

City Deal Working Together Project
Review & Evaluation

Review of Approach to RCT
&
Identification of Control Groups

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1. Background/Context:

1.1 The research and evaluation contract deliverables included the requirement to outline how a 'control group' might be identified as part of a Randomised Control Trial (RCT) 'approach'; which would form part of the overall research and evaluation methods applied to the project. At the time of submitting a tender response (February 2015), the procurement process for 2015/16 City Deal interventions had already commenced, although it was unknown at this point in time what the 'nature' of these interventions and who would be delivering them. The research and evaluation tender included a question relating to how a control group would be identified. Based on the type of data to be collected, our experience of the local employment delivery organisations and current partners involved in City Deal an initial outline approach was suggested.ⁱ This was with a view to exploring in more detail the feasibility and potential RCT design/approaches City Deal could implement going forward within the project. This activity was costed, scheduled and agreed to take place at the beginning of the research and evaluation project.

1.2 Following the award of the Research and Evaluation contract we have been able to undertake this review, which includes examination of the proposed City Deal project 'interventions' and to establish more clearly whether the conditions required to implement a RCT exist. Our findings and recommendations as to the approach the project should take are outlined in this report for consideration by the project management team and relevant stakeholders.

2 What is a RCT?

2.1 In simple terms, what makes a RCT different to other types of evaluation is it introduces a randomly assigned control group to test the effectiveness of a new intervention against what would have happened if you had changed nothing. RCT's work by dividing a 'population' into 2 or more groups **by random** and **measuring pre-selected outcomes** for each group. This allows control of a whole range of factors that enable us to understand what is working and what is not.

3 Background to the use of RCT's in the field of public policy

3.1 Although common in other fields (medicine, international development) they are not routinely used to test the effectiveness of public policy interventions in the UK. Objections include their difficulty to implement, costliness, unethical nature i.e. to withhold 'treatment' (interventions) and that they are just unnecessaryⁱⁱ. However, considered to be the 'gold standard'ⁱⁱⁱ of policy evaluations, the Cabinet Office Behavioural Insights Team (BIT) believes RCTs should be routinely used to test effectiveness in public policy interventions in the UK.

3.2 BIT also suggest there is good evidence to suggest that it can be cheaper than other types of evaluations especially when outcome data is already being delivered and collected from routine monitoring systems. The lead consultant's original assumptions and proposals were made on the basis that 'outcome data' was already being collected – as this is often the most costly factor of RCT's. This is a key factor in whether the final designed and 'agreed' RCT can be delivered within current budgets and resources (City Deal project, delivery partners/providers; researchers/evaluators) or whether additional resources may be required.

4. What conditions need to apply to run a RCT?

4.1 In simple terms, the following things need to be able to be achievable:

- Programme participants/non participant can be randomly assigned into 2 or more groups large enough to comprise a statistically valid sample.
- The groups can be administered a 'distinct' intervention (or non-intervention i.e. control group)
- For each group the programme can measure outcomes

4.2 On this basis, there are a number of questions to consider:

4.2.1 Can we feasibly identify a 'non-participant' control group?

On the face of it, there appears to be some practical (i.e. limited eligible pool of people) and ethical (i.e. denying 'treatment / intervention') grounds which hinder our ability to identify a non-participant group (in respect of a test of the 'whole' City Deal Working Together policy/intervention). It is also important to note that a non-participant group cannot be those who merely opt out i.e. do not wish to participate. However, in cases where there is no suitable non-intervention groups of subjects from which a 'control' group can be selected, RCT's still may be used to test the effectiveness of different interventions (provided that each group is statistically large enough to comprise a statistically valid sample).

4.2.2 What is the 'distinct' intervention that is being delivered in the City Deal project?

On the face of it, the 'policy' i.e. social housing led/area saturation 'approach' and the current delivery 'model' is **not** a 'distinct' or 'standardised' intervention but a range of different interventions which vary from geographical area and/or delivery partner. However, RCT's can be used to not only to test different interventions but smaller interventions or aspects of the 'policy'; quantifying the benefit as accurately as possible and showing which aspects are having the greatest effect. It can be used to compare different policy options and test small/minor variations. A RCT is not necessarily a test between doing something and doing nothing but can establish which of number of intervention options is best. In this case, one of the interventions or a particular 'feature' of an intervention would serve as a control group against which other interventions will be compared. This could be testing a new approach against 'normal' current practice or we could be comparing different levels of 'dosage' against each other. For example, if one of the interventions was a new programme for entrepreneurs that included start-up funding, it might be useful to know whether doubling the amount of available funding would have a significant effect of success or makes no difference. We would not establish the net outcome i.e. in the case of a 'non-intervention' control group but could establish incremental outcomes; useful in providing evidence of programme impacts.

City Deal Working Together Project - Review & Evaluation
Review of Approach to RCTs & Identification of Control Groups

5. Steps for Designing and Planning A RCT

5.1 Once it has been established that a RCT could be delivered, the following steps should be followed. These are best summarised by referencing the Cabinet Offices Behavioural Insights Team’s paper “Test, Learn, Adapt: Developing Public Policy with Randomised Controlled Trials and are at the core their ‘test, learn, adapt’ methodology.^{iv} This structured approach to designing a RCT will also help guide and shape discussions and consultation with stakeholders on what any City Deal Working Together project ‘trials’ including the identification of relevant ‘control groups’ should look like.

No.	RCT Set Up Step	Narrative /Key Considerations:
1	<i>Identify two or more policy interventions to compare (e.g. old vs new policy; different variations of a policy)</i>	<ul style="list-style-type: none"> We have detailed in Section 4.2.2 a range of considerations in relation to this step.
2	<i>Determine the outcome that the policy is intended to influence and how it will be measured in the trial.</i>	<ul style="list-style-type: none"> City Deal has a range of outcomes (sustainable employment; skills; qualifications; improved confidence etc) it is looking to achieve as ‘whole’; which of these (if any) would the intervention being tested be intended to influence? In addition to pre-specifying outcomes, we must decide how and when outcomes will be measured and this must be the same for both groups. Some trials take much longer to produce results; however there is often valuable information to be gained from short-term or ‘surrogate’ outcomes. What ‘surrogate’ outcomes might exist which will give an interim indication of ultimate outcome. The case for using surrogate outcomes is strongest where good evidence that it is a strong predictor of ultimate outcome of interest. However, we must be careful with self-reported measures where people can over report. Cost effectiveness considerations: In RCT’s, data collection is the primary expenses, which can be greatly reduced by measuring outcomes with data already being collected for other purposes e.g. contractual monitoring returns; outcome star data. What data is conveniently available? What it might cost to collect? What works technically?
3	<i>Decide on the randomisation unit: whether to randomise to intervention and control groups at the level of individuals, institutions or geographical area.</i>	<ul style="list-style-type: none"> This might be individuals, institutions (i.e. City Deal delivery providers?); whole geographical areas. Where it is not possible to

City Deal Working Together Project - Review & Evaluation
Review of Approach to RCTs & Identification of Control Groups

		<p>assign interventions to individuals the randomised unit could be organisational teams.</p> <ul style="list-style-type: none"> • Sometimes randomisation takes place across whole groups rather than individuals, particularly when the testing is around incentive based interventions. By randomising in this way it can eliminate resentment which might arise between individual participants who form part of a distinct group/cohort. • The participants must be recruited to the study before randomisation is done, otherwise trial ceases to be robust. If this is not the case it could affect decisions to recruit an individual (bias).
4	<i>Determine how many units (people, institutions or areas) are required for robust results.</i>	<ul style="list-style-type: none"> • Sample size calculations can be complex. • Preliminary 'power calculations' will help determine how many units should be included in the policy intervention and control groups.
5	<i>Assign each unit to one of the policy interventions, using a robust randomisation method.</i>	<ul style="list-style-type: none"> • When assigning must ensure a robust randomised method e.g. random number generator to avoid bias creeping in and avoid allocation concealment i.e. from vested interest. • For smaller trials we may need to take additional steps to ensure groups are evenly balanced.
6	<i>Introduce the policy interventions to the assigned groups.</i>	<ul style="list-style-type: none"> • It is important to monitor how the intervention is being introduced to ensure it is in the way originally intended. • Variations must be delivered simultaneously.
7	<i>Measure the results and determine the impact of the policy interventions.</i>	<ul style="list-style-type: none"> • Are we interested: to find out whether some groups respond differently to others? in segmenting the sample? If we are, this must take place at the beginning; alternatively we could undertake further trials based on results. • The collection of quantitative data as part of a wider evaluation brief will help explain finding, support future implementation. • An RCT which shows no effective is just as valuable as that which shows a positive effective. It can act as a catalyst to find/explore other interventions.
8	<i>Adapt your policy intervention to reflect your findings.</i>	<ul style="list-style-type: none"> • We should see any RCT's we use as a continual process of innovation and improvement.
9	<i>Return to Step 1 to continually improve understanding of what works.</i>	

City Deal Working Together Project - Review & Evaluation
Review of Approach to RCTs & Identification of Control Groups

5.2 In designing and setting up a RCT, we also need to consider and address issues relating to:

- Attrition rates i.e. likelihood of drop out from the 'trial' or the participant does not provide relevant follow up data.
- Contamination i.e. the 'treatment' overflows into the control group.

5.3 Before commencing a trial, we will need to publish a protocol, which allows others to give feedback and suggestions for improvement; but importantly makes clear outcomes were chosen before the trial began. As with the wider evaluation, for any RCT's we run, the findings should be published including an outline the methods used in order in order for others to assess whether it has been a 'fair test'.

6. Recommended Approach / Next Steps

6.1 The core of the research and evaluation brief was establishing 'what works and what doesn't work' in helping unemployed people into work. We recommend designing/setting up 'feasible' RCTs around smaller parts of the overall 'policy' and evaluating specific interventions; this not only addresses the issue of non-standardised interventions and approaches but presents an opportunity to gain learning and developing during the lifetime of the project. It also allows the project to focus on which 'interventions' are effective at particular and key stages of a 'participants' journey back to work. For example, a common theme within the delivery providers 'offer' was the use of specific engagement activities/interventions as a 'hook' to engage individuals into further work focused development activities. This is one potential area of testing of 'distinct' interventions that could be linked to a range of interim outcomes already being collected through 'work star' (i.e. not thinking about work; thinking about work).

6.2 In order to implement the above recommendation the following options need to be considered:

6.2.1 Option 1: Commence a collaborative consultation, planning and design process; with close working between the research and evaluation team, City Deal project team and current delivery partners to 'unpack' the employment interventions and approaches, identify relevant areas for testing, and understand feasibility. Following this activity (proposed to take place October –December 2015), finalise design/protocol and agree timescales for implementation.

6.2.2 Option 2: Work with the City Deal Project Team to build the planning and design process of future RCTs with a specified non-intervention control group into the future procurement of City Deal Working Together project 'interventions' (most likely to occur from 2016/17 onwards).

6.3 Action Required: The City Deal Project Team/Steering Group to consider recommendations and options in deciding the approach to RCT's within the project and the next steps to be taken.

City Deal Working Together Project - Review & Evaluation Review of Approach to RCTs & Identification of Control Groups

ⁱ Extract from Research and Evaluation tender:

“Identification and Use of Control Group: *One option we are proposing is the use of a Randomised Control Group (RCT) identified from within one or more of the City Deal Working Together pilot contracted delivery providers. This option makes the assumption that at least some of the successful providers are current local organisations already delivering services in the specified area to unemployed people to help them back to work. We would work with the contracted delivery provider to ensure the data/information sets captured were in relation to a group of services users:*

- *recruited over the same period,*
- *with the same eligibility criteria*
- *‘randomly’ allocated between their existing employment support services and the City Deal Working Together pilot project.*

If this approach is not possible due to the nature of the delivery providers selected, we propose the identification of a supportive and committed local strategic delivery provider. They would need to be delivering similar but non City Deal funded services and be prepared to commit time and resources to identifying and ‘monitoring’ a controlled cohort for a prescribed period of time. Our initial thoughts on this option, would indicate exploration of this option with a Local Authority partner who has in-house employment support e.g. within a community learning setting e.g. Dudley or as part of wider community regeneration activity e.g. Sandwell.”

ⁱⁱ Duncan Green, Strategic Adviser, Oxfam GB & Author of From Poverty to Power Blog: Randomised Controlled Trials: Panacea or Mirage May 2010 cited James Copestake (Professional of International Development University of Bath) as stating in a recent debate in the Enterprise Development and Microfinance journal “I’m very much in favour of experimentation and testing, but remain to be convinced that RCT’s the most cost-effective way for managers and policy makers operating in a complex, diverse and uncertain context to evaluate them, compared to triangulating routine monitoring data against focus group discussions and individual satisfaction surveys for example.

ⁱⁱⁱ Madaleno M., Waights S. - What Works Centre for Local Economic Growth: Guide to scoring methods using the Maryland Scientific Methods Scale.

^{iv} Haynes L., Service O., Goldacre B., Torgerson D. – Cabinet Office Behavioural Insights Team (2012): Test, Learn, Adapt: Developing Public Policy with Randomised Controlled Trials