness for the labour market has been a long-standing aim, as a precursor to improving employment outcomes. There have been multiple efforts in England from the early 2000s onwards to increase rates of participation in post-16 education on a causal pathway to improve attainment, skills for work, and employment with goals for a positive effect on productivity (Middleton et al., 2005; Bickerstaffe and Walton 2010, Maguire et al., 2012; Maguire, 2015). This, linked to policies and initiatives such as making participation in education and training compulsory up to the age of 18, and the 50 per cent target for higher education participation, has led to overall improvements to participation in employment, education and training (EET) activity for the youngest cohort (16–17-year-olds) centred on increased engagement in education rather than employment or training. However, while approximately 180,000 18-year-olds now undertake higher education studies (DfE, 2022), the proportion of 18-year-olds entering the 'not in employment, education and training' (NEET) status has proved more intractable. Moreover, many young people leave post-16 studies not having achieved a Level 3 qualification and many (around 17%) do not achieve Level 2 by 18 (Thomson and Urwin, 2021).

While overall, higher levels of qualification (for example, a degree or university study contrasted with qualifications below Level 2) are a protective factor in respect of employment and health (Bibby et al., 2014; Britton et al., 2021), achieving higher education qualifications is not sufficiently protective to lead to better quality employment outcomes

(Papoutsaki et al., 2019). Returns to higher education studies differ by demographic characteristics, particularly those associated with disadvantage and marginalisation (Britton et al., 2021). Intergenerational effects can be seen between young people's employment outcomes and those of their parents, with ONS (2022b) analysis demonstrating that young people who have lived in workless households are more likely to be out-of-work themselves. Additionally, 26 per cent of disadvantaged young people (i.e. individuals who qualified for free school meals (FSM)) are not in education, employment or training (NEET), whereas 13 per cent of more advantaged young people are NEET, that is, a 13 percentage point employment gap existing between advantaged and disadvantaged young people when eligibility for FSM is used as a proxy for disadvantage (CVER and Impetus, 2019).

There is limited intelligence on the specific elements of youth employment support practices that achieve better employment outcomes for young people and those who are most disadvantaged (IES, 2020). The Youth Futures Foundation toolkit seeks to address this. This report contains evidence on the specific effects of wage subsidies on these outcomes based on a rapid evidence assessment and meta-analysis.

## 1.1 About this project

The Youth Futures Foundation (YFF) is developing a freely accessible Youth Employment Toolkit. This will serve as an online evidence-based resource for information on policy and practice in supporting good quality employment for young people. The Youth Employment Toolkit expands the [Youth Employment Evidence and Gap Map \(EGM\)<sup>1</sup>](#), providing content that is useful for practitioners, employers, and policymakers working within the field of youth employment programmes in the UK. At the time of drafting this report, the EGM contained 658 studies, including impact evaluations and systematic reviews, classified by intervention type, design, location, outcomes, setting and population.

To determine and develop the initial content for the Youth Employment Toolkit, YFF commissioned an evidence review team comprised of staff from the Institute for Employment Studies (IES) and the Centre for Evidence and Implementation (CEI) to work alongside YFF and its adviser Howard White.

### 1.1.1 Outcomes of interest to Youth Futures

In general, high-quality evidence on the impact of interventions to address youth employment varies widely in scope. This differs substantially from some other what work

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<sup>1</sup> <https://youthfuturesfoundation.org/our-work/identify/evidence-and-gap-map/>

centres' intervention literature (e.g., the Youth Endowment Fund's youth offending map which tends to be narrower in focus). This led YFF to commission its EGM and this review series to support the development of a toolkit.

YFF is primarily interested in interventions that support meaningful, sustained, and good quality employment for young people, and achieving better outcomes for marginalised young people. Engagement in education and training and employment support, as well as achievement of qualifications, can be seen as intermediate outcomes to good quality employment. Other intermediate and secondary outcomes of interest to YFF include employability and wellbeing.

More specifically, outcomes of interest to YFF include those relating to education: high school or equivalent completion, technical vocational education and training enrolment, technical vocational education and training completion, university enrolment or completion and university completion; and to employment: whether individuals ever worked, earnings / wages, number of hours worked, number of months worked, employment rates, employment probability and unemployment duration.

### 1.1.2 Selection of topics

The first stage of this project consisted of developing a series of scoping notes on topics that were included in the EGM. IES and CEI completed a total of 10 scoping notes that informed YFF's decisions about which would be the most useful focus for Rapid Evidence Assessments (REAs). The scoping notes outlined the expected extent of evidence, including lists of papers in the EGM, that would be found, were an REA to be undertaken. Scoping notes covered: off-the-job vocational training, mentoring and coaching, basic skills, life skills, employment services, careers guidance, support employment, apprenticeships, minimum wage, and wage subsidies.

Following consultation with YFF, it was determined that wage subsidies would form a stand-alone REA. In addition, due to overlapping content and lack of distinctiveness between topics, a network meta-analysis (NMA) would be produced, combining: on-the-job training (including internships and traineeships), apprenticeships, off-the-job training, mentoring and coaching, basic skills training, and life skills training. Protocols were developed and published on Open Science for each of these.

### 1.1.3 Development and publication of research protocols

For the scoping notes, protocols and REAs, a PICOSS was developed covering: Population, Intervention, Comparison, Outcomes, Settings, and Study Design. Key decisions were applicable to both REAs, including defining the population of interest (16–30-year-olds), a

focus on primary studies that drew on a comparison group (Quasi-experimental designs: QEDs) or control group (Randomised Controlled Trials: RCTs), and including only including studies conducted in high-income countries<sup>2</sup>.

As an initial step, all relevant papers from the EGM were downloaded. In addition, for the wage subsidies REA, a search string was developed that would be used to interrogate several academic and policy research databases. The protocols for the wage subsidies and the NMA reviews were published on the Open Science Framework (OSF).<sup>3</sup> This registry will be updated with key outcomes following the finalisation of the technical reports from the two reviews.

## 2 Review of wage subsidies

This report covers the REA conducted on wage subsidies with an aim to cover financial incentives that target employers. Studies were included where they examined subsidies for employment and for work-based training, such as apprenticeships where the individual spends most of their working time with an employer. Studies also included those that met the PICOSS and where the intervention delivered a subsidy to the individual. More detail concerning the interventions that have been included in the present review on wage subsidies on youth employment are provided below.

### 2.1 Research questions

This review addresses the following questions, with employment quantity (additional days in employment at the end of the subsidised period) and employment quality (hours worked, job quality, and earnings and salary) as the main outcomes:

1. What is the impact of wage subsidies on supporting disadvantaged or marginalised young people to enter non-subsidised, paid employment? To address this, we examine average effect and variation in effect.
2. Where there is sufficient evidence, secondary questions explore the impact of wage subsidies related to: other outcomes for these young people such as entry into education and the implementation of wage subsidy programmes to generate lessons learned. We also examine variation in settings and intervention design (e.g., duration, size of payment).

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<sup>2</sup> The EGM additionally covers low- and middle-income countries.

<sup>3</sup> Link to the wage subsidies protocol on OSF:

[https://osf.io/5yzt8/?view\\_only=e1b9c481bec04d35a42f784bdd6ef99f](https://osf.io/5yzt8/?view_only=e1b9c481bec04d35a42f784bdd6ef99f)

## 2.2 Definitions and characterisation of wage subsidies

The purpose of wage subsidies is to provide alternative opportunities for young individuals struggling to enter the labour market. Wage subsidy programmes tend to provide a short-term form of support to enable individuals to secure longer-term employment (Kluve et al., 2017). Thus, the evidence on wage subsidy interventions tends to focus on non-subsidised job-related outcomes.

Wage subsidies aim to assist disadvantaged jobseekers of any age into employment (Crichton and Maré, 2013). In their literature review, Bördos et al. (2015) indicate that these subsidies have formed a part of the active labour market programmes (ALMP) toolkit for over 30 years. In respect of youth employment, these authors find that different subsidy models produce different outcomes, however employer take-up can be low, and short-term employment gains can rapidly fade. Kluve et al. (2017) sets out how subsidies provide employers with financial incentives in the form of either a direct payment or tax break, which are used to fulfil wages and non-wage employment costs for eligible employees and identifies two main categories of subsidy: employer-side and employee-side. Employer-side subsidies 'reduce the financial costs or risks associated with not knowing the productivity of the person to be employed... which is particularly relevant to youth entering the labour market for the first time, and whose (perceived) marginal productivity may be below market wages' (Kluve et al., 2017). Employee-side subsidies 'promote labour supply through increasing the returns from employment and hence increasing incentives to seek and retain employment' (Kluve et al, 2017). Employee-side incentives can also support individuals to set up in self-employment.

Wage subsidies are provided through a variety of means, including direct transfers to companies or employees, reduced payroll taxes, reduced social security contributions, and reduced tax credits (Kluve et al, 2017; Bördos et al., 2015). Wage subsidies can entirely or partially cover individuals' wages or non-wage employment costs (Kluve et al, 2017), and they can be applied to competitive vacancies; sheltered/intermediate labour market vacancies; training (including apprenticeship and traineeships) and roles that include 'professional', occupational, and/or employability development (Kluve et al, 2017; Bördos et al., 2015).

The definition used in the Youth Future Foundation (YFF) Evidence and Gap Map (EGM) indicates that wage subsidies are transfers on non-wage employment costs, with a main goal of providing incentives for employers to hire members of a defined target group (Bördos et al., 2015). Furthermore, governments are the major providers of wage subsidies, which can be in the form of direct money transfers to firms or tax deductions. As such, wage subsidies

may be delivered as part of ALMP packages that contain multiple strands of intervention. Typically wage subsidy elements target those who need more help (more disadvantaged people and those judged as less able to help themselves)<sup>4</sup>. In general, wage subsidies aim to help individuals gain immediate employment (resulting in a lower cost to the employer) and/or sustained employment with either the same employer or a new employer (to fully utilise any new work experience and skills acquired).

### 2.2.1 Current practice in the UK and elsewhere

There are examples of wage subsidies operating at the national policy level in the UK and in European settings. In the UK, government-led examples include the Future Jobs Fund delivered by the Department for Work and Pensions (DWP) (Marlow et al., 2012). More recently, the DWP provided a wage subsidy for Kickstart, which was part of the Plan for Jobs measures during the coronavirus pandemic.<sup>5</sup> This is currently subject to evaluation and outcome data is not available to this review. The Coronavirus Job Retention Scheme (CJRS; furlough scheme) is considered as a wage subsidy by some, although this focused on retaining people in employment rather than creating employment opportunities.<sup>6</sup> In Europe, a number of countries introduced subsidy schemes for the Young Person's Guarantee, including Sweden and Finland, and the UK, which offered a guaranteed job (in the form of Future Jobs Fund), or work experience or work-focused training.

Returning to the situation in England, the Department for Education (DfE) provided wage subsidies to employers to take on apprenticeships as part of the Apprenticeship Grant to employers (BMG and IES, 2013). It continues to offer additional funding incentives to employers training 16–18-year-olds in the apprenticeship funding model (Education and Skills Funding Agency, 2022). Most recently, it reintroduced financial incentives for employers to take on young people through traineeships and apprenticeships as part of the Plan for Jobs.<sup>7</sup> Impact data on these schemes are not available.

The existing evidence base on wage subsidies generally sets out a mixed picture of effect but leans towards the positive impact of these policies. For example, in a systematic exploration of the effects of ALMP, Levy Yeyati et al. (2019) find that 'Wage subsidies show the greatest impact on labour earnings and employment relative to the control group, followed by independent worker assistance and vocational training programs, while the incidence of employment services is almost negligible'.

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<sup>4</sup> An example is available here:

<https://ec.europa.eu/social/main.jsp?catId=1080&langId=en&practiceId=35#:~:text=The%20wage%20subsidy%20%E2%80%9Cintegrate%20those%20persons%20into%20the>

<sup>5</sup> <https://www.gov.uk/guidance/how-the-kickstart-scheme-works>

<sup>6</sup> <https://www.gov.uk/guidance/claim-for-wage-costs-through-the-coronavirus-job-retention-scheme>

<sup>7</sup> <https://www.gov.uk/guidance/plan-for-jobs-skills-and-employment-programmes-information-for-employers>

Earlier research from Borland (2016) also identifies the positive effect but usefully discusses the weaknesses of this approach. For example, while in his summation of the evidence Borland finds that wage subsidies increase the level of employment for the group targeted, relative to other forms of employment support, he also notes that four problems can affect these schemes which serve to moderate their impact. These are:

- Substitution – those hired through the subsidy scheme are recruited in preference to those who would have otherwise been selected by employers;
- deadweight – that jobs created for subsidy schemes would have been created without the subsidy;
- displacement – employers not using the subsidy may lose business to those that do, shifting where employment opportunities occur.

The final issue he identifies is the risk that the positive effect ceases when the policy of subsidy is withdrawn (Borland, 2016). Card et al. (2009) contrasts the short- and longer-term effects of ALMP components and find that subsidised public employment programmes 'have the least favourable impact'. However, their analysis indicates that the point at which measurement occurs can affect the trend, and that subsidised (private) employment may have short-term impact, but longer-term other approaches including job search assistance can be more effective.

It is against this context that this current review synthesises the evidence regarding the effectiveness of wage subsidies on a specific group – young people, where a robust evidence synthesis has not yet been undertaken. The focus is on wage subsidies in full or in part, and thus comparison is not drawn with other forms of ALMPs.

## 2.3 Outcomes

The primary outcome for the present review was entry into and sustainment of non-subsidised employment, that is beyond the subsidised phase. This was measured in months or years. The outcome included employment with the same employer that received the subsidy or another employer.

Other outcomes of interest included:

- hours and salary in non-subsidised work,
- the probability of entering and/or re-entering education (which might improve skills and readiness for work in the future),
- the probability of receiving welfare support (a move into non-subsidised employment would reduce reliance on welfare support),

- improvements to employability including improved work awareness,
- quality of work (that is, contract type, job type).

## 2.4 Method

Four key stages underpinned this REA:

1. Systematic search of the literature using an agreed list of search terms.
2. Selection of studies based on specified inclusion and exclusion criteria.
3. Extraction of relevant evidence using an agreed protocol.
4. Synthesis and interpretation of the evidence. The following topics were used to thematically synthesise the process studies: implementation details and context, assessment of the evidence, evidence gaps, intervention design, and costs information.

The review followed the template and guidance for reviews provided by the Campbell Collaboration. The REA methodology was guided by previous publications of methods for REAs and rapid reviews. Rapid reviews have become an important methodology for knowledge synthesis for policy development and were recently described as: ‘a type of knowledge synthesis in which Systematic Review methods are streamlined and processes are accelerated to complete the review more quickly’ (Garritty et al., 2021, p. 14).

The PICOSS for the wage subsidy REA included the following information:

**Population:** The key population of interest includes young people aged 16–30 years to match with the YFF age range of interest at the upper end. This lower age point is selected because UK policy requires young people to be in education full-time up to the age of 16. It is worth noting that in England young people are required to participate in education up to the age of 18, which for young people not in full-time study can entail learning part-time alongside working or volunteering, or undertaking work-based training (specifically, apprenticeship or traineeship). Both the Department for Education and the Department for Work and Pensions have definitions of youth that range up to 30 years.

**Intervention:** Interventions must include a financial incentive to employers with the output that this creates a job for a young person at least for the duration of the subsidy (Kluve et al., 2017) whether the subsidy supports employment or work-based training.

**Comparison:** Primary studies were included where they draw on a comparison group (‘Quasi-Experimental Design’, or QED) or control group (‘Randomised Control Trial’, or RCT). The studies included in the YFF EGM demonstrated that QEDs were typical where subsidies operated at the national or regional policy level. Typically, primary studies draw comparison with business as usual (BAU)/other provisions in ALMP with multiple

components. Being able to access comparative analysis between intervention strands within primary evaluation reports, will be crucial for studies to be included in the REA. Where papers cover implementation associated with the selected interventions, these data were also included.

**Outcomes:** The primary outcome is entry into non-subsidised employment, that is employment that extends beyond the subsidised phase. Secondary outcomes include sustained employment and employability/work awareness, employment expectation, job quality and hours and salary, and education outcomes such as entry to full-time education or training.

**Settings:** The REA covers wage subsidy policies (at national, regional, and local levels), in high-income countries. Training subsidies are included.

**Study design:** RCT or QED designs with robust and credible comparison groups.

Table I provides a list of the wage subsidy REA inclusion and exclusion criteria.

**Table I Inclusion and exclusion criteria**

	Inclusion criteria	Exclusion criteria
<b>Population</b>	Young people aged between 16 and 30 (inclusive).	Young people aged less than 16, or more than 30.
<b>Intervention</b>	Policies or programmes that include the provision of employer subsidies, in part or whole.	Policies or programmes that do not include the provision of wage or training subsidies, in part or whole. Interventions that do not include a financial subsidy that supports employment. Subsidies that do not support the employment of a young person.
<b>Comparison</b>	Treatment as usual, another intervention, no intervention, or wait-list control.	Studies that cover a population that is different in observable characteristics and that receive an alternative intervention not tracked by evaluation. Studies that mobilise non-counterfactual measures.
<b>Outcome</b>	Studies that examine: <ul style="list-style-type: none"> <li>■ Employment post subsidised phase of work.</li> <li>■ Improvements to employability.</li> </ul>	Studies that report outcomes only related to the subsidised period of employment (since these do not show the effect of intervention on longer-term employment).

	Quality of work (contract type, job type).	Studies that examine other outcomes while not covering the outcomes of interest.
<b>Study design</b>	<p>Randomised Controlled Trials (RCT) including individual RCTs and cluster RCTs.</p> <p>Step-Wedge designs with random time allocation.</p> <p>Non-equivalent control group designs using parallel cohorts that adjust for baseline equivalence.</p> <p>Difference-in-Difference estimation</p> <p>Interrupted time-series.</p> <p>Synthetic control group methods</p> <p>Studies based on:</p> <ul style="list-style-type: none"> <li>■ covariate matching;</li> <li>■ propensity score-based methods;</li> <li>■ doubly robust methods<sup>8</sup>;</li> <li>■ regression adjustment;</li> <li>■ regression discontinuity designs; and</li> <li>■ instrumental variable estimation.</li> </ul> <p>Qualitative studies and economic evaluations were included if they are conducted as part of a qualifying study and will be used only to generate hypotheses, inform us about the interventions and populations, and inform or deepen our understanding of the quantitative findings.</p>	<p>Non-primary studies, including:</p> <ul style="list-style-type: none"> <li>■ Literature reviews.</li> <li>■ Systematic reviews.</li> <li>■ Meta-analysis.</li> <li>■ Non-primary QEDs.</li> </ul> <p>Studies without a valid counterfactual, including designs that do not include a parallel cohort that establish or adjust for baseline equivalence, including:</p> <ul style="list-style-type: none"> <li>■ Single group pre-post designs.</li> <li>■ Control group designs without matching in time and establishing baseline equivalence.</li> <li>■ Cross-sectional designs.</li> <li>■ Non-controlled observational (cohort) designs.</li> <li>■ Case-control designs.</li> <li>■ Case studies/series.</li> <li>■ Surveys.</li> </ul> <p>Qualitative designs and economic evaluations not undertaken in the context of an included quantitative study.</p>
<b>Setting</b>	Studies that are undertaken in high income countries: as defined by the World Bank.	Studies that are not undertaken in high-income countries: as defined by the World Bank.
<b>Other</b>	Studies that are published in English.	Studies that are published in languages other than English.

Source: IES 2022

<sup>8</sup> Doubly robust methods combine “a form of outcome regression with a model for the exposure (the propensity score) to estimate the causal effect of an exposure on an outcome” (Funk et al., 2011, p. 761)

### 2.4.1 The screening process

Following the published protocol, the following sources were interrogated for relevant studies for the meta-analysis:

- YFF EGM, which includes studies from the 3ie Evidence and Gap Map / Kluge synthesis and results from search updates – this provided 73 articles.

Additional searches were conducted of:

- Pathways to Work Evidence Clearinghouse (<https://pathwaystowork.acf.hhs.gov/>): filter of young adults as the population and financial incentives as the intervention
- Google Scholar (first 50 policy/grey) (we anticipated that the work of independent research organisations would be included in the results from this source)
- CLEAR: Clearinghouse for Labor Evaluation and Research as part of the United States Department of Labor
- Department for Work and Pensions (DWP)
- Department for Education (DfE)
- The Office of Planning, Research and Evaluation (OPRE), Administration for Children and Families (USA)
- OECD (and specifically Employment, Industry and Entrepreneurship)
- World Bank (Independent Evaluations)
- IZA (Programme Evaluation)
- MDRC

These searches resulted in the identification of 68 papers. Consequently, 141 potentially relevant studies entered the screening process. Additionally, one study (Marlow et al., 2012) was included because of consultation with experts at the YFF. This study was published before 2018, the cut-off date for the novel searches for this review, which drew on evidence collated for the YFF evidence and gap map and new searches to update that. This meant the current REA could not be expected to have surfaced this publication. Having been identified, it is recommended for inclusion in the YFF EGM.

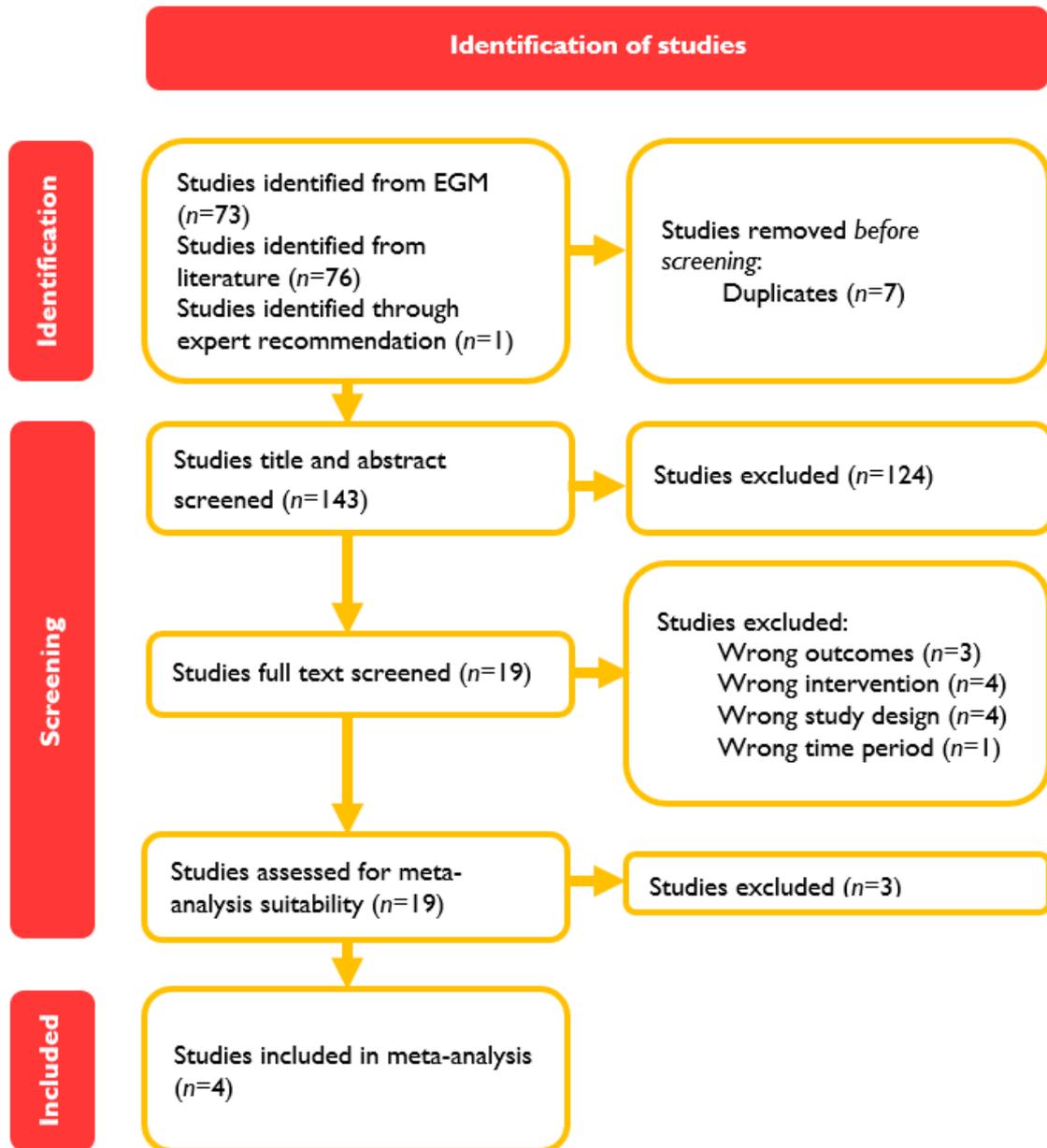
Of the 150 papers, seven were duplicates and therefore removed. This led to 143 studies being title and abstract screened; 124 of these were excluded as being irrelevant, mostly either due to being undertaken in low to middle income countries or due to having an ineligible research design.

Of the 19 studies that were full text screened, 12 were excluded for failing to meet the PICOSS inclusion criteria. This left seven studies, four of which were assessed as being eligible for the meta-analysis (that is, they measured the same outcomes): De Giorgi (2005), Juznik Rotar (2021), Larsson (2003) and Marlow et al. (2012).

The three studies that met the PICOSS inclusion criteria but were not eligible for the meta-analysis were McVicar and Podivinsky (2010), von Simson and Hardoy (2020), and Riley and Young (2001). McVicar and Podivinsky (2010) and von Simson and Hardoy (2020) employ hazard rate models as their study design, which meant that outcomes were not well aligned with other studies. Riley and Young (2001) has as its unit of analysis the intervention delivery areas. Neither of these features necessitate exclusion based on the PICOSS, but present challenges with regards to the meta-analysis in terms of interpretation and inclusion of their results. Additionally, McVicar and Podivinsky (2010) and Riley and Young (2001) are evaluations of the New Deal for Young People in the UK, which another included study (De Giorgi, 2005) also evaluates, so also including these studies would result in the single intervention being overrepresented. It was therefore decided to exclude these three studies from the meta-analysis, however these studies are summarised narratively after the results of the meta-analysis are discussed.

After studies were selected for data extraction, the reference sections of the included papers were searched for relative process studies. This revealed that two of the interventions – the New Deal for Young People and the Future Jobs Fund – were heavily evaluated, whereas the other two had limited evaluation available. For the New Deal for Young People and the Future Jobs Fund, the process and other studies were screened to assess their contribution to delivering insights on context, and implementation issues to further elaborate the impact results. Figure 1 shows the flow of studies through the identification and screening phases to inclusion in the meta-analysis (Page et al., 2021). Of the studies included in the meta-analysis, two (De Giorgi, 2005; Larsson, 2004) were from the Youth Future Foundation's EGM. Section 3.3 provides details of the process evaluation papers.

**Figure 1 Identification of studies for meta-analysis: PRISMA flow diagram**



### 2.4.2 Description of wage subsidies included in the study

Following the screening process (see section 2.4.1), three interventions were included in the meta-analysis: the New Deal for Young People (UK), Youth Practice (Sweden), and subsidised employment programmes for young unemployed people (the Netherlands). In addition, the Future Jobs Fund (UK) was included following expert advice.

**Table 2** Included wage subsidy interventions

	Intervention name	Intervention location	Type(s) of subsidy	Ages	Intervention length
1	New Deal for Young People	UK	Wage and training subsidy	18–24	Gateway period for up to 4 months then one of four options which included wage subsidy for 6–12 months
2	Future Jobs Fund	UK	Wage subsidy	18–24	At least 6 months
3	Subsidised employment	Netherlands	Wage subsidy	20–24	Up to 2 years
4	Youth Practice	Sweden	Wage subsidy	20–24	Typically, 6 months

Source: IES 2022

### How and why wage subsidies are meant to work

The rationale for the introduction of wage subsidies tends to be to overcome challenges of moving into employment for specific groups in times of economic downturns. For example, in the early 1990s, there was a period of economic downturn which affected most of the western world, including most countries in Europe, creating widespread unemployment. This created a general need for programmes targeted at helping people, including young people, attain employment. In the same vein, the ‘great recession’ that emerged from 2007, with global impact, created a similar need for employment support programmes and a need to target support at particular subgroups most at risk, including young people. These demonstrate how economic crises and shocks to traditional levels of youth employment, provide impetus for action.

This action often has a dual focus on improving education attainment (because policies may be set in place to encourage more people remain in education for longer) and increasing

movement into sustainable employment through additional employment support policies or ALMP. In general, wage subsidy schemes are introduced during periods of economic crisis and increased risks for the targeted groups (in this instance, young people having difficulty entering the labour market) and are withdrawn as soon as the period of economic downturn or instability ends. These schemes seek to incentivise the provision of on-the-job training places, sheltered employment or entry to standard jobs in the private or public sectors through offering a financial incentive for employers to behave differently and recruit the groups targeted for support.

Subsidies are typically of short duration supporting the employer for a limited period. The intention is that by incentivising the recruitment of the target group, the group acquires employment 'capital' – from employability attributes, a work history that can be documented on a CV, and a reference that can support their next steps in the labour market. This may lead to the subsidised employer taking the target group into their employment beyond the subsidised period, or to the target group being more able to secure other employment following the subsidised period due to having an improved CV and 'capital'.

It must be noted that studies focused on incentivising on-the-job training programmes and sheltered employment did not pass through the screening process for this study. Both types of scheme were in scope, however, the design of the studies did not meet the criteria for inclusion – for example, the evaluation of the Apprenticeship Grant for Employers – which incentivised employer uptake of apprenticeship in the UK – did not deploy a counterfactual impact method.

## Contexts into which the schemes in this study were introduced and scheme design

### **New Deal for Young People (De Giorgi, 2005)**

In the mid-to-late 1990s, compared to European countries, the UK experienced overall unemployment rates that were lower than the average. However, it had a consistently high rate of young people who were not in education, employment or training, as well as a high rate of *long-term* unemployed young people. Consequently, in the 1980s and 1990s, policymakers implemented substantial modifications to unemployment benefit entitlements and eligibility. The rationale behind establishing the New Deal for Young People was that the type of help available previously had not addressed the barriers to employment that young people experiencing long duration unemployment faced.

The New Deal for Young People, which included wage subsidies but also intensive job search and training options, was established in the UK in 1998. It was mandatory for all 18–

24 year olds who had been unemployed and claiming benefits (Jobseeker's Allowance) continuously for six months or more. The New Deal for Young People comprised three stages of support: the Gateway, a stage with four placement options, and a follow-through period (Dorsett, 2006). The programme was managed by the Department for Work and Pensions.

Following an intensive four-month Gateway intensive job search phase, participants were able to choose one of four options: full-time employment (which was the wage subsidy component), voluntary sector work placement, environmental task force, or full-time education or training (Dorsett, 2006, p.406). Where the wage subsidy element was used, claimants received salaries paid by employers, while employers received a subsidy of £60 per week for a maximum of six weeks plus a £750 one-off payment to cover the compulsory (minimum) one-day-a-week training they had to provide.

The De Giorgi (2005) evaluation of the New Deal for Young People was conducted between 1998 and 2001. For the analysis, De Giorgi focused on 18–24 year olds who were unemployed, had received unemployment benefits for at least six months, and lacked basic reading and writing skills. Unemployed individuals with disabilities, unemployed ex-offenders, and unemployed people who had difficulty with reading and writing had the opportunity to access the New Deal for Young People at an earlier stage than six months. However, these earlier entrants to the intervention were not included in the De Giorgi analysis.

### **Future Jobs Fund (Marlow, Hillmore & Ainsworth, 2012)**

Following the OECD's 'Jobs Study', released in 1994, there was a drive towards ALMPs across many European countries, as a new approach to tackling persistent high unemployment rates. This became a particular concern in western economies when the 'great recession' emerged from around 2007 and lasted for close to two years. Bell and Blanchflower (2010) assess the effect for the UK population, finding that there was a sharp rise seen in unemployment alongside a decreasing level of employment strongly focused on younger jobseekers. Furthermore, this happened at a point where there was a large youth cohort with the effect of heightening the risks for this group.

Consequently, a range of active measures were progressively introduced in the UK. This included the Flexible New Deal, introduced in 2009 to substitute the New Deal for Young People (Ali, 2011). The introduction of the Flexible New Deal was accompanied by the Future Jobs Fund, a 'job guarantee' initiative which was part of the Young Person's Guarantee strategy. The aim of the Guarantee was to ensure that all those under the age of 25, unemployed for 12 months or more would be guaranteed a job, the opportunity of work experience or work-focused training. The Guarantee was introduced to tackle the

challenge of rising youth unemployment, which had reached over half a million young people in February 2008 (Shaheen, 2009). The programme was managed by the Department for Work and Pensions in partnership with the then Department for Communities and Local Government (DCLG), and with input from Jobcentre Plus regional government offices in England and devolved administrations in Scotland and Wales. National organisations and local and sectoral partnerships were invited to bid to create Future Jobs Fund jobs (Marlow et al., 2012).

The Future Jobs Fund was established in the UK in 2009 and ended in 2011. For their evaluation, Marlow and colleagues (2012) focused on the years 2009 to 2010. The Future Jobs Fund was primarily aimed at 18–24 year olds who were recipients of Jobseeker's Allowance (the welfare benefit that supported people who were unemployed). The wage subsidy under the Fund was set at a maximum of £6,500 per job, with 40 per cent paid in advance to cover set-up costs and 60 per cent claimed in arrears based on actual weeks worked by participants.

### **Youth Practice Sweden (Larsson, 2023)**

While general unemployment in Sweden rose from 1.5 per cent in 1989 to 8.2 per cent in 1993, unemployment rates for 18–24 year olds rose from 3.5 per cent to 19.1 per cent, for that same period (Larsson, 2003). The rapid and ongoing rise in unemployment, which was tied to macroeconomic shocks, internal policy failures and supply factors such as a generous unemployment insurance system, prompted a major response by the Swedish government. This led to an unprecedented increase in ALMP, with the aim of improving the prospects of unemployed young people to enter or return to regular employment.

In 1992, a new large-scale programme, called Youth Practice (Ungdomspraktik) was introduced, directed at unemployed young people aged 18–24. Youth Practice was a subsidised work programme, and the participants were placed in both private and public sector jobs. Larsson's (2003) evaluation covered all years of the programme. To be eligible, individuals had to have a high school diploma and to have engaged in active job searches for four months. Participants were a supplementary resource for the employer (so as not to displace regular employment opportunities) and were required to spend four to eight hours per week in job-seeking activities at their local employment office alongside their employment placement. Initially, allowances were provided to the participants but from 1994, employers were required to make these payments. The magnitude of the wage subsidy for Youth Practice was 338 SEK (39 Euro) per day. From 1994, employers had to pay 1,000 SEK (115 Euro) per month.

## **Subsidised employment in the Netherlands (Juznik Rotar, 2021)**

In the 2000s, the Netherlands boasted one of the highest youth employment rates in the Organisation for Economic Co-operation and Development (OECD), with youth employment standing at 64 per cent in 2006 compared to an OECD average of 43 per cent (OECD, 2008). Despite high youth employment, there was also a high rate of young people who were not in education, employment or training (hovering around seven per cent) and of young people who were unemployed, around 20 per cent were long-term unemployed (OECD, 2008). Among factors which were likely to be contributing to this trend were widespread temporary and part-time work among Dutch young people. In particular, temporary contracts were frequent among young people, with more than 43 per cent of workers aged 15–24 having a temporary contract in 2006, up from 30 per cent in 1996 and nine percentage points higher than the OECD average (OECD, 2008). This compared to, respectively, 10 per cent and seven per cent for workers aged 25–54 (OECD, 2008).

The Dutch government introduced a range of measures to address these challenges, with the ambition of improving youth transitions systems and the quality and stability of work. Among these, were education policy measures such as the Qualification Law (Kwalificatieplicht Wet), introducing compulsory education up until 18, and the 'Blits on drop-outs' programme, strengthening schools' responsibility and accountability for young people's post-16 destinations. Early School-Leavers Regional Reporting and Co-ordination Centres were also introduced in each Dutch municipality, and there was increased investment in secondary vocational education. The Youth Unemployment Taskforce brought together employers, workers, local authorities, educational institutions and other stakeholders to prevent long-term unemployment among young people, create additional jobs, and reduce the number of drop-outs. The central goal of the Taskforce was to create 40,000 additional jobs for young unemployed people (OECD, 2008). Juznik Rotar (2021) analysed subsidised employment programmes for unemployed young people aged 20–24 in the Netherlands from 2007 to 2010. The magnitude of the wage subsidy was EUR 3,500 per year for two years, which is equivalent to just over £3,000 in current prices (January 2023).

## **2.5 Meta-analytic procedures**

Once the extraction of evidence was performed, the results were synthesised using a meta-analysis. This first required the programme impact estimates to be standardised across the studies. This was a challenging task given the variety in methodological approaches and the information reported. The protocol originally envisaged the reporting of risk ratios for dichotomous outcome measures, such as employment probability. However, this was

either not feasible due to a lack of information or ill-advised due to the reported data not accounting for pre-intervention differences between the treatment and control groups. As such, standardised mean differences were derived for dichotomous and continuous outcome measures using the Campbell Collaboration effect size calculator (Wilson, n.d.) to compute Cohen's  $d$ , its variance and its confidence interval for each of the outcome estimates. This is akin to the approach employed by Card et al. (2010) who faced similar challenges when performing a meta-analysis of ALMP – these authors produced quasi effect sizes from the ratio of the treatment effect to the standard deviation of the outcome measure within the control group.

Where necessary, the standard deviation of the programme effect was derived using the following formula from the Cochrane handbook:

$$\text{Standard Deviation} = \frac{\text{Standard Error}}{\sqrt{\frac{1}{N_{\text{treatment}}} + \frac{1}{N_{\text{control}}}}}$$

In some instances, the standard error also needed deriving from the t-statistic as follows:

$$\text{Standard Error} = \frac{\text{Treatment Effect}}{t \text{ statistic}}$$

For Marlow et al. (2012), two additional assumptions were made. Firstly, neither a t-statistic nor standard error, which could be used to derive the treatment effects' standard deviation, was reported. The treatment effects were reported to be significant at the five per cent level; therefore, a t-statistic of 1.96 was (conservatively) assumed, which was used to derive the standard error, and thus standard deviation, of the treatment effect. Secondly, while the total number of potential comparison individuals available for treatment individuals to be matched with was reported (232,000), the number that were included in the matching were not (the authors used Kernel matching, meaning that feasibly some control observations may well not have been a close enough match to any treatment observation to be used). Therefore, it was assumed that the same number of non-participants as participants were used in the matching, giving several control observations to use to derive the effect size (12,310).

The meta-analysis was conducted using Stata's suite of meta-analysis commands. A random effects model was deployed, specifically the restricted maximum likelihood method which produces an unbiased, non-negative estimate of the measure of between-study variability and is commonly used in practice. When studies reported on the same outcome at multiple time points, the results from the longest follow-up were used. We elected to use random rather than fixed effects to enable the results of the analysis to be applicable beyond the included studies, and given study heterogeneity (in terms of intervention population, form of

the intervention, labour market context and so forth) it was considered unsound to assume that there is a common effect across studies. When the meta-analysis was performed for the “entry into unsubsidised employment” outcome, the  $I^2$  statistic indicates that 28 per cent of the variability in the effect-size estimates across studies was due to between-study differences rather than sampling variation, a relatively low proportion (Higgins et al., 2003). However, when the analysis for the subgroup of UK studies was performed (De Giorgi (2005) and Marlow et al. (2012)), the  $I^2$  statistic was much larger at 58 per cent. The p-value of the overall homogeneity test was 0.35, meaning that there was not definitive statistical evidence of between-study heterogeneity. However, given that with a small number of studies the homogeneity test is known to have low power (Hedges and Pigott, 2001), it may not detect statistically significant heterogeneity, which is likely present here. This somewhat justifies our decision to be conservative in the assumptions we were willing to make when selecting our model<sup>9</sup>.

### **Critical appraisals of individual studies in the meta-analysis**

A critical appraisal of each study that was to be potentially included in the meta-analysis was performed to examine whether the results of each were at risk of bias. Following the approach of Saran et al. (2020) used in the Youth Futures Foundation Youth Employment Evidence and Gap Map, seven items were assessed in decision making: *study design* (related to confounders); *sample size*; *level of attrition* or losses to follow up; *intervention definition*; *definition of outcomes*; *baseline balance reports* and *overall confidence* based on the lowest score for intervention and outcomes definitions and baseline balance were assessed in decision making.

### **Process evaluations and primary studies not in the meta-analysis**

For the interventions included in the meta-analysis, process studies and research involving designs that did not deliver an assessment of net impact were also examined. These were also critically appraised for quality and likelihood of bias. While the protocol envisaged the use of AMSTAR (an appraisal checklist developed by Shea and colleagues (2017) for systematic reviews of randomised and non-randomised trials), this was suited to systematic reviews rather than primary studies and so was discounted. Instead, the CASP (Critical Appraisal Skills Programme) checklist,<sup>10</sup> which includes a series of items to specify the findings of each study and determine the validity of the findings, was explored and used for critical appraisal, however as Long et al. (2020) note, this does not provide a ready rating of

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<sup>9</sup> For completeness we also ran our analyses using the fixed-effects inverse-variance model – differences in the results produced were not noteworthy, hence they shall not be reported on here.

<sup>10</sup> The CASP checklists are located here: <https://casp-uk.net/casp-tools-checklists/>.

quality aligned to Campbell Collaboration guidance despite its detailed assessment questions. Moreover, the range of studies in this aspect of synthesis did not fit well under a single CASP checklist. Nonetheless the studies were reviewed using the 10-question approach but allowing for some adaptation for method, for example.

For these reasons, the approach used by Apunyo et al. (2022) in their qualitative review of interventions to increase youth employment, was also deployed and this is reported below. It led to three factors being examined: (1) methodology, (2) data collection, and (3) findings. For each study, *yes*, *no*, or *somewhat* categories were used to appraise against the following questions:

1. Do the authors clearly describe the methodology?
2. Do the authors clearly describe the data collection methods?
3. Do the authors clearly present the findings, and are the findings clearly linked to the available data?

A composite confidence score was then composed using the three items for each study, with a rank of 'high confidence' indicating that yes applied to all three items, a rank of 'medium confidence' indicating that the answer to at least one item was 'unclear', and a rank of 'low confidence' indicating that the answer to at least one item was 'no'.

### 2.5.1 Limitations of the evidence base

The evidence base on the impact of wage subsidies on youth employment is limited in terms of scope and study design, thus restricting the conclusions that can be drawn. Regarding methods, the studies included in the meta-analysis used quasi-experimental designs (QEDs), including regression discontinuity, propensity score matching and difference-in-differences. Although these methods are advanced, some believe they lack the rigour typically associated with randomised controlled trials (RCTs; Goesling and Lee, 2015). Balancing that, the reliance on administrative data sets for the analysis increases rigour and reliability as data can be gathered for the full population of interest (assuming a suitable consent process is in place) which has benefits over the use of survey or management information where greater attrition might be seen. Nonetheless, the study designs typically do not account for general equilibrium effects, as they do not account for the effects of the programme on the wider population. For instance, while participation in a wage subsidy programme may increase the employment probability of trial participants, it may decrease the employment probability of non-participants as businesses may choose not to employ these individuals in favour of those for whom their labour costs are subsidised. In essence, there can be a displacement effect.

Turning to outcomes, the studies examined included detail of entry to unsubsidised employment and entry to education. However, less emphasis was placed on examining

sustained employment or education. Other outcomes that would have been useful but were not investigated include employability, work awareness, employment expectation, job quality, hours and salary and 'softer', short-term outcomes such as increased confidence and changes in behaviour. The evidence base also includes inconsistencies in the amount of detail on cost-benefit analyses and information on spillover effects.

A more minor note, albeit interesting and relevant to current practice, is that all studies included in the meta-analysis were published prior to 2013 – i.e., responding to the ongoing effects of the Great Recession, except for Juznik Rotar (2021). This may generate questions about the applicability to the labour market in 2023 as globally, labour markets are moving beyond the effects of the COVID-19 pandemic.

While evidence is still emerging on the relative effects of the Great Recession in contrast to the pandemic, commentators (such as Birinci and Amburgey, 2021) provide some useful insights into the varied effects. The similarities between the two time periods include the economic and labour market shock experienced. This caused high disruption to employment for many groups and young people were particularly at risk. However, there are substantial differences too. In the Great Recession, the rate of job separation increased and as recession deepened, the prominence of job separations increased. In contrast, the COVID-19 pandemic created rapid, high job separation with the rate decreasing after the initial shock. Relating this to rapid response policies set in place by the UK Government to address the employment challenges wrought by the pandemic, it can be seen that initial predictions of a youth unemployment crisis were not borne out, and so the Kickstart scheme struggled to gain traction. Additionally, the Restart scheme that was introduced in part to address long-term (six plus months unemployment) amongst a group with relatively straightforward need instead pivoted to support those with more complex needs.

It is therefore worth re-stating that typically, wage subsidy interventions are introduced to respond to challenging labour market trends for particular groups – and are most effective when there is a clear challenge for that target group gaining employment. This means that transferable lessons can be derived for practice where similar contexts emerge in the future.

## 3 The impact of wage subsidies on youth employment and education

### 3.1 Findings on whether wage subsidies have an impact on young people's outcomes

Various outcomes were measured across the extracted studies, including for example earnings (Youth Practice) and the probability of receiving welfare support (Future Jobs Fund). However, two grouped outcomes were measured by enough studies to perform meta-analyses – entry to unsubsidised employment, and entry into education.

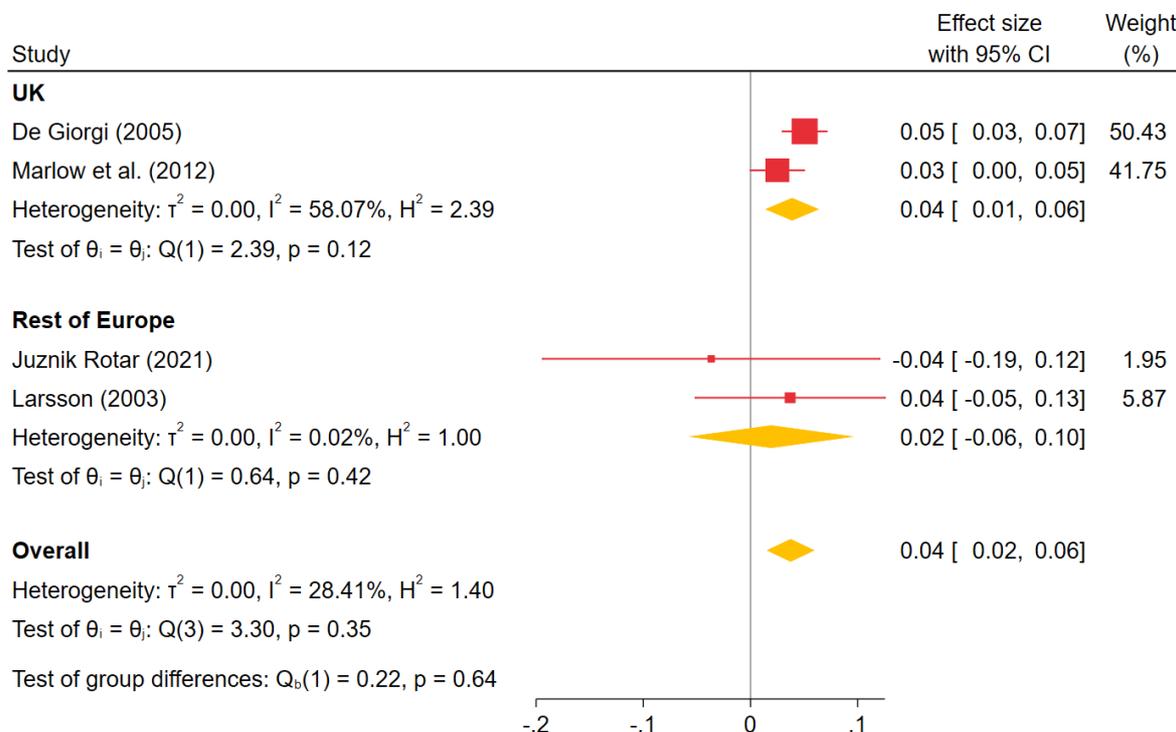
#### 3.1.1 Entry into unsubsidised employment

Results from four studies are pooled for the entry into unsubsidised employment outcome measure:

- De Giorgi (2005) – (re-)employment probability within 12 months of intervention start.
- Juznik Rotar (2021) – (re-)employment probability 24 months after programme start.
- Larsson (2003) – proportion employed within 24 months after programme start.
- Marlow et al. (2012) – probability of being in unsubsidised employment 24 months after intervention start.

Figure 2 displays the forest plot that shows the results from the meta-analysis for the entry into unsubsidised employment outcome. Given that De Giorgi (2005) and Marlow et al. (2012) evaluate interventions in the UK (the New Deal for Young People and the Future Jobs Fund respectively) while Juznik Rotar (2021) and Larsson (2003) evaluate interventions from the rest of Europe (ALMP in the Netherlands and Youth Practice in Sweden respectively), the meta-analysis used the sub-groups of the UK and the rest of Europe.

**Figure 2 Entry into employment forest plot**



Random-effects REML model

Source: IES 2022

The overall mean effect size for the entry into employment outcome is  $d = 0.04$ , significant at the 95 per cent confidence level (95 per cent confidence interval = 0.02, 0.06) suggesting that the mean effect size is significantly different from zero. Therefore among these studies the wage subsidies appear to have had a significant positive impact on treated individuals' likelihood of entry into non-subsidised employment. As an effect size this is quite small, however translating it back into the units of the treatment effect from De Giorgi (2005), it corresponds to an increase in the re-employment probability within 12 months of intervention start of 3.38 per cent (95 per cent confidence interval = 1.37, 5.49), which for an ALMP is non-negligible. From July to September 2022, there were 1,224 million unemployed working age individuals in the UK (ONS, 2022a),

Another way of interpreting this is to use the number needed to treat, which is 33; thus, if 1,000 young people benefit from the subsidy, 330 find employment and out of those 330, 300 individuals would have done so without the subsidy. Naturally, these are quite crude calculations, which for instance, fail to account for general equilibrium effects; however, they provide some idea of the potential impacts of subsidised employment programmes. The

effect sizes from the UK studies, given the greater precision of these individual studies' estimates due to having much larger sample sizes, are far more heavily weighted in the overall mean effect size than the non-UK studies. As such, the estimated mean effect size and 95 per cent confidence interval for the UK subgroup is closely aligned with the overall mean effect size. The test of group differences shows that there are not significant differences between the two Sub-Group mean effect sizes, therefore it is reasonable to pool the studies and consider the overall mean effect size estimate as broadly representative of both sub-groups.

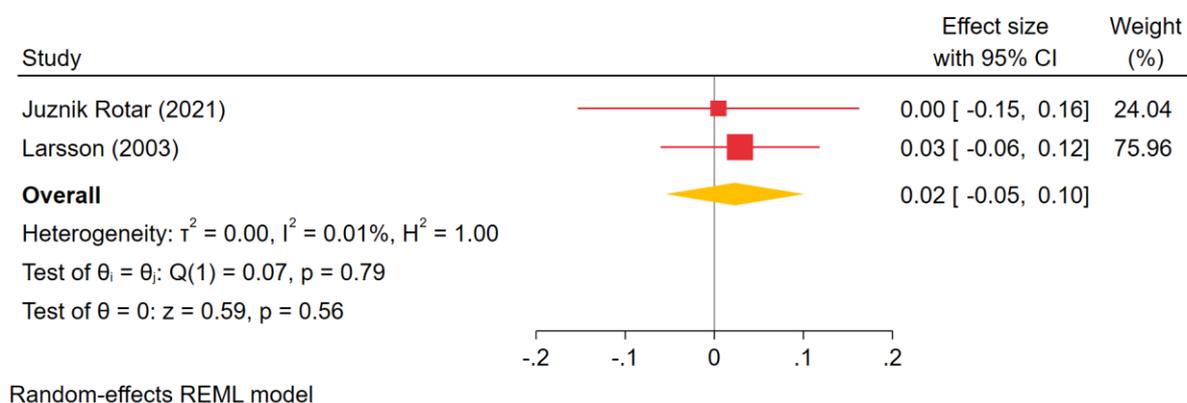
### 3.1.2 Entry into education

Results from the following two studies are pooled for the entry into education outcome measure:

- Juznik Rotar (2021) – probability of being in education 24 months after programme start.
- Larsson (2003) – proportion that started education within 24 months after programme start.

Figure 3 displays the forest plot that shows the results from the meta-analysis results for the entry into regular studies outcome.

**Figure 3** Entry into regular studies forest plot



Source: IES 2022

The mean effect size for the entry into an education outcome is 0.02 (95 per cent confidence interval = -0.05 to 0.10). The p-value of 0.56 suggests that the mean effect size is not significantly different from zero, that is, among these studies, wage subsidies do not appear to have a significant impact on treated individuals' likelihood of entry into education post-participation. This is perhaps unsurprising given that, while participants in a wage subsidy programme may become more aware of the value of education as a means of gaining employment, it is likely a secondary potential pathway as their goal remains employment. It

is also worth noting that employment support systems, and criteria for welfare benefit receipt, may require the prioritisation of employment over full-time education programmes.

### 3.1.3 Other results from studies

Several other results of interest were produced by the included studies that were not subjected to meta-analyses but warrant discussion given our broader interest in the impact of wage subsidies on youth outcomes.

Larson (2003) found that Youth Practice had a significant negative impact on earnings one year after starting the programme of 3813 kr, equivalent to £302 based on an exchange rate of 1 kr to £0.79, rising to 6660 kr (£527) two years after starting the programme although this longer-term effect is not significant.<sup>11</sup> Youth Practice also had a significant negative impact on the probability of employment and a non-significant negative impact on the probability of starting education within 12 months after programme start.<sup>12</sup>

Juznik Rotar (2021) estimated that subsidised employment in the Netherlands had not significant positive impacts on (re-)employment probability and probability of being in education one year after starting the programme.<sup>13</sup>

Marlow et al. (2012) also found that the Future Jobs Fund had a significant negative impact on the probability of being in receipt of welfare benefit support over the 18 months after intervention, reducing it by 7.2 per cent. This is to be expected given that these authors found that the programme also had a positive significant impact on the probability of being in employment, and that Future Jobs Fund was targeted at individuals in receipt of Jobseekers' Allowance.

### 3.1.4 Findings of studies not eligible for meta-analysis

Several studies were deemed ineligible for meta-analysis due to issues with their design, the interpretability of their results, or the intervention that they evaluated having already been evaluated by another included study. Whilst they are rightly excluded from the meta-analyses, it is worth discussing their findings around the impact of wage subsidies on youth outcomes.

McVicar and Podivinsky (2010) evaluate the New Deal for Young People, with the data used in their evaluation covering 1996-2005. Employing a Cox proportional-hazards model of

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<sup>11</sup> These impacts were calculated based on the average of 1993-94 and 1994-95 earnings respectively. Inflating these figures (from the latter year for each figure) to 2021 prices gives estimated impacts on earnings of £515 and £875 respectively (Bank of England, 2022).

<sup>12</sup> These impacts are not included in the meta-analysis as they are not the results from longest follow-up period.

various specifications, they initially find that this intervention increased the likelihood of leaving unemployment by 45-50 per cent and it also had a positive impact on the job entry hazard rate of 40-45 per cent, each result being significant at the 99 per cent confidence level. Introducing additional controls to their specifications maintains the significant positive impact of the New Deal for Young People, but also highlights an inverse relationship between the programme's impact in an area and the area's unemployment rate; that means the New Deal for Young People was 'least effective where it was most needed'. Potential explanations for this include: (1) there may be more and better quality vacancies in tighter labour markets, (2) the composition of the unemployed group varies with the unemployment rate so that individuals who will benefit less from an ALMP are more prevalent in high unemployment areas and (3) the nature of the programme may vary with unemployment rates, either due to correlation with the characteristics of the unemployed or through variation in the provision at the provider level.

Riley and Young (2001) also evaluate the New Deal for Young People, covering the first two years of the programme (1998-2000). They employ a (quasi-) Difference-in-Difference approach, with their unit of analysis being the Units of Delivery – the geographic unit at which the New Deal for Young People was delivered. They overall conclude that the intervention had raised outflow rates from youth unemployment, specifically long-term youth unemployment, with a significant increase in outflows to jobs including unsubsidised employment. Whilst participants returning to unemployment from the options phase (which includes subsidised employment) also increased inflows to unemployment, the net effect of the intervention was a reduction in youth unemployment by approximately 35,000 and an increase in youth employment by approximately 15,000.

Von Simson and Hardoy (2020) evaluate vocational rehabilitation programmes (including a wage subsidy programme) in Norway. These programmes are targeted at work-impaired youths (those who have been previously employed on sickness leave or those deemed so through a work capacity assessment). They evaluate the intervention across the period 2002-2012. Using a mixed proportional competing risk hazard model, they find that the wage subsidy is associated with a four-percentage point increase in the probability that an example reference person transitions to employment or education, significant at the 99 per cent confidence level. The wage subsidy is also the most effective of the ALMP evaluated (the others consisting of off-the-job classroom courses or education, on-the-job training providing work experience in ordinary and sheltered sectors, and supported employment and follow-up assistance to obtain or retain work) in terms of its effect on transitions to employment or education.

Aside from these studies that were eligible for inclusion in the meta-analysis but were not included due to issues with the outcome measures, a discussion of the findings of Dorsett

(2006) is also relevant. This evaluates the New Deal for Young People, examining the effectiveness of the various options after the Gateway period relative to each other.

Dorsett (2006) was excluded from the meta-analysis as it does not employ a comparison group that meets the criteria for inclusion in the meta-analysis. Dorsett (2006) uses as the counterfactual individuals receiving the same, multi-component intervention – New Deal for Young People, and draws comparison between different components. That is, this research does not include an external control or comparison group. As such, it does not estimate an absolute effect of the programme, and instead focuses on relative effects of different components of the same programme. However, it is useful to discuss the findings from this study to understand the usefulness of treating the overall impact estimates of the package that formed New Deal for Young people as representative of the true impact of the wage subsidy component.

Dorsett (2006) evaluates the components of the package across 1998-2001, and employs a Propensity Score Matching approach on a sample of 34,000 male participants.<sup>14</sup> Dorsett finds that the wage subsidy component predominates in terms of its estimated effect on unemployment and employment probabilities. For instance, the wage subsidy option leads to a 24-29 percentage point (depending on model specification) higher employment rate than if the individual had participated instead in the full-time education option. The finding that the wage subsidy is the most effective of the components of the New Deal for Young People provides reassurance that using the aggregate impact estimates for all the components of this intervention (which is what is available in the literature) as opposed to an individual impact estimate specific to just the wage subsidy component should not result in an overestimated effect size – rather, the effect size of studies such as De Giorgi (2005) may in fact underestimate the effect size that the wage subsidy component is responsible for, as the other less effective components reduce the aggregate impact estimate.

## 3.2 Strength of evidence for individual studies and outcomes

Table 3 shows the results from the risk of bias assessment for studies included in the meta-analysis and those that were assessed for meta-analysis eligibility but excluded due to issues surrounding their methodology – high, moderate and low indicate our level of confidence in the studies' ability to deal with the risk of bias relating to each item.

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<sup>14</sup> Who form three-quarters of the cohort.

**Table 3 Critical appraisal of studies in the meta-analysis – confidence in dimensions**

	Study design	Sample size	Attrition	Intervention definition	Outcomes	Balance of characteristics	Overall
De Giorgi (2005)	High	High	N/A	High	High	High	High
Juznik Rotar (2021)	Moderate	High	N/A	Low	Moderate	Low	Low
Larsson (2003)	Moderate	High	N/A	High	High	Low	Low
Marlow et al. (2012)	Moderate	High	N/A	High	High	High	Moderate
McVicar & Podivinsky (2010)	Low	High	N/A	Moderate	High	Low	Low
Riley & Young (2001)	Moderate	High	N/A	Moderate	High	Low	Low
Simson & Hardoy (2020)	Low	High	N/A	Moderate	High	Low	Low

Source: IES 2022

De Giorgi (2005) employed a Regression Discontinuity Design (RDD); given that RDD *a priori* results in near-perfectly comparable treatment and control groups at baseline, it was assigned a high level of confidence in study design. The other three included studies employed some form of Propensity Score Matching (PSM) (with Juznik Rotar (2021) combining PSM with a Difference-in-Difference (DiD) approach); these were categorised as moderate levels of confidence, as this method balances characteristics ex-post. Riley and Young (2001) employ a (quasi-)DiD providing a moderate level of confidence. McVicar & Podivinsky (2010) and Simson & Hardoy (2020) employ hazard rate models – standard methods within labour economics but according to the risk of bias assessment framework used, as a regression-based approach they provide low levels of confidence.

None of the studies reported on attrition, however they all made use of administrative data sources (which would in likelihood cover close to all the cohort of interest), which may indicate that attrition was not a noteworthy issue hence why it was not reported on. Given this, each of the studies was rated as not applicable on this metric.

De Giorgi (2005), Larsson (2003) and Marlow et al. (2012) clearly and fully describe the intervention under evaluation. McVicar & Podivinsky (2010), Riley & Young (2001) and Simson & Hardoy (2020) provide limited details on the wage subsidy (for instance regarding its magnitude and form), while Juznik Rotar (2021) is not specific at all on the intervention they are evaluating – described only as ‘subsidised employment programmes’.

All the studies clearly and fully described their outcome measures except Juznik Rotar (2021) whose description was much briefer, hence moderate confidence was assigned on this item for this study.

‘Balance of characteristics’ is the item in which there was generally lower confidence across studies. High confidence in this was seen in Marlow et al. (2012) as once they constructed their matched comparison group, the balance in characteristics with the treatment groups was strong. De Giorgi (2005) did not report on the balance of characteristics but was awarded high confidence for the RDD approach resulting in comparable treatment and comparison groups *a priori*. All the other studies either did not report on the balance of characteristics or where they did, there were greater than 10 per cent differences between the treatment and control groups in important characteristics, therefore low confidence was assigned to each of these studies for this item.

Overall confidence in each study is derived by taking the lowest confidence level across the previous six items. De Giorgi (2005) is the only study which we have high confidence in overall dealing with potential risks of bias. We have moderate confidence in Marlow et al. (2012), brought down only by its study design (PSM). We have low confidence in each of the other studies, including Juznik Rotar (2021) and Larsson (2003) which are included in the meta-analysis. Each of these are penalised for a lack of balance in characteristics at baseline between treatment and control groups. For the two included studies, given that they employ PSM approaches, the matching process should have resulted in balanced characteristics between the treatment group and matched comparison group. However, given that the results of this were not reported, they must conservatively be assigned low confidence.<sup>15</sup>

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<sup>15</sup> (Juznik Rotar (2021) reports on the propensity scores and areas of common support but this does not allow us to assess the quality of matching across each of the characteristics the groups are matched upon.

### 3.3 Critical appraisal of other studies

As noted earlier, primary studies and process evaluations were included in this review for those papers selected for the meta-analysis.

Table 3.2 shows the results from the critical appraisal for these studies, with ‘yes’, ‘no’, and ‘unclear’ indicating whether the authors clearly described the methodology, data collection, and findings. As noted earlier this replicated the approach taken by Apunyo et al. (2022) in their qualitative review of interventions to increase youth employment, for YFF. Despite what was specified in the protocol, AMSTAR was not applied in the REA since this is suited to systematic reviews rather than primary studies. A CASP checklist was used additionally however this does not result in an overall rating (see Appendix Table A), so below, instead is the assessment based on Apunyo et al. (2022).

An overall score was generated for each study, with a rank of ‘high confidence’ indicating that a study met the requirements on all three items, ‘medium confidence’ when at least one item was ‘unclear’, and ‘low confidence’ where at least one item was found to not meet the requirement.

**Table 3.2 Process studies critical appraisal**

	Methodology	Data Collection	Finding	Overall score
<i>New Deal for Young People (UK)</i>				
Beale et al (2008)	Yes	Yes	Yes	High
Dorsett (2006)	Yes	Yes	Yes	High
NAO (2002)	Yes	Unclear	Yes	Medium
Van Reenen (2003)	Yes	Yes	Yes	High
McVicar and Podivinsky (2010)	Yes	Yes	Yes	High
<i>Future Jobs Fund (UK)</i>				
Ali (2011)	No	No	No	Low
Allaker and Cavill (2011)	Yes	Yes	Yes	High
Fishwick et al. (2011)	Yes	Yes	Yes	High
Shaheen (2009)	Yes	Unclear	Yes	Medium

<i>Subsidised employment (the Netherlands)</i>				
OECD (2008)	Unclear	Yes	Unclear	Medium
<i>Youth Practice (Sweden)</i>				
Bördos et al. (2015)	Yes	Yes	Yes	High
Edin et al. (2000)	Yes	Yes	Yes	High

Source: IES 2022

The reasoning behind the unclear ratings is as follows:

- the papers examined in the NAO (2002) study were unclear, as the authors simply stated that they ‘carried out a range of analyses of published data on the programme, and of data held on the Employment Service’s New Deal Evaluation Database’ (p35);
- the most detailed information about data collection that Shaheen (2009) provided was the use of ‘evidence collected from city level analysis’ (p3); and
- the OECD (2008) paper did not provide a clear methodology section; however, it appears that most data was collected by the OECD.

Overall, very limited implementation evidence was available for the selected interventions to provide lessons for future design of wage subsidy policy. This in part stems from the decision to link the inclusion of process evaluation and qualitative studies to those interventions prioritised for meta-analysis – earlier studies suggested these only existed for the two UK studies. Moreover, the inclusion/exclusion criteria applied meant standalone process evaluations of relevant interventions were excluded. While this is common practice in systematic review approaches, and was explicit in the protocol, it meant that some wage subsidy programmes that were subject to process evaluation but not counterfactual impact assessment were not examined. It suggests a synthesis of process and qualitative studies that examines how elements of culture and society are tied to outcomes could be beneficial to derive more robust findings on implementation. To assess this, some additional searches with a revised search string might be warranted.

Details of the papers examined for implementation messages are included below.

## **New Deal for Young People (UK)**

Four papers covered some limited implementation details of the New Deal for Young People and were published between 2000 and 2010. A challenge is that a process evaluation specific to the wage subsidy could not be located. Key points taken from the available papers are extracted in this section. For example, Beale (2008) examined 20 monthly cohorts of male starters<sup>16</sup> on the programme from July 1999 to June 2000 and followed them for four years to analyse the programme's impact. The cohorts' Active Labour Market Benefit claims and other programmes for clients who are ineligible for Jobseekers' Allowance were compared to cohorts of unemployment benefit recipients slightly too old to have participated in the programme and whose claims had lasted at least six months. Since the programme was mandatory for all unemployment benefit recipients aged 18–24 years, whose claim reached six months, it was not possible to use a comparison group of the same age. The outcome measure was time off Active Labour Market Benefit, which allowed for a difference-in-differences design.

Dorsett (2006) used a non-parametric matching approach to examine administrative data based on benefit payment records for all males starting the New Deal for Young People between September and November 1998. Local unemployment rates, ranging from one to 14 per cent, at the time of entry to the New Deal for Young People were included in the models. Results indicated that there was a greater tendency for those in areas of higher unemployment to enter an option than remain in Gateway.

Van Reenen (2003) used a difference-in-difference design to examine the impact of the New Deal for Young People pre and post programme as well as young people in pilot and non-pilot areas. Various sources of potential bias were mentioned, including selectivity, differential macro trends, job quality, substitution and general equilibrium effects. These findings are not summarised narratively as the effect of the wage subsidy relative to other components of the intervention are not identified.

## **Future Jobs Fund (UK)**

Five process studies for the Future Jobs Fund were published between 2009 and 2012. Allaker and Cavell (2011) conducted 89 telephone interviews with people who had recently completed their six-month placement on a job funded through the Future Jobs Fund between November 2010 and January 2011. Most respondents reported having some work experience prior to undertaking their Future Jobs Fund placement but felt that the labour market at the time was highly competitive, and all reported experiencing challenges when looking for work. Most felt they would not have found their employment without the

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<sup>16</sup> Dorsett (2006), who used a similar male sample, reports that young men accounted for three-quarters of the New Deal for Young People population.

Future Jobs Fund. However, due to the sampling strategy and qualitative method (compared to the overall number of Future Jobs Fund participants), it is important to note that the qualitative results from these interviews may not be representative or generalisable.

In their evaluation of the Future Jobs Fund, Fishwick and colleagues (2011) completed desk research on the impact of the Future Jobs Fund on labour markets, gathered input and feedback from stakeholders and participants, and modelled value for money. The desk research examined the following outcomes: number of individuals returning to benefits, number of individuals in jobs, and other positive outcomes, including locally collated data and national tracking information. Key messages from a meta-evaluation of local Future Jobs Fund evaluations, that had already been conducted, were also examined. The value for money analysis included information on wages, hours and duration of Future Jobs Fund jobs; wages, hours and duration of job outcomes after the Future Jobs Fund; other outcomes after the Future Jobs Fund; and participant characteristics.

In their evaluation of the Future Jobs Fund, Marlow and colleagues (2012) used PSM to examine the impact of the Future Jobs Fund on participants aged 20–24 years, who voluntarily began a Future Jobs Fund job between October 2009 and March 2010. Estimates were provided of: (1) net impact of the Future Jobs Fund on the likelihood of individuals being welfare support recipients (that is in a Future Jobs Fund job, receiving out-of-work benefit, or receiving training allowance) across the first 104 weeks in their Future Jobs Fund jobs, (2) net impact of the Future Jobs Fund on the likelihood of individuals being in unsubsidised employment (specifically, employed in a job outside of the Future Jobs Fund) across the first 104 weeks in their Future Jobs Fund jobs, and (3) costs and benefits of the Future Jobs Fund. Given its coverage, this paper was included in the meta-analysis; however, it is included in this section for the further information it supplies.

Shaheen's (2009) city-level analysis of the Future Jobs Fund used Nomis 2009 Labour Force Survey (LFS) data from April 1992 to April 2009 to examine unemployment patterns by age group and length of youth unemployment. This did not meet the study design criteria for the meta-analysis. Nonetheless, it provides useful information on implementation. Interviews with stakeholders (including local authorities, Connexions services, and third sector and voluntary organisations) were conducted in several UK cities to identify how the Future Jobs Fund could make a difference to youth unemployment in different city contexts.

### **The Netherlands and Sweden**

Very limited information was available beyond intervention design details regarding the process aspects of the Youth Practice programme in Sweden as well as the subsidised employment programmes for young people in the Netherlands.

## 3.4 Evidence gaps

While there are several examples of wage subsidy programmes in the UK that are well evaluated, including the New Deal for Young People and the Future Jobs Fund, there was less information available regarding the evidence behind wage subsidy programmes in the Netherlands and related to Youth Practice from Sweden.

The wage subsidy literature lacks the use of randomised controlled trials (RCTs) as randomisation is often judged unsuitable for the delivery of these programmes which are in effect public employment programmes. While the benefits of wage subsidies may not have been fully interrogated until now, policymakers have found it problematic to allocate some members of a marginalised group to an employment opportunity while not offering this opportunity to others. Supporting this view is wider evidence on the value of employment and work experience to sustained employment outcomes (for example, Percy and Tanner, 2021). Consequently, studies typically utilise nonexperimental matching designs, such as difference-in-differences, propensity score matching, and regression discontinuity. However, these benefit from mobilising administrative data sources which means information for the full cohort is typically available.

The specific evidence gaps for each intervention: New Deal for Young People, Future Jobs Fund, subsidised employment programmes in the Netherlands, and Youth Practice are discussed below.

### **New Deal for Young People**

The National Audit Office (NAO; 2002) highlighted some 'inherent difficulties' involved in evaluating the effects of the New Deal for Young People and generating reliable results. First, due to the assumptions that were made for the analysis, the ability to make robust suggestions about the sustainability of the employment effects generated by the New Deal for Young People was limited (NAO, 2002). Second, to assess the difference that the programme made, evaluators would need to identify the impact of deadweight (workers moving into jobs they would have taken regardless of the programme), substitution (workers replacing other workers that were not eligible for the New Deal for Young People), and displacement (activity similarly dropping off in sectors less likely to employ). Third, the possibility of positive spillover taking place, whereby the programme generally entices employers to hire, would also need to be considered (NAO, 2002). Lastly, the economic and policy background in which the programme took place, should be recognised. Specifically, the effects of a prosperous economy on the labour market for young people, and the introduction of the National Minimum Wage would need to be accounted for, to

examine the impact of the New Deal for Young People programme in isolation (NAO, 2002).

Beale (2008) emphasised the potential bias in comparisons including full-time employment (which indicated the wage subsidy option), which should be taken into consideration when examining the impact of the subsidy compared to that of other options. The effect of the wage subsidy compared to that of Environment Taskforce was slightly larger for the whole cohort than for the matched cohort. This suggests that some of the wage subsidy participants were more closely aligned with employment than those in Environment Taskforce (Beale, 2008). Although the wage subsidy was the best performing option in terms of subsequent time in employment, according to Beale (2008) three factors suggested that the estimated impact was biased upwards. Some unobservable characteristics that were not accounted for, such as motivation to find employment, might be related to which option participants chose. In addition, Beale (2008) notes that the wage subsidy element had a lower proportion of employment spells compared to other options, again meaning that estimates might be biased. Lastly, time spent on subsidised employment was included as time in employment, which increased the estimated net impact of this option compared to the other options in the first year (Beale, 2008).

### **Future Jobs Fund**

As to the Future Jobs Fund programme, Shaheen (2009) identified several gaps in evidence with implications for the programme. This author highlighted that underlying factors, such as the skills mismatch driving youth unemployment in the cities with the highest stocks of unemployment, could not be addressed by the programme. In addition, as the Future Jobs Fund was a tool aimed at helping young people through the recession, Shaheen (2009) suggested that the programme should be focused on those who were ready for work, who would have found a job had it not been for the recession. Finally, Shaheen (2009) also argued that although it was unlikely that the Future Jobs Fund would create long-term jobs, the programme should be able to create jobs that act as 'stepping-stones' for future job opportunities, once demands increased. However, it was unclear whether this did ultimately happen, and whether the programme was effective in materialising these jobs.

### **Subsidised employment in the Netherlands**

Looking at subsidised employment in the Netherlands, the OECD (2008) review identified there are a limited number of ALMP in the Netherlands specifically and exclusively aimed at young people. Moreover, the OECD (2008) highlighted the lack of rigorous evaluations of the effects of such programmes, arguing that in most instances recommendations for improvements on best practices were limited to implementation details.

## 3.5 Intervention design and implementation issues

The evidence gaps above point to the challenges of implementing wage subsidy programmes, to achieve positive impact. The following sections consider the design and implementation issues that affected the two well-evidenced UK programmes. This is followed by information on costs and benefits of these schemes. Very little implementation information was available for the subsidised employment programmes in the Netherlands and the Youth Practice programme in Sweden and so it has not been possible to provide thematic synthesis.

### **New Deal for Young People**

Under the wage subsidy option, the New Deal for Young People placements offered a £60 payment to employers per week (Dorsett, 2006). This and the other options in the post-Gateway phase lasted for a maximum of six months, except for full-time education and training option, which allowed a maximum of twelve months. Each option, except for full-time education and training, also required employers to support education or training for young people at least once a week, which contributed to the completion of a formal qualification. In return for holding education or training sessions, employers received £750 for each New Deal for Young People participant. Those individuals taking the voluntary placements or education and training routes also received £400, across six months (Dorsett, 2006). The follow-through stage provided advice and assistance to young people who continued participating in the New Deal for Young People following their placement in one of the four options.

According to Dorsett (2006), the wage subsidy option resulted in more unsubsidised employment outcomes than the other three options. The volunteering and the full-time education and training options also resulted in more unsubsidised employment outcomes than the environmental taskforce option. These findings were confirmed in a study by Beale and colleagues (2008), who found that after controlling for observable characteristics, wage subsidy participants performed better than those participating in the other options. Indeed, wage subsidy participants were in employment for nine percentage points longer than those in volunteering and environmental taskforce and seven percentage points longer than those in full-time education and training. These results suggest that wage subsidy participants were more successful in the long term than those participating in the other options. Additionally, the point at which participants completed the programme had an impact on observed outcomes, with those who completed the wage subsidy option being 317 per cent more likely to see successful outcomes than those who went on to complete the follow-through

option (an additional period of intensive job searching). It is important to note that those in the follow-through group were entrenched in unemployment and did not necessarily build employment capital in the same way as the other groups. Additionally, the environmental taskforce participants generated poor outcomes overall and were less employable at the outset.

According to Dorsett (2006), many employers who welcomed wage subsidy participants into their organisations offered ongoing employment to the participants after the six months subsidised period. Examining wage subsidy participant outcomes 1.5 years after entering the option, it was shown this group was five percentage points less likely to be unemployed than those who remained on Gateway, and 16 to 19 percentage points less likely to be unemployed than those who participated in the other options.

Additionally, participation in the wage subsidy option depended on employers' willingness to host a New Deal for Young People participant in their organisation, even though a subsidy was provided (Dorsett, 2006). Thus, examining if an aspect of the programme impacted outcomes, also provides information regarding why that aspect may have impacted participation.

- Most likely, age was a critical feature in the ability to find work. The results from Dorsett (2006) show that younger participants were less likely to be in the wage subsidy option (and were most likely to be in environmental taskforce). Those closer to the upper end of the age range, were likely more attractive to employers due to having some existing work experience.
- Individuals who had partners were more likely to participate in full-time education or training or the environmental taskforce. It was not obvious why this should be the case.
- Disabled men were less likely to choose the wage subsidy option and more likely to choose volunteering or environmental taskforce.
- Men from ethnic minority backgrounds were less likely to be present in the wage subsidy option and most likely to be observed in full-time education and training. Thus, employer discrimination might play a role in employment outcomes for ethnic minority participants.

A survey conducted by the National Audit Office (NAO, 2002) asked 'Units of Delivery'<sup>17</sup> to make suggestions about how the programme could be improved. Most respondents (68 per cent) pointed to the need for greater flexibility within the programme and/or enhanced use of the wage subsidy option. Suggestions related mainly to extending (for some participants)

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<sup>17</sup> Units of Delivery were the areas of delivery, led by organisations in the private sector, of the New Deal for Young People overseen by the Employment Service, an Executive Agency of the Department for Work and Pensions. There were 142 Units of Delivery in total.

the time spent on the Gateway, or on one of the options and the flexibility to be able to transfer participants between the different options. Employer support and involvement was also important for the success of the programme; employers provided subsidised job vacancies under the subsidy option. Research commissioned by the Employment Service, however, showed that there were a variety of setbacks to increased employer involvement as providers of subsidised employment, especially for participants who demonstrated barriers to employment. These included:

- employer knowledge and understanding of the programme, which was shown to be highly variable;
- employers often used the same recruitment criteria to select programme participants as they would in standard recruitment. Specifically, employers tended to avoid taking on participants who had criminal records, were not native English speakers, or had mental health problems;
- approximately 50 per cent of employers were satisfied with the £60 weekly subsidy but the remainder deemed the subsidy as insufficient to have an effect on their recruitment practices; and
- employers viewed the one day per week training requirement and the paperwork connected with subsidised employment as disincentives.

According to Van Reenen (2003), 20 per cent of participants in the options stage chose the wage subsidy, which was substantially lower than anticipated. The reasons for this low take-up were not entirely clear, but the author asserted it followed patterns of low take-up of wage subsidy schemes seen in other countries. Possible reasons included: (1) the UK economy was experiencing 'prolonged expansion'. Unemployed individuals who could not enter unsubsidised employment following the Gateway period may have had very poor basic skills, which made them unattractive to employers; (2) the formal training requirement may have caused high costs for employers; (3) the Employment Service had limited extensive experience of delivering wage subsidy schemes; and (4) an inability to enter the job market following the Gateway phase may have generated stigma for affected individuals.

## **Future Jobs Fund**

The Department for Work and Pensions introduced the Future Jobs Fund in October 2009 as a part of the Young Persons' Guarantee (YPG; Allaker & Cavill, 2011; Marlow et al., 2012). The central aim was to create guaranteed jobs for 18–24-year-olds who had been unemployed for at least six months, to improve skillsets and provide disadvantaged young

people with work experience (Allaker & Cavill, 2011). It was also offered to a small number of individuals aged over 25 years in unemployment 'hotspots' (Allaker & Cavill, 2011).

Public, private or third sector organisations were able to bid for funding for job creation; bids had to meet the following criteria: (1) additional to existing vacancies, (2) provide a form of benefit to the community, and (3) last at least 25 hours per week and pay at least the minimum wage (Allaker & Cavill, 2011). The nature of the Future Jobs Fund highlighted the importance of integration of local authorities with partners in cities and sub-regions, aiming that these organisations should work together on bids to facilitate meeting the needs of local economies (Shaheen, 2009). A total of 27,290 jobs were filled by March 2010, with the number of jobs in accepted bid applications ranging from 30 to 8,000 (Marlow et al., 2012). By the end of the programme in March 2011, a total of 105,220 jobs had been filled (Marlow et al., 2012).

The Fishwick et al. (2011) study took forward research on behalf of seven local authority bodies involved in the delivery of Future Jobs Fund. This provided case study examples of implementation, as well as estimates of effect, outcomes and costs and returns in these seven areas. The findings based on the qualitative case study research they undertook indicated that the subsidy was positively perceived by the range of stakeholders, and seen as a 'real job for a real wage'. Employers engaged because the programme provided a relatively risk-free means to trial young people in the workplace. The job creation benefitted communities improving citizenship and cohesion. The partnership structure for delivery – that is, devolved from national bodies to sub-regional bodies, strengthened these partnerships increasing capacity for future collaboration on economic development. Despite these positive features, some lessons for future delivery were identified:

- more time and improved guidance were needed through the commissioning process as the programme was devolved to local authority bodies.
- better preparation of candidates was required to improve the number and quality of applications to the jobs funded through the programme.
- more flexibility and more support to employers – private companies were often excluded by criterion that demanded community benefit from roles created; voluntary and community organisations lacked resources and required more support.
- an increased emphasis on sustainability of the jobs beyond the subsidised period, and ensuring the envisaged wraparound training support was more consistently delivered.

Findings from Shaheen (2009) indicated a patchy picture across cities in England, which this author traced back to labour market composition and associated issues, and personal

contexts of those entering subsidised jobs. As such, this author made several recommendations for future implementation of similar schemes. These focused on:

- building realistic expectations for what this type of initiative can achieve,
- a sharp focus on the immediate issue (young people who would in other circumstances have made an effective transition to the labour market, rather than those with higher or more complex needs), and
- encouraging local authorities to form partnerships reflecting the size of the functional economy, that is at a sub-regional level to enable demand-side policy to be exercised at a sub-regional level reflecting travel to work zones for example.

### Summary

There were many design similarities among the wage subsidy programmes. The New Deal for Young People included a design feature that required employers to provide training, and the Future Jobs fund required employers to provide access to training. Both programmes also included a ‘try before you buy’ option for employers, in which organisations could offer programme participants a work placement prior to employment. Age and work experience, with slightly older workers with more work experience being preferred by employers, were factors that influenced the ability of both New Deal for Young People and Future Jobs Fund participants to find work. One difference was that whereas New Deal for Young People focused on job entry after programme participation, the Future Jobs Fund also highlighted the sustainability of employment after programme participation.

## 3.6 Costs of providing wage subsidies

In line with the evidence generally, more information on the costs of wage subsidies was available for UK programmes than those in the Netherlands and Sweden. The OECD (2008) evaluation of wage subsidies programmes in the Netherlands, simply mentioned that the central government reimbursed local governments for implementing the programmes. Bördos and colleagues (2015) noted that each worker participating in the Youth Practice programme in Sweden received SEK 338 per day (approximately £32), of which the employer paid a small proportion. No additional costs information was provided for either the Netherlands or the Swedish programmes. The following sections therefore extract the available direct and indirect cost information, alongside information on benefits resulting (where this was available) for these two heavily evaluated interventions.

## **New Deal for Young People**

For the New Deal for Young People, direct and indirect costs information was available for the programme as a whole, rather than the wage subsidies component in isolation. The gross exchequer cost was £250m, consisting of about £100m in allowances for the New Deal for Young People options, £50m for the Gateway and £100m for the resource inputs into the options (Van Reenen, 2003). The actual social cost per additional employee was less than £4,000, and Van Reenen (2003) found that the social benefits exceeded social costs. Indeed, the study estimated unemployed young men were 20 per cent more likely to become employed because of the programme, compared to an absence of this support (with youth employment being about 17,000 higher than it would have been without the New Deal for Young People). The initial cost-benefit analysis suggested that it was worth continuing the programme solely based on its efficiency.

## **Future Jobs Fund**

The Future Jobs Fund was initially provided with £1 billion to cover up to 150,000 jobs (Ali, 2011). This was increased to approximately £1.3 billion when the Future Jobs Fund was extended by a year, as a part of the government's March 2010 budget (Marlow et al., 2012). More precisely, the Department for Work and Pensions covered a maximum of £6,500 for each job created through the Future Jobs Fund; this was for all job-related costs, which included wages, set-up fees, administrative costs, equipment, training, and job search assistance (Fishwick et al., 2011). Fishwick and colleagues (2011) found that most contracts were close, if not equal, to the £6,500.

Forty per cent of the Department's funding was provided in the form of set-up costs, and 60 per cent was claimed according to the actual weeks that participants worked (Marlow et al. 2012). In addition to this funding, bidders were also encouraged by the Department to find some form of secondary funding. Through a case study analysis, Fishwick and colleagues (2011) found that some locations used funds from their local areas, or Europe from the working neighbourhoods fund; and some of these funds were sourced by the national government. The average cost of wages covered by the Department for Future Jobs Fund participants was £4,200, and average non-wage expenditure covered was £1,400 (Fishwick et al., 2011). According to Marlow and colleagues (2012), 'participants [were] financially better-off by approximately £1,600 as a result of the programme', and employers received a net benefit of approximately £6,850 for each. The Exchequer experienced a net cost of approximately £3,100 for each participant (Marlow et al., 2012) while society gained a net benefit of approximately £7,750 for each participant (Marlow et al., 2012).

## **Summary**

The evidence, albeit limited, on the cost of providing wage subsidy programmes is generally positive, with the benefits tending to outweigh the costs. For the periods in which these programmes are needed, wage subsidy schemes tend to be efficient and have good affordability.

## 3.7 Substitution and deadweight estimates: UK programmes

The challenge for wage subsidy programmes is whether they influence employer behaviour in such a way that vacancies that would otherwise have been advertised in the open labour market, are redirected to the subsidy scheme in order to attract the financial incentive. This can cause a displacement or substitution type effect. The following sections explore the degree of evidence on these more challenging consequences of subsidy programmes.

### **New Deal for Young People**

The Beale (2008) analysis of the New Deal for Young People did not examine the potential substitution and displacement effects. However, previous research suggests that substitution and displacement were not significant issues for this programme. Neither the National Institute of Economic and Social Research (NIESR) nor the Policy Studies Institute (PSI) macro evaluations of the New Deal for Young People, found evidence of a negative impact from substitution. The Van Reenen (2003) analysis assumed that there were no substitution effects or general equilibrium effects. The former would increase the costs and the latter would increase the benefits. The study did not uncover strong evidence of either.

### **Future Jobs Fund**

When including substitution effects, Marlow and colleagues (2012) estimated an increased net cost per participant of approximately £1,200 (full substitution) and £200 (partial substitution) to the Exchequer 'because the 'substituted' non-participants would be expected to pay less tax and receive more benefits than under the baseline assumptions' (p63). Moreover, the addition of substitution effects decreased society's estimated net benefit by approximately £2,400 (full substitution) and £450 (partial substitution) per participant 'because the 'substituted' non-participants would be expected to produce less output than under the baseline assumptions' (Marlow et al., 2012; p63).

Deadweight estimates for the Future Jobs Fund calculated by Fishwick and colleagues (2011; p42) were £1,654 as a net benefit for each participant, which amounts to a total of £174 million. These authors (p42) defined deadweight as 'the proportion of benefits that would have occurred in the absence of an intervention'. Benefits included the amount participants

saved in benefit payments while employed and any increases in income tax and national insurance revenue during employment. Participants of the Future Jobs Fund were on benefits for an average of 10 weeks (70 days) less than they would have if they had not participated in the programme (Fishwick et al., 2011).

### **Summary**

While there were risks associated with substitution and deadweight for the New Deal for Young People, the policies were well timed and targeted to avoid them. Although the Future Jobs Fund findings on deadweight and substitution were not as conclusive as the New Deal for Young People findings, they also suggest that it was timed well and designed to avoid any setbacks related to substitution and deadweight.

## **4 Discussion of implications for policy and practice**

The results from the meta-analysis suggest that involving unemployed young people in wage subsidy programmes improves entry into employment. However, there are weaknesses in the available evidence. For example, principally, the De Giorgi (2005) New Deal for Young People evaluation included only males (although men accounted for around three-quarters of the overall cohort). Thus, it is not possible to state with certainty the effects for other genders. Additionally, the De Giorgi (2005) paper examined this intervention in its entirety, rather than assessing the various components of the support package. However, given this programme was well evaluated, further evidence from Dorsett (2006) (which did not fit the criteria for inclusion in the meta-analysis as it did not include a comparison group of non-participants) to compare the different post-Gateway options (specifically, wage subsidy in comparison to education, training and volunteering options) demonstrated that the subsidy was a key driver of outcomes. Overall too, it has to be acknowledged that there is limited evidence for longer term outcomes.

Nonetheless, based on the available evidence a few design features are indicated for how wage subsidy programmes should be designed to make the most impact. In terms of how they are expected to work, there is much to support the intended mechanisms set out in section 2.4.2 in that by incentivising the employment of disadvantaged or marginalised young people they can increase their employment 'capital'. However, there is an additional mechanism that results from the analysis. While the policies do not intend to create long-term jobs with the subsidised employers, this can be the result for some young people. Therefore, the subsidy scheme can provide a 'try before you buy' option for employers, which could increase opportunities for disadvantaged or marginalised young people to prove their capability to an employer to gain longer term employment. It also appears important

that they contain elements of on-the-job or off-the-job training to ensure young people progress in their skills during the scheme.

Balancing this, there is some evidence that these schemes have been more beneficial to young people in the target cohorts who are less disadvantaged than some others. For example, the Future Jobs Fund was better suited to more work-ready young people; and in the New Deal for Young People, slightly older more experienced young people were supported more than those in other components of this multi-component ALMP. This may suggest that a bundled support package that includes a preparation phase for more disadvantaged young people, covering basic skills such as reading and writing and employability skills, as well as the brokering of a more supported model for subsidised employment for the most vulnerable, could be important. It may also be the case that ongoing in-work support through a trusted source could help retain young people in employment, through working with the young person and employer.<sup>18</sup> While the criteria used in this REA allowed for the inclusion of subsidised training places (apprenticeships and similar), intermediate labour market programmes and sheltered employment schemes, no evaluations of these made it through the screening process and yet some programmes such as Independent Placement and Support are known to be impactful with various subgroups. Building in aspects of the increased support seen through these type models alongside providing wage subsidies could provide a way forward.

In designing an evaluation of a new subsidy scheme that featured elements of supported employment for vulnerable groups, may raise concerns about using randomisation. Given positive effects might be argued for both the subsidy and the supported employment, it could be argued that any trial might not be in equipoise. Moreover, delaying (through a waitlist) or refusing to offer support of this kind randomly to some young people who might benefit from it might not be palatable to delivery agents or funders. Cluster design trials might be one way forward, however, the availability of substantial and comprehensive administrative data to track outcomes suggests other opportunities exist. The Longitudinal Educational Outcomes data could be used to track outcomes against a matched comparison group using a quasi-experimental design.

In general, future research should explore potential barriers to participant success in wage subsidy interventions (for example low skill levels, no previous work experience and factors known to be associated with disadvantage on various dimensions) and whether the duration of the subsidised jobs has an impact on outcomes. Additionally, more could be done to explore work-related skills outcomes (such as productivity) and earnings, and subgroup

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<sup>18</sup> Examples of this can be found in the implementation of Individual Placement and Support programmes, as well as in the Learning Agreement Pilots, Hillage et al. (2008) and Maguire et al. (2009)

analyses could shed light on whether wage subsidy programmes impact various groups of individuals differently (including those living below the poverty level vs those above the poverty level; those from ethnic minorities in comparison to the white British population in the UK).

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**Appendix: Table A: CASP Checklist critical appraisal of process studies**

	<b>1. Is there a clear statement of the research aims?</b>	<b>2. Is the method appropriate?</b>	<b>3. Is the research design appropriate to address the aims?</b>	<b>4. Is the recruitment strategy appropriate to the aims</b>	<b>5. Is data collected in a way that addressed the research issue</b>	<b>6 (if relevant) Is relationship between researcher and participants been adequately considered?)</b>	<b>7. Are ethical issues been taken into consideration?</b>	<b>8. Is data analysis sufficiently rigorous?</b>	<b>9. Is there a clear statement of findings?</b>	<b>10. How valuable is the research?</b>
Beale et al. (2008)	Yes	Yes	Yes	n/a	Yes	n/a	n/a	Yes	Yes	Yes
Dorsett (2006)	Yes	Yes	Yes	n/a	Yes	n/a	n/a	Yes	Yes	Valuable
NAO (2002)	Yes	Yes	Yes	Can't tell	Yes	n/a	Can't tell	Yes	Yes	Yes
Van Reenen (2003)	Yes	Yes	Can't tell	n/a	Yes	n/a	n/a	Yes	Yes	Yes
McVicar and Podivinsky (2010)	Yes	Yes	Yes	n/a	Yes	n/a	n/a	Yes	Yes	Valuable
Ali (2011)	No	No	Can't tell	n/a	n/a	n/a	n/a	n/a	Can't tell	Valuable
Allaker & Cavill (2011)	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Valuable
Fishwick et al. (2011)	Yes	Yes	Yes with some caveats	Yes	Yes	Yes	No	Yes	Yes	Yes
Shaheen (2009)	No	Can't tell	Can't tell	n/a	n/a	n/a	n/a	n/a	No	Valuable
OECD (2008)	Yes	Yes	yes	n/a	n/a	n/a	n/a	Yes	Yes	Yes
Bördos et al. (2015)	Yes	Yes	Yes	N/a	Yes	n/a	n/a	Yes	Yes	Yes
Edin et al. (2000)	Yes	Can't tell	Yes	n/a	Yes	n/a	n/a	Yes	Yes	Yes

## Acknowledgements

The authors wish to thank members of the Youth Futures Foundation who contributed to this project, including Anna Round, Chris Goulden, Howard White (Campbell Collaboration), Catherine Fitzgerald, Talia Dundoo, young people/stakeholders taking part in consultations, and the peer reviewers of the report.

We would also like to thank the other members of the IES research team who made contributions to this project: Billy Campbell, Kate Alexander, Joe Cook, Joy Williams, Abbie Winton, Sally Wilson, Seemanti Ghosh, Charlotte Edney, and Susie Bamford. We include Zoe Gallagher in this who provided detailed proofing support. We also thank the wider teams at CEI and Monash University for their support and collaboration in delivering this review series.

## About the Author(s)

Dr Alexandra Nancarrow, Research Fellow, IES

Alexandra joined IES as a Research Fellow in December 2021. Broadly, her main interests include using a range of quantitative skills to investigate predictors of children's educational achievement. Through her background in developmental psychology, she brings experience of using quantitative methods and collaborating with a wide range of individuals from a variety of backgrounds.

Dan Muir, Research Economist, IES

Daniel Muir's main research interests include unemployment and welfare, low pay, and skill demand and utilisation. Dan uses a range of quantitative skills to evaluate public policy, education and the labour market.

Beatrice Rosolin, Research Officer, IES

Beatrice's main research interests include young people's transitions into employment, and the relation between quality of work and health outcomes for disadvantaged people. Prior to joining IES, Beatrice completed an MSc in Occupational Psychology, during which she developed a range of quantitative and qualitative skills to explore people's experiences of work, and how these impact organisational and other outcomes.

Cristiana Orlando, Research Fellow, IES

Cristiana is leading a three-year project at IES on behalf of the Health Foundation on improving access to good work for disadvantaged young people. She brings expertise on the interaction between inequalities and employment outcomes among young people and developing practical tools to support practitioners on the ground understand what works in improving young people's journeys to employment.

Becci Newton, Public Policy Research Director, IES

Becci has over 20 years' experience of applied social research and evaluation and is a recognised expert on topics including: young people's transitions, particularly within the 14-19 phase; further education and apprenticeship; and unemployment, inactivity and welfare-to-work including vulnerable and disadvantaged young people including those who are NEET.

Jamie Roland, Advisor, CEI

Jamie is an experienced research and evaluation professional with recent experience in youth exclusion and homelessness. With frontline experience within both local government and the third sector, his work is driven by an understanding of how local welfare systems, services and policies have the potential to shape people's experiences of hardship and oppression.

Dr Ellie Ott, Senior Advisor, CEI

Ellie brings over 12 years' experience leading research projects including impact evaluation and evidence syntheses and systematic reviews. Previously, Ellie led research at the Department of

Education at the University of Oxford and research for the US federal government in the Division of Economic Independence in the Administration for Children and Families.

Prof Aron Shlonsky, Head of Department (Social Work), Monash University

Aron is known internationally for his work in child and youth services, particularly in the generation, synthesis and implementation of evidence to inform practice and policy as well as longitudinal data analysis in the child and family services field.