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The impact of financial inclusion interventions on the economy of Kirklees - final technical report

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THE IMPACT OF FINANCIAL INCLUSION INTERVENTIONS ON THE ECONOMY OF KIRKLEES – FINAL TECHNICAL REPORT

Pål Vik
Community Finance Solutions
November, 2011



About CFS

Located within the University of Salford, Community Finance Solutions (CFS) is an independent award-winning research and development unit engaged in promoting and developing integrated solutions for financial and social inclusion, and community ownership of assets.

For more information about CFS and our work, please visit our website at www.communityfinance.salford.ac.uk

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Foreword

Financial exclusion covers a myriad of issues that sometimes appear to be dealt with in isolation.

A small group of representatives from Kirklees Neighbourhood Housing, Citizen's Advice Bureau, Economic Development Services and the Deighton and Brackenhall Initiative started meeting in 2007 to discuss financial inclusion in Kirklees and exploring best practice from other regions.

In May 2008, the Regeneration and Sustainable Communities Local Public Service Board supported a proposal to set up a Financial Inclusion Partnership Group in Kirklees. A group of interested organisations met at the beginning of June to discuss the best way to take this forward, and how the views of local residents can be incorporated into a Financial Inclusion Strategy.

Our approach has brought together a whole range of providers who are keen to work together for the best outcomes for Kirklees residents. A range of different agencies, services and individuals now come together to explore ways in which we can deliver access to appropriate and affordable financial services, along with access to debt advice and money management skills.

This report is an important milestone as it shows the value of this work and its benefit to the economy of Kirklees and the wider region. It shows that as well as having a massive positive impact on our residents on low incomes, financial inclusion activity also provides a boost to the economy.

A handwritten signature in black ink that reads "A Briggs." The signature is written in a cursive, slightly slanted style.

Andi Briggs – Chair, Financial Inclusion Group

Glossary

BIM – Business Intervention Model, a cost-benefit analysis methodology developed by CFS for the analysis of financial inclusion interventions

CFS – Community Finance Solutions

CMCU – Castle and Minster Credit Union

DWP – Department of Works and Pension

FRS – Family Resources Survey, bi-annual national survey about the living conditions and resources of UK households

Growth Fund – Fund of £36 million fund set up by DWP in 2004 to increase availability of affordable personal loans via third sector (not-for-profit) lenders (e.g. CDFIs and credit unions)

Input-output table – Transaction table which shows purchases (input) and sales (output) by sector within a regional or local economy in a given year

KCA – Kirklees Citizen Advice

KBAS – Kirklees Benefit Advice Service

Keynesian income-expenditure model – Method developed by John Maynard Keynes for estimating impact of changes in demand on an economy based on calculating income and employment multipliers

KNH – Kirklees Neighbourhood Housing

KWZ – Kirklees Warm Zone

LM3 – Local Multiplier 3, simplified method for calculating local multipliers designed measure the impact of a certain economic activity, company or investment on a local economy.

Marginal propensity to consume locally – Likelihood of households and firms to purchase locally produced goods

Multiplier – Measure of magnitude of the impact of a change in investment beyond what is immediately measurable

NEF – New Economics Foundation, independent think-tank based in London

EXECUTIVE SUMMARY

Introduction

This study quantifies the wider effects of financial inclusion interventions in Kirklees on both the local and regional economy. The methodology applied is two-pronged:

- First we conduct an analysis of performance management information provided by the financial inclusion service providers. This is used to quantify the increase in disposable income resulting from the intervention as well as the costs of providing the service.
- Second, we use an input-output table for the Yorkshire and Humber region to assess the wide economic impact of this increase on the regional economy. We also make some estimates for the economic impact on the economy of Kirklees.

Financial inclusion in an age of austerity

The findings of this study are being published at a time when both the national and local financial inclusion agenda is shifting radically. After the election of New Labour in 1997, there was a decade of sustained government investment in financial inclusion programmes, underpinned by period of unprecedented economic growth. Today following the largest banking crisis since 1929-33 and the most severe recession since the Second World War, we are entering a period in which financial inclusion interventions and their beneficiaries and providers will be under considerable financial pressure.

Under an extensive programme of cuts many national financial inclusion programmes have already been discontinued or are likely to be discontinued. In addition, the funding of local authorities is also likely to decrease considerably with potential ripple effects on the many services and programmes they deliver or fund.

The impact of financial inclusion interventions on the economy of Kirklees

In total we estimate that financial inclusion interventions in Kirklees generate an increase in disposable income among its users of £27.5 million per year at a cost of £8.8 million. The financial inclusion service providers achieve this mainly by providing access to affordable credit and increasing benefit up-take.

In turn, using the Family Resources Survey, we estimate that £24.5 million is spent in the economy of Kirklees. Based on input-output for the Yorkshire and Humber region, we estimate that this, in turn, has a cumulative impact on the regional economy of £30 million. This cumulative impact is generated as the firms providing goods and services to the financial inclusion service users, purchase goods and services from other firms in the region.

If we take into account the increase in disposable income of users as a result of the intervention and the effect this has on local businesses and industry, this means that for every £1 invested in financial inclusion in Kirklees, £3.5 is generated for the regional economy.

The impact on the local economy of Kirklees is likely to be smaller than that of Yorkshire and Humber because smaller economies tend to rely more on imports and a greater proportion of workers would be commuting in from (and spending their wages) outside the economy. However, in absence of data on the proportion of inputs imported by local industry from outside the local economy, it is difficult to know for certain the exact impact on the local economy. Using inward commuting as a proxy

for leakage, we estimate the impact on the local economy to be in the region of £24.5 million. This means that for every £1 invested in financial inclusion work, £2.7 is generated for the local economy.

Policy implications

The impact and benefits of financial inclusion interventions have been considered in numerous studies and are also an important consideration for organisations, local authorities and governments investing in financial inclusion. In the main the impact and benefits are understood in terms of impacts on the financial and social well-being of the households of the beneficiaries.

This study points to an additional dimension of benefits associated with financial inclusion interventions: the impact on the local and regional economy. The providers, funders and supporters of such interventions may want to consider this dimension when it comes to making decisions on allocation of funding.

The discontinuation of funding of financial inclusion interventions in Kirklees is likely to have knock-on effects on the local and regional economy. The services provided by the organisations in this study enable Kirklees residents to access benefits and cheaper finance which has positive ripple effects on the local and regional economy.

That said it is important to not let financial inclusion policy be determined by one dimension alone. For example services aimed at increasing benefit up-take are more likely to provide higher sums than say weaning people of home credit. However, it does not mean that increasing benefits is more worthwhile than the latter. Ultimately financial inclusion policy should take a broader view of importance and effectiveness.

1. Introduction

This document presents the findings and the methodology for a research project assessing the impact of financial inclusion interventions on the economy of Kirklees. Specifically, the research focused on the interventions by Kirklees CAB, Castle and Minster Credit Union, Kirklees Neighbourhood Housing, Kirklees Benefits Advice and Kirklees Warm Zone.

The remainder of this report is organised into four chapters:

- *Chapter 2: Methodology*
- *Chapter 3: Costs and benefits of financial inclusion interventions in Kirklees*
- *Chapter 4: Economic impact of financial inclusion interventions in Kirklees*
- *Chapter 5: Summary and conclusions*

Additional documentation can be found in Appendices A and B:

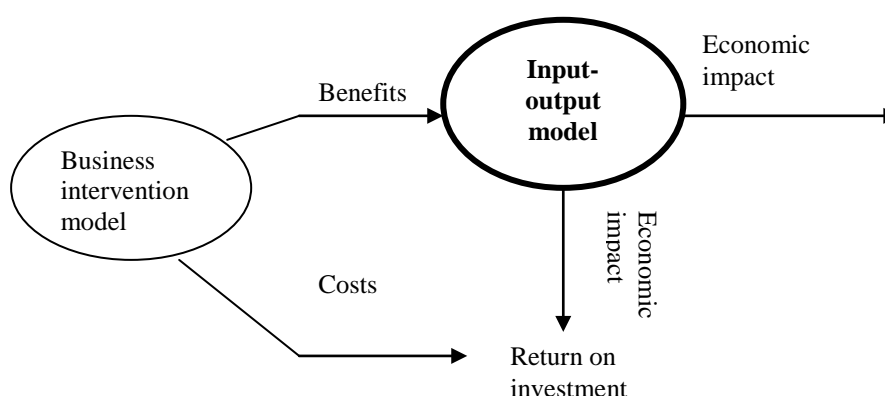
- *Appendix A: Details of assumptions used*
- *Appendix B: Economic impact of financial inclusion – models and applications*

2. Methodology

2.1. Introduction

This chapter details and discusses the methodology applied to evaluate the regeneration impact of the financial inclusion interventions in Kirklees. The methodology on which the present study is based was first developed for a study conducted in Leeds (see Dayson et al, 2009). The methodology applied is depicted in Figure 2.1.

Figure 2.1: Methodology



The methodology consists of two components. First we applied an input-output model. This is the core component of the methodology, as illustrated by the circle in bold font, because it allows us to translate the benefits for clients into impact on the local economy. Second, we used a Business Intervention Model (BIM) – a cost-benefit analysis methodology developed by CFS for the analysis of financial inclusion interventions – to calculate the costs and benefits of the financial inclusion interventions. As illustrated in Figure 2.1, looking at the costs relative to the economic impact quantified by the input-output models allows us to ascertain return on investment in financial inclusion activities.

The remainder of this chapter is organised into three sections. The first lists the financial inclusion interventions included in the study and the rationale for including these. The second outlines the methodology of the BIM, while the third describes and discusses input-output model used to ascertain the impact of the interventions on the local economy.

2.2. Financial inclusion interventions studied

A number of key partner organisations were identified for participation in this research study:

- **Castle and Minster Credit Union:** A credit union with a common bond covering people living or working in Kirklees. Has 6,500 members and offers savings and loans to its members.
- **Kirklees CAB:** Citizen Advice Bureau offering generalist and specialist advice in debt, housing and benefits to in excess of 10,000 clients per annum.

- ***Kirklees Neighbourhood Housing:*** The largest social housing landlord in Kirklees with a housing stock of 23,400 properties. Has an in-house debt and money advice team.
- ***Kirklees Benefits Advice Team:*** Local authority unit providing specialist and generalist advice on benefits and tax credits to residents of Kirklees.
- ***Kirklees Warm Zone:*** Three-year carbon reduction and fuel poverty project offering cavity and loft insulation, and benefit checks.

The reasons for choosing these particular partners were numerous, but on the whole they provide a broad mix of perspectives across a range of financial inclusion activities, and offered a cost effective way to undertake the research.

2.3. Business Intervention Model

We used a Business Intervention Model (BIM) to quantify the costs and benefits of the financial inclusion interventions in the study. In simple terms, the Kirklees BIM works by calculating the net average benefits accrued to beneficiaries by receiving the financial inclusion services provided net of the costs of delivering the services. It involves:

- Understanding the roles, responsibilities and required activities of all relevant staff in terms of delivering and managing the activities
- Understanding the interaction and information flows between these parties (internally and externally, with beneficiaries and also with other agencies);
- Understanding the outputs and, to a lesser degree, the outcomes of the interventions; both with regards to the number of beneficiaries dealt with but also the net average return to the beneficiary as a result of being involved in the activity
- Calculating the cost of delivering the services provided; at an organisational level where appropriate, certainly at a unit level and also, where possible and appropriate at a unit cost per beneficiary level

The calculations have in the main been based on data provided by key partners (e.g. Performance Management Information etc). Where such data has not been available, we have had to make some assumptions, which are detailed in Appendix A. The assumptions have either been informed by empirical research, which findings can feasibly be transferred, or by estimates provided by the management of the service providers.

The creation of the Kirklees BIM has involved a number of stages:

1. ***Identification of potential organisations to review:*** This involved selecting a subset of organisations from a number of organisations providing financial inclusion services.
2. ***Agreement with key partners to participate in the evaluation:*** At this stage agreement by the management of the organisations is sought as this is important for completion of the template.
3. ***Field interviews:*** The interview process was semi-structured in that it looked to broadly follow the format of the Intervention templates. At the end of each interview each interviewee was advised that there would be a number of questions according to how the interview had progressed.
4. ***Follow up information:*** In most cases there would be need to collect some additional information

5. **BIM development:** At this stage the results are cross-referenced with the client survey findings. The development of the BIM seeks to:
- To calculate average beneficiary benefit / loss of benefit per beneficiary
 - To understand cost of delivery (per FTE equivalent at programme level) plus management overview and contribution to core costs
 - To calculate Return on Investment in relatively simple terms: benefit / loss per beneficiary in the ratio of £1 cost to run the service provided
 - Rely on actual information wherever possible, and prudent assumptions and forecasts where necessary
 - Apply control factors to compensate for other dynamics (might be positive or negative)

2.4. Input-output modelling

The methodology on which the template is based is an input-output approach to modelling impact. (See Appendix B for a discussion and justification for using this particular approach.) This approach uses an input-output table to assess the impact of increased demand (in this case resulting from financial inclusion interventions) on an economy. An input-output table is a transaction table which shows purchases (input) and sales (output) by sector within a regional or local economy in a given year.

The input-output modelling is conducted in three stages. In stage one we quantified the income per beneficiary resulting from the financial inclusion intervention (advice, credit etc).

In stage two, using data from the 2005-2006 Family Resources Survey (FRS) for the lowest income decile we estimated how the households would spend this increased expenditure (i.e. % spent on clothing and footwear, fuel, transport etc). With the exception of non-consumption expenditure (i.e. savings, investments and housing related spending), we assume that the residents of Kirklees spend all their income within the city and that inward commuters spend all their income where they reside (i.e. outside of Kirklees). This is not a realistic assumption as residents of Kirklees may go shopping outside of the city and as inward commuters may spend part of their income in Kirklees. However, in absence of a viable method of collecting accurate data on proportion of income spent locally, this was deemed the best approach.

In stage three, once the increased income, discounting inward commuters, has been calculated and allocated by sector according to the FRS 2005-2006, we used the input-output table for the Yorkshire and Humber region to see the distribution of spending by sector on the other industries (e.g. if £10 is spent on agriculture, how much does this sector spend on rubber and plastics, and banking and insurance, and in turn how much does rubber and plastics spend on banking and insurance etc). We have developed a simplified set of equations estimating the percentages of spending by sector. For example, from the input-output table for Yorkshire and Humber we can see that Agriculture, Forestry and Fishing purchases 2% of inputs from Chemicals.

3. The costs and benefits of financial inclusion interventions in Kirklees

3.1. Introduction

This chapter details the operating costs of the financial inclusion interventions under study and quantifies the benefits for users and clients of the different programmes. The estimates on benefits presented in this chapter will be used in the input-output modelling in Chapter 4 to assess the impact of financial inclusion interventions on the economy of Kirklees. Similarly the costs detailed in this chapter will allow us to estimate the economic benefit generated by each pound invested in financial inclusion activities in Kirklees.

The remainder of this chapter is structured as follows. The first sections present the costs and benefits for each of the financial inclusion service providers. We then provide data on the overall costs and benefits of the interventions.

3.2. Business Intervention Model

This section presents the results of the Business Intervention Model (BIM). The BIM estimates the increase in disposable income resulting from the financial inclusion interventions and the operating costs of these interventions. We use this data in the input-output modelling in Chapter 4. The BIM calculates costs and benefits by relying on data from a wide range of sources:

- ***Performance Management Information:*** Most of the financial inclusion service providers collect data on benefit uptake, decreased debt burden, number of clients and other useful information which we use in our calculations.
- ***Audited accounts:*** For the costs we have used audited accounts or similar documentation on the operating costs.
- ***Selected random sample:*** Where data has been unavailable we have in some cases asked for aggregate data from a random selection of clients.
- ***Estimation:*** In some cases, when we have not had data, we have had to make estimates.

Most of the data provided by the organisations is for the financial year of 2010-11. We use more up-to-date where available and older data when necessary.

3.2.1. Castle and Minster Credit Union

Castle and Minster Credit Union (CMCU) started as an employee-only credit union in 1995. It changed its' common bond in 2002 to cover anyone living or working in Kirklees. CMCU is today the largest credit union in Kirklees with 6,500 members. In 2004, CMCU started offering instant loans not requiring a savings record. The credit union received funding under the first round of the Growth Fund.

Table 3.1 shows the result of the BIM for CMCU. The estimation of costs and benefits of the service is based on data for the period October 2009 to September 2010. The data is for the bronze loans – loans for new members and members without savings – only.

Table 3.1: Costs and benefits CMCU (£)

Increase in disposable income:	367,215
Total costs:	485,915
Number of beneficiaries	3,095

The present study focuses on increase in disposable income as opposed to the wide range of positive outcomes which financial inclusion service providers may facilitate. This has particular implications for CMCU. While the Credit Union may have a positive impact on its members, by increasing their resilience through saving and by enabling them to access banking and transaction services, it may not necessarily increase the disposable income or the spending of its members. The estimation of benefits of CCU has focused on increases in disposable income due to decreased financing costs. In turn the reduction in financing costs is produced as some of the borrowers make the transition from more expensive sources of credit to a credit union loan or a growth fund loan. The assumptions are detailed in Appendix A.

It is estimated that over the course of a year the reduced financing costs lead to an increase in disposable income of £367,215 at a cost of £485,915. Again it is important to stress that this study had the relatively narrow focus of quantifying increased spending in the local economy as a result of the interventions. The scope and potential impact of the Credit Union is more holistic aimed at increased resilience and propensity to save, and enhanced financial capability, which are not covered in this study.

3.2.2. Kirklees Benefit Advice Service

Kirklees Benefit Advice Service (KBAS) was founded in 1979 with a couple of advisors. Today it has 17 FTE advisors, 4 administrators and one manager working in six different locations across Kirklees. KBAS offers welfare rights advice services to residents in Kirklees. The benefits for which it has the most enquiries are Disability Living Allowance (38% of enquiries), Employment Support Allowance (12%) and Attendance Allowance (8%).

Table 3.2 shows the result of the BIM for KBAS. The calculation uses data from the financial year 2010/2011.

Table 3.2: Costs and benefits KBAS (£)

Increase in disposable income:	13,154,393
Total costs:	791,657
Number of beneficiaries	5,250

It is estimated that the service of KBAS generates £13 million in increased benefit uptake at a cost of nearly £800,000. This makes it the single-greatest generator of economic impact in the study. This is largely due to its emphasis on its emphasis on benefit maximisation and the scale of its operation with 14 FTE specialist advisers. In addition, the organisation has an established client group with a considerable proportion of repeat clients, which presumably are less resource intensive and have a higher success rate. The assumptions are detailed in Appendix A.

3.2.3. Kirklees Citizen Advice

There were originally four CABs operating across Kirklees. In 2009 the various CABs merged forming Kirklees Citizen Advice (KCA). KCA offers information, guidance, casework and generalist and specialist advice on debt, welfare rights, housing, family law and consumer rights. The bureau offers advice under the Financial Inclusion Fund and the Legal Services Commission.

Table 3.3 shows the result of the BIM for KCA.

Table 3.3: Costs and benefits KCA (£)

Increase in disposable income:	9,036,488
Total costs:	1,494,284
Number of beneficiaries	10,624

There are at least three ways in which the advisory services of KCA may lead to increased disposable income for its clients which in turn may generate an impact on the local economy. First, the bureau may assist its clients with accessing benefits and hardship funds by checking eligibility and assisting in the application for benefits. Second, as a result of negotiating with creditors, the clients may have to pay less in debt repayments increasing their disposable income. Third, As a result of budgeting advice and assessment, the client may be assisted in reducing their household costs (financing costs, fuel costs etc).

Generally, it is very difficult to make estimates for benefits for the two latter points. It is often impractical for bureaux to collect data on reduced debt payments. There are also no credible and widely recognised assumptions on which estimates can be produced, it has not been possible to estimate costs for the two latter points. Instead the increase in disposable income has been based on increased up-take of benefits. The calculation has been based in part on KCA's own estimates for benefits gained through the Moneywise Project. In addition, we have made a series of assumptions based on a study conducted by CitA of 13 bureaux. The assumptions are detailed in Appendix A.

3.2.4. Kirklees Neighbourhood Housing

Kirklees Neighbourhood Housing is an Arms Length Management Organisation (ALMO) set up in 2002. It is the largest social housing landlord in Kirklees with over 23,000 properties. The ALMO has an in-house team of four full-time debt advisors who deal with around 800 cases per annum.

Table 3.4 details the results of the BIM for KNH.

Table 3.4: Costs and benefits KNH (£)

Increase in disposable income:	882,000
Total costs:	101,918
Number of beneficiaries	784

It is estimated that the in-house debt advice team at KNH generates nearly £900,000 at a cost of 102,000.

3.2.5. Kirklees Warm Zone

The Kirklees Warm Zone project was a comprehensive three-year project from 2007 to 2010 targeting all Kirklees residents. The measures included free cavity wall and loft insulation, free low energy light bulbs, free improvement to heating systems (subject to funding and household criteria), competitive prices for replacement boilers and central heating for able-to-pay customers, interest free loans for renewable energy technology and benefit checks.

It should be noted that Kirklees council has a range of initiative in place to combat fuel poverty, including energy champions, signposting, and fuel debt and energy awareness training of frontline staff. However, this study focuses on the Warm Zone because this has been an important and nationally recognised fuel poverty scheme for which ample performance management information and evaluations exist.

Table 3.5 details the results of the BIM for Kirklees Warm Zone (KWZ).

Table 3.5: Costs and benefits Kirklees Warm Zone (£)

Increase in disposable income:	£4,100,722
Total costs:	£5,958,532

The calculations of benefits are based on increase benefit uptake and reduced energy bills for households due to energy efficiency measures offered through the Warm Zone project. Details of the assumptions used can be found in Appendix A.

A number of evaluations of the Warm Zone project (Butterworth et al, 2011; Liddell et al, 2011; Edrich et al, 2011; Kirklees Council Environment Team and Corporate Research and Consultation Team, 2011) show that the project has had a large impact on the local economy.

However, for a number of reasons, these impacts are not directly transferable to this study. First, the Warm Zone evaluations take into account benefits over the long-term, while this study only focuses on impacts over a year excluding longer-term and cumulative impacts. Second, the evaluations examines the impact of the service providers themselves (through employment and cost-savings), which this study does not. Third, the studies assess the impact of the project on wider issues, such as house prices and wealth, and health, which were not included in this study.

Hence, the findings of the modelling should be seen in light of the relatively narrow remit of this study: estimate the impact on the local economy increases in disposable income for beneficiaries as a result of financial inclusion interventions.

3.3. Overall costs and benefits

Table 3.8 summarises the results of the BIM for the organisations in this study.

Table 3.8: Costs and benefits all activities (£)

	Total increase in disposable income	Total costs
CMCU	367,215	485,915
KBAS	13,154,393	791,657
KCA	9,036,488	1,494,284
KNH	882,000	101,918
KWZ	4,100,722	5,958,532
Total	27,540,818	8,832,306

In total the financial inclusion service providers generate £27.5 million in increased disposable income among its users. The total costs of running these interventions are £8.8 million.

In the next chapter we will use the data in the table above in our input-output modelling to look at the ripple effects of this spending on the economy.

4. Economic impact of financial inclusion interventions in Kirklees

4.1. Introduction

In the previous chapter we detailed the operating costs of the financial inclusion interventions under study and quantified the increase in disposable income for users of the different programmes. We now turn to how the additional increase in disposable income is spent and how this affects the local economy as they spend money on local suppliers and households (labour) who in turn spend part of that income in the local economy.

It is important to note that a distinction is made throughout the chapter between the **local** (i.e. Kirklees) and the **regional** economy (i.e. the Yorkshire and Humber region). The estimates for the increase in income and expenditure resulting from financial inclusion interventions are for the **local** economy, in other words, the economy of Kirklees. However, the ripple effects of this expenditure across different industries are estimated on a **regional** level (i.e. for the Yorkshire and Humber region). This is because we rely on an input-output table for Yorkshire and Humber as opposed to one for Kirklees.

4.2. The economic impact of financial inclusion interventions in Kirklees

Table 4.1 displays the estimated increase in disposable income per year by intervention. This increase in disposable income was calculated in Chapter 3 (see Table 3.7).

Table 4.1: Increase in disposable income by intervention (£)

	Total increase in disposable income
CMCU	367,215
KBAS	13,154,393
KCA	9,036,488
KNH	882,000
KAW	4,100,722
Total	27,540,818

The increases in income vary considerably by intervention. KBAS and KCA produce the largest increases with £13 and £9 million. At the other end the Credit Union generates nearly £400,000 and KNH generates just shy of 900,000. The main reasons for these variations include:

- *Scale:* The larger the scale of the intervention in terms of clients served, the larger the increase in disposable income tends to be. KBAS and KCA are the largest providers in this study providing face-to-face advice to around 5,250 and 10,000 respectively.
- *Benefit uptake:* Organisations providing support and advice relating to the take-up of benefits tend to provide higher returns than those with less tangible outcomes.
- *Face-to-face contact:* In this study we have focused on advice and support provided face-to-face. The thinking behind this is that the organisation must have a minimum involvement, in the form of a minimum of casework or related involvement, in the case to take the credit for the outcome.

We assume that the beneficiaries will spend the increase in disposable income as the lowest income decile households in the Family Resources Survey (Table 4.2).

Table 4.2: Spending for lowest income decile by sector (%)

Food & Non-Alcoholic Drinks	16
Alcoholic Drinks, Tobacco & Narcotics	3
Clothing and footwear	4
Housing, fuel and power	21
Household Goods & Services	7
Health	1
Transport	9
Communications	4
Recreation Culture	11
Education	1
Restaurants & Hotels	6
Miscellaneous goods & services	6
Non-consumption spending*	11

Source: Family Resources Survey 2005-06

Notes: * Refers to addition to savings, investments, financing costs (loan and mortgage repayments), cash donations, house purchases and major renovations and alterations

It is especially important to note that 11% of spending is classed as non-consumption spending, i.e. it is not spent in the economy, as this constitutes an important form of leakage. When imported into the input-output table for the Yorkshire and Humber region, household spending is distributed as detailed in Table 4.3.

Table 4.3: Spending for lowest income decile by sector according to I-O Table (%)

Gas, electricity & water	21
Food, drink & tobacco	19
Textiles and clothing	4
Retailing	7
Hotels & catering	6
Transport	9
Communications	4
Education	1
Health	1
Other (mainly public services)	17

The sectors which are estimated to receive the greatest proportion of the increased spending are utilities, food, drink and tobacco, and other (mainly public services).

Table 4.4 details the impact on the economy of the increase in client income as a result of financial inclusion interventions. (The cumulative impact on the regional economy is the result of the input-output modelling.)

Table 4.4: Impact on local economy by intervention (£)

	Increase disposable income	Income spent in local economy	Cumulative impact on regional economy
CMCU	367,215	326,821	407,856
KBAS	13,154,393	11,707,410	14,610,246
KCA	9,036,488	8,042,474	10,036,595
KNH	882,000	784,980	979,615
KAW	4,134,055	3,649,643	4,554,567
Total	27,540,818	24,511,328	30,588,879

It is important to remember that 11% or approximately £3 million is destined to what we refer to as non-consumption spending and is therefore not spent in the local economy. Thus, of the **£27.5 million** total estimated increase in income **£24.5 million** is spent in the local economy. This in turn leads to an estimated **£30.5 million** being spent in the regional economy as the recipient industries of the increase in income purchase inputs from other industries.

The regional economic multiplier is 1.25. In other words, for every £1 spent in the local economy as a result of a financial inclusion intervention an additional £0.25 is spent in the regional economy as recipient industries purchase some of their inputs from other industries in the region.

However, the industries in Yorkshire and Humber import a considerable proportion of their inputs from outside the regional economy and, as such, constitute an important leakage. On average over 60% of inputs are either imported from outside the Yorkshire and Humber region or categorised as gross operating surplus (i.e. not spent on inputs from other industries in the region). At the high end of import reliance, sectors such as fuel refining and oil & gas import 85% and 84% of their inputs respectively. Conversely, the health sector only imports around 48% of their inputs.

Table 4.5 displays the return on every £1 of investment (operating costs) by intervention in the regional economy.

Table 4.5: Return on every £1 invested by intervention

	Cumulative impact on regional economy	Operating costs	Return on £1 invested
CMCU	407,856	485,915	0.8
KBAS	14,610,246	791,657	18.5
KCA	10,036,595	1,494,284	6.7
KNH	979,615	101,918	9.6
KAW	4,554,567	5,958,532	0.8
Total	30,588,879	8,832,306	3.5

On average every £1 invested in financial inclusion activity generates £3.5 of spending by individuals and industries in the regional economy. The extra spending by individuals and industries in the regional economy generated for every £1 invested vary from £0.7 to £18.5 for the different interventions. The reason for this is that the financial inclusion interventions studied generate different levels of increased disposable income.

4.3. Isolating the impact on the economy of Kirklees

The input-output table on which the modelling is based is for Yorkshire and the Humber. When we conducted the study in Leeds this was somewhat less problematic given that Leeds constitutes a larger part of the regional economy than Kirklees. Because that study was also part funded by the Regional Development Agency, the regional impact of the interventions was also of greater interest.

Thus in this section we attempt to discuss and isolate the impact on the economy of Kirklees. We would expect that the impact would be greater at a regional level because smaller economies tend to rely more on imports and a greater proportion of workers would be commuting in from (and spending their wages) outside the economy. That said it is important to note that the amount of leakage in the form of commuting and imports is not necessarily proportional to the size of the economy, but that this will depend on the structure of the economy. For example, a free-standing town with limited transport links to other towns and cities may be more self-contained and self-sufficient than a town that is situated within a closely linked network of towns and cities.

The question then is how can we measure the amount of leakage from the economy of Kirklees in order to isolate the impact? The most accurate way of ascertaining the amount leakage would be calculating the proportion of inputs imported by local industry. However, such data is not available in Kirklees (and is, as far as we are aware, not available in any local authority in Britain). Instead we use inward commuting as a proxy of leakage, which according to the 2010/11 Local Economic Assessment was 20%.

Table 4.6: Estimated cumulative impact on Kirklees

	Increase in disposable income	Cumulative impact on regional economy	Estimated cumulative impact on Kirklees
CMCU	367,215	407,856	326,285
KBAS	13,154,393	14,610,246	11,688,197
KCA	9,036,488	10,036,595	8,029,276
KNH	882,000	979,615	783,692
KAW	4,100,722	4,554,567	3,643,654
Total	27,574,151	30,588,879	24,471,103

Using this proxy, we estimate an impact on the local economy of around **£24.5 million**. This means that on average for every £1 invested in financial inclusion activity £2.7 of spending by individuals and industries in the local economy. It is important to stress that this is only an estimate as one could only isolate the impact with certainty with data on industry imports.

5. Conclusions and policy implications

Introduction

This study attempted to quantify the wider effects of financial inclusion interventions in Kirklees on both the local and regional economy. The methodology we applied was two-pronged. First we conducted an analysis of performance management information provided by the financial inclusion service providers. This was used to quantify the increase in disposable income resulting from the intervention as well as the costs of providing the service. Second, we used an input-output table for the Yorkshire and Humber region to assess the wide economic impact of this increase on the regional economy. We also made some estimates for the economic impact on the economy of Kirklees.

Financial inclusion in an age of austerity

The findings of this study are being published at a time when both the national and local financial inclusion agenda is shifting radically. After the election of New Labour in 1997, there was a decade of sustained government investment in financial inclusion programmes, underpinned by period of unprecedented economic growth. Today following the largest banking crisis since 1929-33 and the most severe recession since the Second World War, we are entering a period in which financial inclusion interventions and their beneficiaries and providers will be under considerable financial pressure.

Under an extensive programme of cuts many national financial inclusion programmes have already been discontinued or are likely to be discontinued. In addition, the funding of local authorities is also likely to decrease considerably with potential ripple effects on the many services and programmes they deliver or fund.

The impact of financial inclusion interventions on the economy of Kirklees

In total we estimate that financial inclusion interventions in Kirklees generate an increase in disposable income among its users of £27.5 million per year at a cost of £8.8 million. The financial inclusion service providers achieve this mainly by providing access to affordable credit and increasing benefit up-take.

In turn, using the Family Resources Survey, we estimate that £24.5 million is spent in the economy of Kirklees. Based on input-output for the Yorkshire and Humber region, we estimate that this, in turn, has a cumulative impact on the regional economy of £30.6 million. This cumulative impact is generated as the firms providing goods and services to the financial inclusion service users, purchase goods and services from other firms in the region.

If we take into account the increase in disposable income of users as a result of the intervention and the effect this has on local businesses and industry, this means that for every £1 invested in financial inclusion in Kirklees, £3.50 is generated for the regional economy.

The impact on the local economy of Kirklees is likely to be smaller than that because smaller economies tend to rely more on imports and a greater proportion of workers would be commuting in from (and spending their wages) outside the economy. However, in absence of data on the proportion of inputs imported by local industry from outside the local economy, it is difficult to know for certain the exact impact on the local economy. Using inward commuting as a proxy for leakage, we estimate the

impact on the local economy to be in the region of £24.5 million. This means that for every £1 invested in financial inclusion work, £2.7 is generated for the local economy.

Policy implications

The impact and benefits of financial inclusion interventions have been considered in numerous studies and are also an important consideration for organisations, local authorities and governments investing in financial inclusion. In the main the impact and benefits are understood in terms of impacts on the financial and social well-being of the households of the beneficiaries.

This study points to an additional dimension of benefits associated with financial inclusion interventions: the impact on the local and regional economy. The providers, funders and supporters of such interventions may want to consider this dimension when it comes to making decisions on allocation of funding.

The discontinuation of funding of financial inclusion interventions in Kirklees is likely to have knock-on effects on the local and regional economy. The services provided by the organisations in this study enable Kirklees residents to access benefits and cheaper finance which has positive ripple effects on the local and regional economy.

That said it is important to not let financial inclusion policy be determined by one dimension alone. For example services aimed at increasing benefit up-take are more likely to provide higher sums than say weaning people of home credit. However, it does not mean that increasing benefits is more worthwhile than the latter. Ultimately financial inclusion policy should take a broader view of importance and effectiveness.

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A. Details of assumptions used

Kirklees Citizen Advice

The calculation of costs is based on the revised budgeted costs for the financial year 2010/2011. No attempt has been made at separating out any part of the service.

The estimation of the increase in disposable income resulting from the intervention of Kirklees Citizen Advice (KCA) is based on two data sources (Table A2). First, we relied on performance management data from the Moneywise Project (Method 1). As part of this project, data was collected on estimated and confirmed income gain, and secured and unsecured debt managed. The income gain refers to increased benefit payments and backdated payments. A confirmed income gain is where the gain is confirmed by the client or through some form of documentation, whereas an estimated income gains refers to cases where the client is eligible for the benefit in question but it has not been confirmed. Only the confirmed income gain figure was used. For 2010/2011 this figure was £371,288.

Second, we estimated the increased up-take in benefits for the remaining clients based on a study conducted by Citizen Advice on benefit advice in 13 CABx during two weeks in March and April 2010 (Method 2).¹ 1,009 clients received benefit advice during this period from the pilot bureaux. 464 outcomes were recorded for 378 of these clients. All clients whose main problem was a benefit problem and whose enquiry proceeded past the initial stage of the gateway system were included in the study.

Table A1 goes through the calculation step-by-step.

Table A1 Overview of calculation of increased benefit uptake (Method 2)

Total number of F2F advice clients	10,397
Less	
Number of clients covered by Moneywise Project	664
And	
Number of British Legion clients outside Kirklees	113
Equals	
Remaining F2F advice clients	9,600
Number of clients receiving advice on benefits	4,150
Multiplied by	
Average amount benefit increase in CitA study	£2,088 ²
Equals	£8,665,200

The estimated number of clients receiving advice is based on CASE statistics for 2010/2011. We have excluded the clients receiving advice through the Moneywise Project because there are separate income gain figures for this group. We have also excluded the number of clients outside of Kirklees receiving advice through the British Legion project. According to estimates provided to us, 66% of the clients in this programme come from outside of Kirklees.

¹ Citizen Advice (2010). *Outcomes from Benefit Advice*. Research paper published September 2010.

² The study followed up the outcomes for 378 clients seeking advice on benefits. Out of these clients, 234 experienced an increased in benefits of a total of £789,210. The average gain for all clients seeking advice on benefits was £2,088 (£789,210/378 clients).

In this period 4,150 clients were registered as benefit clients. We have not included clients receiving telephone advice. This is because it is assumed that in order to increase the benefit uptake among clients a minimum of casework is required which may not be provided through telephone advice.

The table below lists the estimated increase in disposable income by the two methods outline above.

<i>Increased disposable income by method (2)</i>	
Increased disposable income Method 1	371,288
Increased disposable income Method 2	8,665,200
Total	9,036,488

Kirklees Benefit Advice Service

The income gain refers to increased benefit payments and backdated payments. A confirmed income gain is where the gain is confirmed by the client or through some form of documentation, whereas an estimated income gains refers to cases where the client is eligible for the benefit in question but it has not been confirmed. Only the confirmed income gain figure was used. For 2010/2011 this figure was £13,846,729. In addition, we have excluded clients receiving telephone advice. This is because it is assumed that in order to increase the benefit uptake among clients a minimum of casework is required which may not be provided through telephone advice. We have used the percentage of 5%, which is probably higher than it in reality is and thus erring on the side of caution.

Castle & Minster Credit Union

The central assumption underpinning the calculation of the benefits of the Credit Union is that a proportion of its borrowers make a transition from home credit providers to credit union loans. This transition will reduce their financing costs and increase their disposable income. We make this assumption for the bronze loan customers only. Bronze loans were Growth Fund loans and are available to first time borrowers and members who do not save.

The assumptions and calculations for this transition are detailed in the table below.

<i>Table A3: Overview of transition</i>	
Total number bronze loan clients	3,095
29% of clients transitioning*	898
Multiplied by	
Average reduction in financing costs	£409
Equals	
Total reduction in financing costs	£367,215

Notes: * Based on study conducted of CDFI clients by Dayson and Vik (Forthcoming), ** Management estimate

Unless otherwise specified, the assumptions are based on loan portfolio data for October to September 2009/2010. The number of clients is based on the number of loans made over the period in question. The average reduction is based on a comparison of the costs of a loan with Provident Financial (the market leader in home credit) and with those of either the Growth Fund or a core loan. The average amounts used are £600 for Growth Fund clients, which is approximately the average size of the

loans issued in 2009/2010. The percentage of clients transitioning is based on a study conducted of Growth Fund clients by CFS in 2009.³

In terms of the delivery costs we have separated out the costs of providing the bronze loans. The cost per loan is set to be £157 (for a total cost of around £170,000) which is based on a review conducted by ABCUL of the lending practices of Castle and Minster Credit Union.

Kirklees Neighbourhood Housing

The calculation of costs is based on the budgeted figure for 2011/2012. This covers four full-time debt advisors and overhead costs. The estimation of the increase in disposable income resulting from the intervention of KNH is based on PMI for quarter 1, 2011/2012. This is the first quarter for which KNH is collecting a full range of relevant PMI. The annual figures are extrapolated by multiplying the quarterly figure with four.

Table A4: Potential increase in income

Weekly	£68,640
Lump sum	£4,800
Total increase in income	£73,440
Extrapolated annual figure	£293,760

It should be noted that we have here not attempted to calculate the increase in income resulting from reduced debt payments. Also, the increase in benefit uptake among clients has not been confirmed by the client or in any other way.

Kirklees Warm Zone

The calculation of costs and benefits are based on figures and estimates provided in the report by Butterworth et al (2011). Table A5 provides an overview of the gains and costs used in the analysis.

Table A5: Overview gains and costs

	2007-2010	Per annum
Costs		
Kirklees Council	£11,726,585	£3,350,531*
Scottish Power	£9,128,004	£2,608,001*
Total costs	£20,584,862	£5,958,532*
Increase disposable income		
Benefit up-take	£700,000	£200,000*
Fuel saving		£3,900,722
Total increase disposable income		£4,134,055

* Extrapolated from figures for total project period

Some of the figures have been derived by taking the costs or benefits of the whole project period and dividing it by the number of years of the project (3.5 years). These are indicated by an asterisk in the table. For the data on fuel bill savings we have used the figure including reduction factors. The reduction factors mean that the predicted saving is reduced by 50% as people increase the temperature rather than save on fuel bills or because the insulation underperforms.

³ Dayson et al (2010). *The social impact of UK microfinance*. University of Salford.

B. The economic impact of financial inclusion interventions – models and applications

Introduction

The economic landscape of local communities and cities is constantly evolving as plants open and close, the industry mix changes, and public investment oscillates. This has potentially important implications for employment opportunities for the local population, for industries interlinked through trade and for the planning of public infrastructure and service provision. Thus economists have long been developing methods and models, often referred to as impact analysis or multiplier models, to estimate the impact of such changes.

This appendix critically analyses and discusses impact or multiplier analysis models and their applications in the evaluation of financial inclusion interventions. We start by examining the two main models for estimating the impact of increased demand resulting from new economic activities or public investment on a local or regional economy: the Keynesian income-expenditure model and the input-output approach. We then examine and discuss various applications of such models in the evaluation of financial inclusion interventions. We discuss the main considerations and justification guiding the selection of an appropriate model for assessing the economic impact of financial inclusion activities in Leeds. Finally, we provide some information about the Yorkshire and Humber input-output table on which our analysis is based.

The Keynesian income-expenditure model

John Maynard Keynes is arguably one of the most influential economists in the field of regional economic analysis and methodology. Perhaps one of his most important contributions to this discipline has been the Keynesian income-expenditure model. Central to Keynes model is that an initial injection of capital into a local economy has ripple effects beyond the initial investment as recipients of the injection spend money on local suppliers and households (for labour) who in turn spend part of that amount in the local economy. These ripple effects continue over several rounds of spending.

Keynes' framework for estimating the impact of these changes in demand on an economy is based on calculating income and employment multipliers of government investment and the establishment of new plants (Miernyk, 1965). Multipliers measure the magnitude of the impact of a change in investment beyond what is immediately measurable. In other words, if a government or a company invests a given amount on a particular project or in an economic activity, how would that affect local firms and households beyond the immediate investment? For example, an employment multiplier of 1.25 means that for each job created as a direct result of the investment leads to the creation of .25 jobs elsewhere in the economy.

Inevitably the initial injection and subsequent rounds of spending are not spent in their entirety in the local economy as inward commuters spend wages in other economies and as local industries and residents purchase goods imported from other economies. The likelihood of households and firms in purchasing locally produced goods is called the marginal propensity to consume locally. It is also important to seek to identify leakages in the initial injection, as the investment may include inputs and workers from other economies.

There are two principal ways of estimating the marginal propensity to consume locally produced goods. First, it is possible to conduct a survey of a sample of local

residents enquiring about the proportion of their income being spent locally. This approach may be problematic given that it is costly and because local residents may not be able to provide accurate estimates of the proportion of their income they spend locally.

A second and more commonly used approach was developed by Archibald (1967). He used data from the Family Expenditure Survey (FRS) to identify services and goods typically bought locally to calculate a national figure for marginal propensity to consume. By using data on regional disposable income, Archibald (1967) would then estimate a regional figure for marginal propensity to consume and subsequently a regional multiplier. Most empirical studies use a variant of this approach.

Because sub-national economies, relative to national economies, tend to rely to a greater degree on imports and inward commuters, producing a realistic estimate of the marginal propensity to consume locally produced goods and services is crucial in determining the economic impact of increased demand. The marginal propensity to consume goods from that locality depends on numerous factors (Armstrong and Taylor, 2000). First, the marginal propensity to consume locally is likely to be smaller in smaller regions as they are likely to rely more on imports. Second, highly specialised regions will to a greater extent rely on imports and the marginal propensity to consume locally will, therefore, be smaller. Finally, the greater the flow of inward commuters is, the smaller is the propensity to consume locally. This is because inward commuters tend to spend most of their income where they live rather than where they work.

The Keynesian income-expenditure model is a scientifically sound and useful methodology for assessing the impact of increased demand on local and national economies. The Keynesian income-expenditure model is especially suitable for assessment of specific economic activities for which there are audited accounts and similar information available. For example, Bleaney et al (1992) used university audited accounts and local statistics to assess the impact of the University of Nottingham on the city-economy.

However, the model also has some drawbacks. Among frequently cited weaknesses is that it is too aggregate in that it does not separate out sectoral effects (Armstrong and Taylor, 2000), unlike the input-output model discussed below. The ability to differentiate between the impacts of different industries is crucial in local economic planning as different industries may have different infrastructure and service needs. Moreover, the expansion of some industries may have greater impact on the local economy than others owing to greater embeddedness in the local economy through trade links and local employment

Another criticism levelled at Keynes' model is that it disregards capacity constraints, although this is a common trait of most regional economic models including the input-output approach which we turn to in the next section. The model assumes that local industries face no constraints in coping with increased demand for their goods.

The input-output approach

The input-output approach to economic modelling was first developed by the US economist Leontief in the 1930s. Today it is one of the most widely used methods by national and sub-national policy-makers and authorities in forecasting the development of the economy and in planning future infrastructure and service

provision needs. Input-output analysis is also used to calculate important regional and national economic indicators, namely GDP and Gross Value Added.

At the heart of the input-output approach to modelling local and regional economies lies the input-output table (Table B.1).

Table B.1: Illustrative input-output table

	Inputs purchased by			Final demand sector				Gross output
	Agriculture	Manufacturing	Services	Households	Government	Exports	Investments	
Outputs purchased by:								
Agriculture	20	40	0	20	0	20	0	100
Manufacturing	20	20	10	75	10	55	10	200
Services	0	40	10	25	20	5	0	100
Payments for:								
Household services	40	45	70	5	0	0	0	160
Government services	10	15	5	0	0	0	0	30
Imports into regions	10	40	5	0	0	0	5	60
Gross inputs	100	200	100	125	30	80	15	650

Source: Yan (1969, p.20)

The input-output table is a transaction table which shows purchases (input) and sales (output) by sector within a regional or local economy in a given year. Sales by sector are displayed horizontally, while purchases are displayed vertically. For example, if we turn to Table 2.1, we can see that Services purchase 10 from Manufacturing, 10 from Services, 70 from Households (labour), 5 from Government and 5 from Imports totalling inputs of 100 to produce an output of 100. Services sell their outputs to Manufacturing (40), Services (10), Households (25), Government (20) and Exports (5). For each unit of output there must be an input so that outputs are always equal to inputs. If outputs are smaller (loss) or greater (profit) than input then this is recorded in the payments sector.

Input-output tables vary greatly in complexity and size. The simplest tables consist of a handful of sectors, like our illustrative transactions table (Table B.1), while national input-output tables can consist of as many as 500 industrial sectors (Miernyk, 1965). The input-output table for the Yorkshire and Humber region consists of 30 industries.

In itself the input-output table constitutes a rich insight and snapshot of an economy, facilitating an understanding of inter-industry links, dependency between different economic agents and of relationships with other economies. Nevertheless, arguably the most useful aspect of the input-output table is that it can be applied to predict or assess the impact of increased demand.

In order to use the input-output table to model the impact of an increase in demand of one or more sectors, the impact of the increased demand has to be calculated between each of the industries. For example, if the demand for agricultural goods increases by £10, we have to calculate how this impacts upon manufacturing, services and all the other industries separately.

The initial increase in output of the industry in question leads to increased demand for inputs from other sectors, whose increased output in turn leads to increased demand for inputs from other sectors. This process occurs over several rounds of spending until the net increases in output for the sectors converge to zero. So an initial increase in demand for agricultural goods of £10 will have greater impact on the regional economy than the initial injection.

Like with the Keynesian income-expenditure model, income, employment and sectoral multipliers can also be calculated using input-output tables. For example, as we discuss in the next section, an evaluation of CAB in Glasgow used an input-output approach to calculate multipliers and found that an increase in benefit uptake by £5.48 million supported 97.6 additional jobs in the city (The Fraser of Allander Institute, 2005).

The input-output approach to modelling the local economy can provide policy-makers and economists with rich picture and forecasts of past and future trends in the economy. One can see how increased output in one sector affects the output of other sectors and employment opportunities for the local population. Nevertheless, there are also some limitations of the use of the input-output approach to analysing the local economy.

In particular, there are a range of challenges concerning the accuracy of input-output tables themselves with important implications for their use in impact assessments. Due to high costs associated with conducting direct surveys with all firms, most statistical authorities use non-survey methods or estimates based on a sample of industries. This may negatively affect the accuracy of the input-output tables in

describing industry relations. Another problem possibly affecting the accuracy of transaction tables is that it assumes that the relationships between industries are constant. Thus, changing technology and industry sensitivity to prices of inputs may erode the usefulness of the transactions table to model economic impact (Armstrong and Taylor, 2000). These issues may cause problems in the modelling of impacts, because the model is only as accurate as the input-output table upon which it is based.

Applications of multiplier models in financial inclusion evaluations

Above we have outlined the two key approaches to economic impact analysis. In this section we examine how these approaches have been applied in two cases of financial inclusion intervention analyses. First, we discuss a study by the Fraser of Allander Institute (2005) using the input-output approach to modelling. Second, we consider the application of the LM3 (Local Multiplier 3) methodology of the New Economics Foundation (NEF), which is based on the Keynesian income-expenditure model.

Fraser of Allander Institute study

The impact assessment of Glasgow Citizens Advice Bureaux (CAB) conducted by the Fraser of Allander Institute (2005) assesses the employment effect of CABs on the local economy. The study estimates the number of jobs supported in Glasgow by expenditures generated through CAB advisory services using an input-output approach to modelling.

It is assumed that CAB advisory services can enhance income of low-income households through maximising up-take of benefits which in turn can be spent in the local economy generating jobs. The increased up-take is estimated based on figures provided by CAB, which for the financial year of 2003/2004 was £5.48 million. The researchers assume all of this increased income results in increased expenditure. The areas or sectors in which this is spent (e.g. household fuel and power, transport etc) is broken down using the 2001/2002 Expenditure and Food Survey data for the lowest income quintile. It is believed that all CAB clients are among the 20% poorest households.

They then estimate the impact of this increased income on the local economy through being re-spent within Scotland. This is because there is no way of directly estimating the impact for Glasgow. They argue that a high proportion will be spent locally based on the fact that CAB's clients live locally in Glasgow and because they are on a low income the study assumes that they do not travel outside of Glasgow to spend additional payments.

They then run this estimated increase in spending through a version of the Scottish Input-Output model, which results in total effects on Scotland. Using sectoral employment/output ratios (multipliers) they then estimated the number of jobs created at a national level. By examining the sectoral composition of the local economy, the authors estimate that 82% of the jobs created at a national level through increased spending are created in Glasgow. They also estimate wage effects estimated using a similar procedure. By examining at the structure of the local economy, they estimate that 65% of the wage increase across Scotland would benefit Glasgow.

The study then derives the cost per job of this increased employment. The study does this by looking at the total cost of running the CAB offices in Glasgow for the financial year of 2003/2004. They then divide this sum by the number of jobs created in Scotland and for the number of jobs created in Glasgow. The study concluded that the increase in benefit uptake by £5.48 million supported 97.6 additional jobs in the

city and that the cost per job support was £6,279 (The Fraser of Allander Institute, 2005).

New Economics Foundation study

Based on the Keynesian income-expenditure model, the New Economics Foundation (NEF) has developed a simplified method for calculating local multipliers called Local Multiplier 3 (LM3) (Sacks, 2002). The methodology is designed to measure the impact of a certain economic activity, company or investment on a local economy.

It attempts to do this by measuring the impact of the initial increase in demand over three rounds. The first round measures the initial income of the group of people, the organisation or the company in question. The second round measures the proportion of this initial income spent locally, while the third measures the proportion of the locally spent income estimated in the second round spent locally. The three rounds of local spending are added together and divided by the initial income to produce a multiplier.

Most of the data needed for LM3 has to be collected from accounts or registers of individual business or through surveys of local people and businesses. NEF has developed a set of generic surveys for interviewing individuals and businesses (see Sacks, 2002).

However, NEF has also calculated a set of standardised percentage figures of how much major chains and public sector organisations (including the armed forces) are likely to spend in the local economy based on annual reports published by the companies (Sacks, 2002). These percentages are calculated as follows. It is assumed that most of turnover is spent on VAT, supplies, rent, profit and labour. It is further assumed that “almost all” of VAT, supplies, rent and profit leave the local economy leaving only spending on labour which, NEF assumes, is spent in its entirety in the local economy (Sacks, 2002).

This methodology has been applied by NEF on numerous studies including in the evaluations of financial inclusion interventions. For example, the methodology has been applied in the village of Killamarsh outside of Sheffield to evaluate the impact of a cash machine put in by Coop Bank following local pressure. A survey was conducted of users of the cash point and revealed that between 50 and 70% of cash taken out was spent in the local community.

Another example of the application of LM3 is the evaluation of effort by Newham Council to encourage people in low-income employment to take up Working Family Tax Credit. A survey found that people eligible for this means-tested tax credit spent most of their income locally and the intervention carried a multiplier of 1.77.

The LM3 is a practical methodology which local community groups and policy-makers can use and replicate with relative ease. It is especially useful in evaluating economic effects of economic activities and interventions in small economies and for individual organisations and companies with few suppliers.

However, the LM3 does require collection of primary data, through surveys and from company accounts, which makes it difficult and impractical for larger and more complex economies. Moreover, the methodology does not differentiate between the different sectors.

Selecting a model for Leeds – considerations and justification

In the preceding sections, we examined the underlying methodology and the applications of the Keynesian income-expenditure model and the input-output approach. One could have justified using either of these models in the economic impact analysis of financial inclusion interventions. Both models have a strong theoretical underpinning and there is a wealth of examples of where they have been applied, though perhaps not so extensively in the context of financial inclusion interventions.

Ultimately in the case of Leeds (and now for Kirklees) for three reasons we opted for an input-output approach instead of the Keynesian income-expenditure model;

- The necessary data for an input-output analysis were readily available data in the form of a recent input-output table for Yorkshire and Humber. Conversely, to use a Keynesian income-expenditure model we would have to collect data on marginal propensity to consume using a survey or estimated the propensity to consume locally from the FRS.
- The second advantage of the input-output approach over the Keynesian income-expenditure model was the ability to disaggregate impact by industry and sector.
- In choosing the input-output analysis we also put emphasis on the ease with which the analysis could be replicated. As detailed in the next chapter, repeating an analysis would only requiring inputting basic information, such as number of beneficiaries and amount in increased disposable income. Moreover, the input-output table and the percentile expenditure of the lowest income decile could be updated when Yorkshire Forward and Office of National Statistics produce new data.

The Yorkshire and Humber input-output table

The input-output table used in the analysis is the estimated coefficients matrix for Yorkshire and Humber showing the relationship between industries in the region. The coefficients matrix tells us for each unit of output produced the purchases made of each input.

The Yorkshire and Humber matrix is based on the equivalent matrix for the UK, which itself was estimated from UK input-output tables updated to 2004. The UK coefficients matrix was adjusted to account for the differences in the relative size between industries in the region compared to the UK, and the absolute size of the industry in the region compared with the UK. The general idea is that industries in the region are smaller than at the UK level, and the economy as a whole is smaller, so industries in Yorkshire and Humber will not be able to supply as much to the purchasing industries as at the UK level per unit of output. This means the values in the regional matrix will be smaller than for the UK (a higher proportion will be imports) and that the multipliers will be smaller. It is important to bear in mind that the table does not use any actual data on industry purchases in the region, but as explained above estimates the relationships based on UK input-output tables.