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**Community development finance institutions
and the 'poverty trap': social and fiscal impact.**

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Abstract.

This paper examines the current and potential ability of 'community development financial institutions' – institutions aimed at reducing the incidence of financial exclusion at the bottom end of the capital market – to reduce poverty, and the fiscal implications of this process. It seeks to connect the growing literature on labour supply functions for the self-employed with the literature on poverty and measures to escape from it, generating in the process a 'poverty exit function' which is then estimated against data (at this stage, a pilot sample of 45 self-employed households only, plus their employees) for three UK cities. Our model, by analogy with the 'poverty trap' models sometimes used in developing countries, has potentially self-reinforcing features, in which in the presence of certain parameter values efforts to get out of poverty only make the problem worse; but this, to our knowledge, is the first application of such a model to an industrialised country.

The quantitative analysis indicates a negative role, in escaping from the poverty trap, for uninsured shocks. It indicates a positive role for formal education and for institutional measures which protect against risk; indeed, some of independent variables such as training are significant only if interacted with protection against risk, implying that simple injections of inputs are insufficient as a support policy for the sector. We make a preliminary investigation of the fiscal savings arising from investment in the CDFI sector, of which the upper bound is about £350 million a year or about 1.5 per cent of the total social social security budget; these impacts, however, are sensitive to variations in the policies of both CDFIs and the various levels of government support for the sector. The qualitative part of the analysis, in addition, suggests a positive role for 'integrated support' to microentrepreneurs which combines finance, mentoring and training.

We have observed that many escapes from the poverty trap are achieved by employees rather than by entrepreneurs, which draws attention to the importance of growing along a labour-intensive production function, which ironically was in our sample secured better by small-to-medium firms than by start-up enterprises. Finally, a key variable in the exit-from-poverty process is the 'regeneration multiplier': the extent to which benefits provided by CDFIs remain within, or leak outside, target areas of high social deprivation. This multiplier varied greatly across our samples, being highest in Glasgow and lowest in Sheffield. We surmise (and proper analysis of this parameter is an important agenda for future research) that the regeneration multiplier varies negatively with the wage level and positively with the level of human capital inside regeneration areas. Diversification of financial products, and accompanying expenditure in support of regeneration areas by incentives to source labour and materials locally, could be a useful addition to this policy agenda.

1. **Introduction**

In spite of the decline in most poverty indicators over recent years in Britain (Sutherland, Sefton and Piachaud 2003), there is evidence that many households, especially at the lower end of the income distribution, continue to be trapped in severe and sometimes increasing levels of deprivation. For many at the bottom end of the income scale, not only has there been no improvement in material conditions over the years since 1997 but levels of vulnerability to an income shock have markedly increased[1], in defiance of many policy initiatives established to prevent this. Awareness that the social protection system 'could do better' in achieving the Government's objective of reducing poverty has stimulated a number of enquiries into these initiatives, which in many cases have concluded that if the living conditions of the poorest are to be improved, there is no escape from putting more resources into the system (Goodman et al. 2004….). However, as is well known, the putting of resources directly into social security may incur the cost of reducing the incentive to work and thereby distorting the smooth functioning of the labour market ;it will also cost money. Thus there is at least a potential conflict between the major Government objective of reducing poverty, the major Government objective of achieving a more open labour market and the major Government objective of avoiding an increase in the fiscal deficit.

In this context it is interesting to review the effectiveness of one instrument of social policy which, at least in potential, has the ability to reconcile these objectives, namely intervention at the bottom end of the capital market to combat financial exclusion[2]. Under the name of *microfinance*, this approach has made considerable headway in the developing world, to the point that some pressure groups have set a target for half of global poverty to be eliminated by this means over eight years (Hulme and Mosley 1996, 1998; Morduch 1999) and it has now attracted attention in the UK also. The prime minister has emphasised the 'need to look at how small amounts of credit and capital can be made available for promoting business ideas in Britain's poorest areas' and, more recently, the hope has been expressed that microfinance may be able to help households cope with rising levels of household debt and debt arrears (United Kingdom, Social Exclusion Unit 2004). The national labour market, and the livelihoods of many low income people, have recently been shifting from employment towards self-employment (see figure 1), thereby increasing the importance of institutions which support the bottom end of this sector of the market.

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[1] Within the lowest income group, earning less than £11, 500 a year, the burden of debt has more than doubled over the last five years, from 15% to 35% of total income (Office of the Deputy Prime Minister, 2004) and the number of people struggling with debt problems has risen by 47 per cent over the last five years (Citizens' Advice, cited in Bridges and Disney 2003:5)

[2] The exclusion of low-income people and neighbourhoods from financial services has been documented for many years (Kempson 1990?, Whyley 1993?), but the emergence of a range of institutions aimed directly at combating it in a manner which competes directly with the monopolistic provision of moneylenders is largely an invention of the 1990s.

Figure 1: The growth of self-employment in UK 1990-2004

Figure 1. United Kingdom: numbers of people self-employed, 1993-2003
(Source: Labour Market Trends, December 2003)

In the UK, microfinance fits into a group of initiatives, known as *community development finance,* 'which seek to widen the access of disadvantaged people and neighbourhoods to capital and other financial services. Such services include microfinancial services provided for example by credit unions; neighbourhood regeneration initiatives, such as community loan funds; and loan funds and social banks targeted at relevant sectors, such as small businesses, community and social enterprises, or charities' (Rogaly et al 1999:3). But everywhere, microfinance instruments share a common technique, which is to use methods of peer-pressure, intensive loan supervision and incentives to repay to overcome the problem that lenders, at the bottom end of the capital market, suffer from asymmetric information about borrowers' type and cannot protect themselves by taking collateral, which borrowers by assumption are too poor to offer. And especially in industrialised countries where systems of social security exist, they offer the potential benefit of being able to resolve the trade-off mentioned earlier, by enabling poor people to make a sustainable exit from long-term poverty at no or very small fiscal cost. But is this benefit currently being realised by the forms of microfinance which exist in Britain, and could it be more effectively

realised by changes in policy or institutional design? These are the questions to which this paper is addressed. There are four elements in our story: a discussion of the structure of the microfinance (community development finance) sector and of motivation within it; a review of its impact on the labour market; a model of escape from the 'poverty trap'; and, emerging from all this, a discussion of the fiscal consequences of alternative ways of developing the microfinance sector. It should be emphasised that our conclusions are illustrative rather than definitive, since the dataset on which we draw is derived from samples of 45 small businesses and their employees within the cities of Belfast, Glasgow and Sheffield. The questions asked were qualitative as well as quantitative; and the qualitative data on mechanisms of causation, in the process of exposing flaws in the quantitative data, also helps to some extent to overcome the limitations of small sample size, in a manner that is described in Section 3 below.

2. The community development finance sector in relation to the labour market and poverty

We begin by presenting a picture of the community development finance sector in Britain as it is currently constituted. Notable features of this landscape (table 1) include:

Firstly , community development finance institutions (CDFIs) are typically managed by the voluntary, not-for profit sector, although there is substantial financial participation by national government (in the shape of the DTI's Phoenix Fund, being wound up this year) and regional and local government, in the shape of advisory and mentoring services. In Scotland the support for CDFIs goes beyond this, and nearly all support for CDFIs, both financial and technical, goes through the regional government.
Secondly, CDFIs remain small and thus unable to realise economies of scale. The average clientele of the 55 institutions reporting to the Community Development Finance Association in 2004 was 119 (Mc Geehan 2005:3). Although it is true that lending to the sub-prime sector, without access to commercial bank loans, is much more of a niche market in Britain than in developing countries where financial exclusion is the rule rather than the exception, it is notable that very few UK institutions have achieved the commercial dynamism of, say, the commercial financial services firm First National Provident, which, has 2,000, 000 clients, even in the process of charging average interest rates of 58% on unsecured loans, well over twice the rates charged by the average CDFI (McGehan 2004, appendix 3) – or indeed.

Table 1.The structure of community development finance in Britain

Institution	Number of loan clients(2004)	Value of lending (£million, 2004)	6-month arrears rate (2004)	Return on capital/SDI/other indicators of viability
Sampled institutions:				
DSL	360	3	8	
SENTA	c.45	0.3	15	
ASPIRE	150+	0.6	9	
UK total	6523	45		
UK average	119	0.9	9	

Source: for sampled institutions, 2002 sample; for bottom two rows, McGeehan(2004)

Third, and related to this, no CDFI of which we have knowledge has yet achieved complete financial sustainability, in the shape of profitability without subsidy[3]. Two CDFIs, East Lancs Moneyline and ASPIRE Belfast (the latter one within our sample) are close to this objective and within sight of achieving it in a year or two. Although this fact on its own does not damage the case for CDFIs – since it takes time to move down the cost curve and CDFIs have the potential, as we shall see, to yield substantial externalities – it does, of course, impair the claim that CDFIs provide social protection in a manner that inflicts no fiscal burden on the taxpayer. This issue will be taken up again in section 4 on fiscal impact.

Fourth, and partly in an attempt to extend the market, there has been a diversification of the sector from its antecedents in lending for the development of small businesses to a broader base, already somewhat inhabited by local credit unions, in consumption lending designed to help individuals manage what is often a worrying burden of debt (Office of the Deputy Prime Minister, 2004). For some successful CDFIs, such as East Lancs Moneyline, most of the growth over the last couple of years has been on the consumption-lending side.

Fifth, and perhaps most worryingly of all, few CDFIs make proper use of the arsenal of weapons developed by microfinance institutions in developing countries to counter the problem of asymmetric information which leads to clients being financially excluded in the first place. Very few institutions use peer-monitoring of clients through group lending and otherwise; few use incentives to repay (although several do charge a lower rate for repeat than for first-time customers, which is a simplified version of this); only a few offer any diversity of financial products; and most charge interest rates which are too low to cover the costs of borrowing, capitalisation, administration and likely loan-loss, issues which are clearly related to the issues of portfolio size and arrears mentioned earlier. As a consequence, arrears rates of CDFIs in Britain are *higher* than they are for microfinance institutions in developing

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[3] Footnote may be needed on Yaron's (or other) Subsidy Dependence Index.

countries[4], even though incomes, and in principle ability to service loans, are much higher.

Thus the sector, innovative though parts of it are, can reasonably be represented as a sector whose potential has not yet been fully realised.

Next we describe the sequence of causation between community development finance institutions and social indicators. This runs from lending activity by CDFIs, to supply and demand for labour in employment and self-employment in the small business sector, to indicators of need and deprivation themselves. The process is formally modelled in the Appendix.
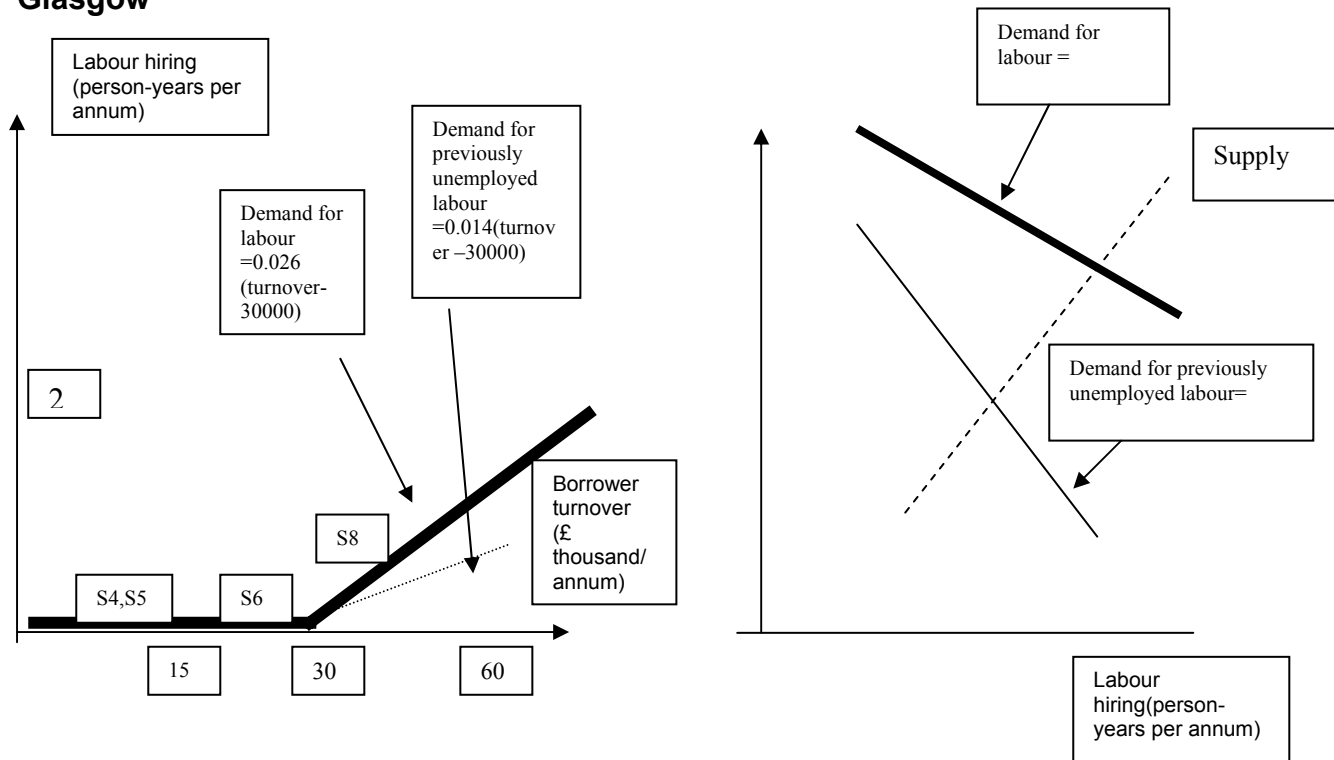
Labour demand and supply

We operate with a simple labour demand function in which demand for labour in the self-employment sector responds to the wage offered, a measure of wage uncertainty , the turnover of the business and a measure of access to credit or financial exclusion which we interpret as the frequency of having been turned down for a loan. With respect to business income, we have discovered within our three city samples a kink in the demand curve for labour (Figure 2), which we ascribe to the influence of risk: any labour hiring runs the risk, unless supervised in a way that is not always feasible, of reducing rather than increasing productivity, and the consequences of the risk going wrong are much more serious for a fledgling enterprise with unestablished reputation and no financial reserves than for an established enterprise, even a small one. Enterprise G9[5] commented, very typically for our sample: 'I feel that the trust issue at the start of the business is too important to employ a stranger'.

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[4] The Microbanking Bulletin, November 2003, quotes an average six-month arrears rate for microfinance institutions in developing countries of 4 per cent – or half the UK rate.

[5] Our sample is described in Appendix 2. Institutions are coded by city (G=Glasgow, B=Belfast, etc.) and number.

Figure 2. Demand functions for low-income labour: Sheffield and Glasgow

Labour hiring (person-years per annum)

Demand for labour =0.026 (turnover-30000)

Demand for previously unemployed labour =0.014(turnover –30000)

Demand for labour =

Supply

2

Demand for previously unemployed labour=

S8

S4,S5

S6

Borrower turnover (£ thousand/ annum)

15

30

60

Labour hiring(person-years per annum)

(1) With respect to employer income   *(2) With respect to wage rates*

Because labour market impacts are the key channel of poverty-reduction the ironic implication, to be further explored below, is that more poverty is reduced by lending to small-to-medium firms than by lending to start-up microenterprises.

Turning to the supply side of the market, the recent examination of markets for self-employment by Parker et al. (2005) discovers from US data that supply of labour to the self-employment sector is positively associated with wage uncertainty, where the self-employed 'wage' is defined as the hourly total remuneration from work (Parker et al 2005:191). The presumption is that employees work harder when wage uncertainty increases to make the deterministic element in their income larger; and thus that the trend towards higher levels of self-employment illustrated in Figure 1 may be in part a consequence of generalised levels of wage uncertainty. In addition we may expect that labour supply will vary positively, as per conventional micro theory, with the wage offered and negatively with the level of benefits.

Thus, in a simple view, the market for labour within the self-employment sector is described by the intersection of this kinked labour-demand curve and a labour-supply curve which is responsive to the level of wage uncertainty within the economy (right-hand part of Figure 2). The driver for poverty reduction is the speed at which equilibrium demand for labour in the self-employment sector increases. The following factors, in our model, drive this variable:

8

(i) An increase in wage uncertainty, which as discussed produces a movement into the self-employment sector;

(ii) An increase in the amount or effectiveness of financial provision to the financially excluded, if the measures described earlier are successful in reducing financial exclusion;

(iii) An increase in small businesses' willingness to invest, modelled by us in terms of not only conventional 'accelerator' terms but also in terms of the perceived vulnerability of the entrepreneur.

We now discuss how it may be possible for CDFIs and policy towards them to influence (ii) and (iii).

The demand for low-income labour and the dynamics of exit from poverty

From the point of view of poverty reduction, what matters is not the amount of labour taken on, or equilibrium employment creation, but the extent to which increases in self-employment reduce poverty, -either within the entrepreneur's household or within the households who derive employment from the self-employment sector – and how long such reduction lasts. Although many CDFIs, as we have seen, seek to target their lending within areas of high social need, there is as yet little information on how widely practised or effective such targeting is. *A fortiori,* we do not know the allocation of the multiplier effects of CDFI expenditure on poor as against non-poor people.

In order to understand how well microfinance enables people to make a sustainable exit from poverty, it is useful not simply to observe how long such exits last, but also to ask what are the barriers to exit which keep poor people poor, as these may provide a key to the processes by which escape can be facilitated and made sustainable. To understand these barriers better, we conducted a number of some qualitative case studies within the three cities which we studied. A selection of these is provided in Appendix 2, and they suggest that not only is the failure rate higher among start-up businesses, but it is higher still among start-up businesses whose owners are below the poverty line, in particular within groups which may be the subject of discrimination such as ethnic minorities. (Some cases are described in Section 3 below.) Indeed, some of the most vulnerable small businesses become trapped in a vicious circle of high vulnerability, low rate of return, low asset quality and limited risk-sharing. There are four particular reasons for this:

(i) smaller businesses, and especially sole traders, may have less access to economies of scale and bulk ordering, and thus pay higher prices for inputs;

(ii) smaller and more vulnerable businesses may have less good access to processes of quality certification and control, and as a consequence receive lower prices for their outputs;

(iii) smaller and more vulnerable businesses may not be able to afford adequate insurance premia for their assets, which leaves them additionally vulnerable to shocks such as burglary;

(iv) smaller and more vulnerable businesses may be more socially isolated, and in particular may have less access to informal sources

9

of short-term credit and moral support in the event of a shock. In our empirical work, we found this vicious circle to operate particularly powerfully in the case of ethnic-minority businesses.

In other words, being trapped in a state of continuing poverty, for many people, derives not only from having low assets, but from the fact that situational constraints make it hard for low-income entrepreneurs to use those assets effectively and to achieve high rates of return on them. The approach which we take to this problem (Figure 3), by analogy with the 'poverty trap' models sometimes used in developing countries (e.g. Zimmerman and Carter 2003, Carter and May 1999; Barrett et al 2002) acknowledges these potentially self-reinforcing features, in which in the presence of certain parameter values efforts to get out of poverty only make the problem worse. Their implication is that CDFI policies to spring the poverty trap for low-income individuals need to consist not just of the making available to them of inputs from whose ownership they are excluded, but also of measures to enable them to make and protect a worthwhile return on these assets once the capital market is open to them.

Figure 3. A view of the 'poverty trap' within the self-employment sector
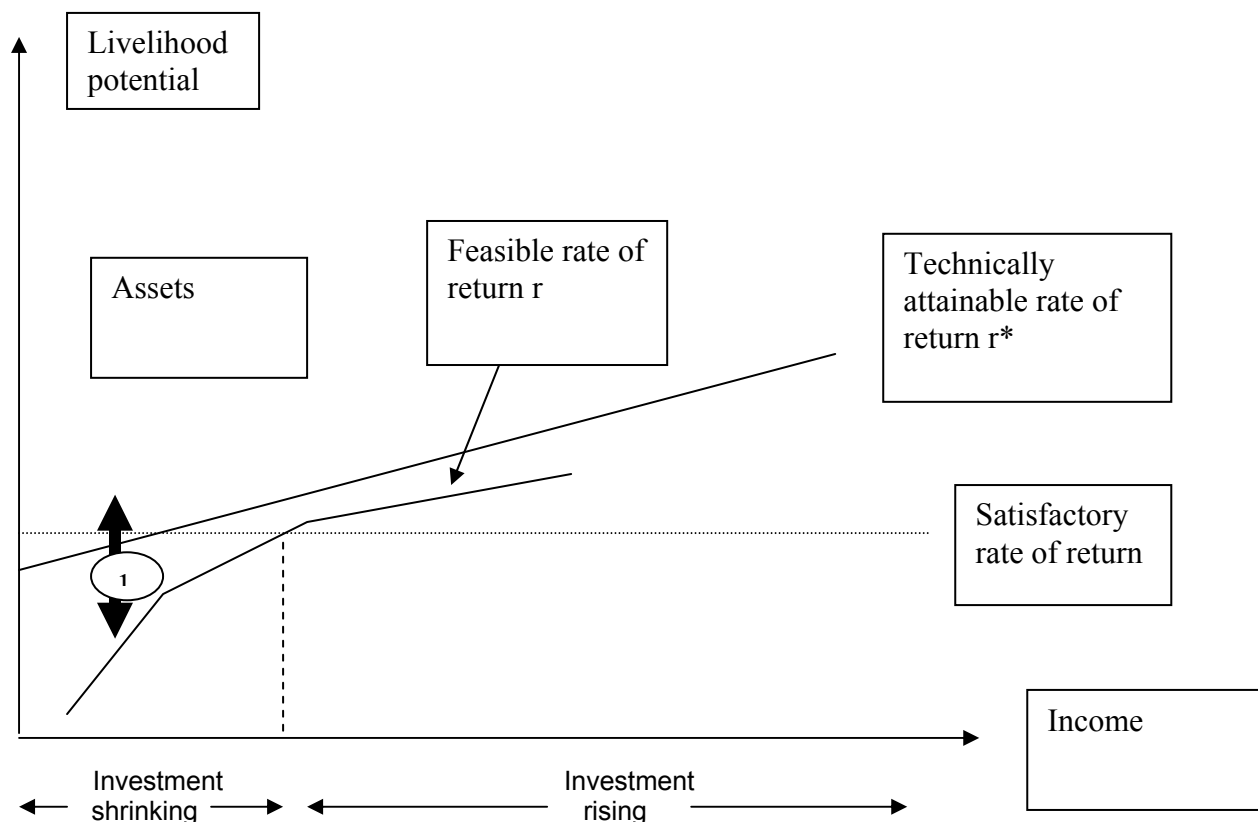
Notes: **1.** Feasible rate of return shifts up or down in relation to the technical maximum (and makes escape from poverty trap more or less feasible) as a consequence of shifts in the level of social capital influenced by insurance and other policy instruments) and certain forms of government expenditure . Depending on the value of these variables, the poverty trap either opens or stays closed.

These are of two kinds:

  (i)   *individual attributes* which give low-income families a bargaining
         advantage in their attempts to utilise resources effectively;
  (ii)   *policies* which achieve the same objective..

       Human capital, in the shape of applied knowledge relevant to increasing business income and social capital, in the shape of membership of social networks, represent illustrations of the first kind of variable: they both, in principle, provide an asset which helps a vulnerable business withstand a shock. The second is well illustrated by complementary expenditures by public authorities at central and local government level (such as New Deal and Business Links, respectively) and also by the actions of some microfinance institutions themselves, in the shape of emergency support which enables their clients to withstand shocks. In the absence of such

support, not only may their clients not escape from the trap represented by Figure 3, but shocks which hit people currently above the poverty line may push them below it in a way that is long-term and persistent (Dercon, 2005). In both cases, success in the use of such instruments has one fundamental attribute: it controls and limits the level of risk associated with investment by and for low-income people, in order to raise the attractiveness and safety of investment at a given expected rate of return. By effectively controlling the level of risk associated with poor people's investment, the negative interaction between income and rate of return is countered.

How this was done in Glasgow, Sheffield and Belfast is illustrated by some of the case studies in Appendix 2. The common thread underlying them is not only that control of risk is important but also that if achieved it provides a key unlocking the effectiveness of other factors of production; and by the same token, if lost (Case Study 4), it may deprive the other factors of production of effectiveness. We may illustrate by means of the diagram of Figure 4. This presents a possible client's-eye view of the low-income household's livelihood, and of the possible role of supporting institutions within it. The variables on the graph are expected income flow from a small business (on the vertical axis) and risk (on the horizontal axis); they exist in a positive relationship, so that in general high-return 'promotional' projects involving new technology with a good chance of high rates of return (e.g. in zone C of the diagram) are also high-risk, and by contrast low-risk projects (such as those in zone A) are in general simply 'protectional' of the household's livelihood and show low rates of return. It is our hypothesis that most of the unemployed see themselves as being in zone A, and see all possible escape routes from dependence on benefits as being attended by massive downside risks, the consequences of which are more serious, the smaller and less liquid are the assets which they have available to deal with those risks (the lower their risk efficacy). The two parallel lines running from southwest to northeast are the upper and lower boundaries of the capital market, which can be seen as a river which the client household has to navigate; it is a river which, as we shall see, contains a number of hidden eddies and rocks, but what is clearly visible are the crocodiles on the southern bank, which is marked 'financial exclusion'. To avoid this outcome at all costs, vulnerable clients in zones A and B typically do not aim for the middle of the river, but rather navigate close to the left bank during its most dangerous reaches, allowing themselves to drift back into the centre, and face moderate levels of risk, only when assets – and hence risk efficacy – have built up to a sufficient point (the 'risk-avoiding trajectory' on figure 4).

Figure 4: Risk and yield in the self-employment sector
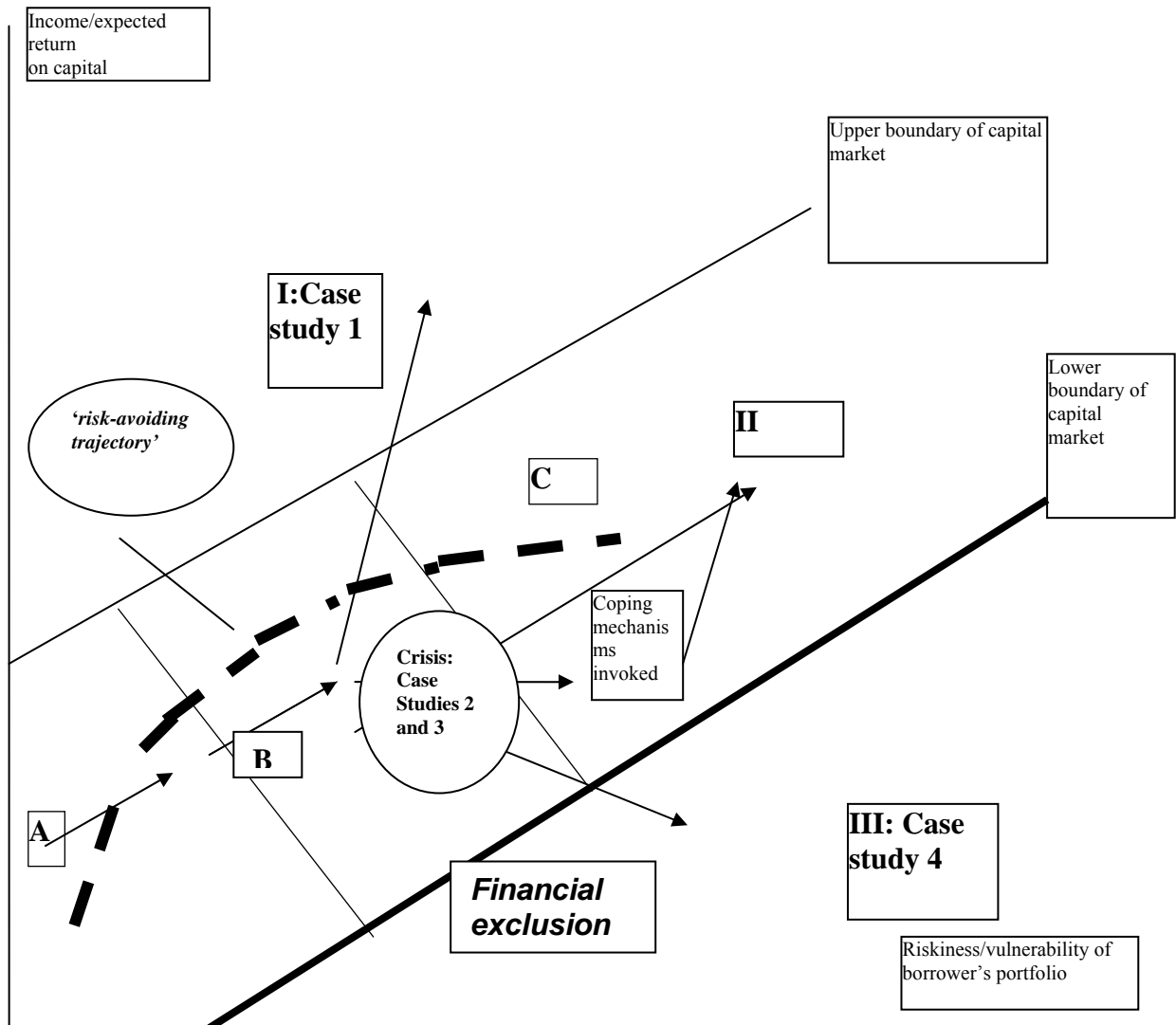
Key to symbols:

Zones of the capital market and patterns of borrower behaviour:

A : low risk, low income, client probably unemployed and possibly living in a hazardous (crime and vandalism-threatened) environment,very low income and asset levels, extreme perceived need for risk-protection devices, including equity and insurance; social and human capital increments particularly critical within household portfolio.

B : moderate risk, moderate yield, financial services demanded mainly for working capital with very small fixed capital investment.

C : high risk (unless insurance available), high average yield, financial services demanded for fixed capital equipment (esp. housing and vehicles) and labour hiring as well as fixed capital.

Possible outcomes for individual borrowers:

I (case study 1)**:** the 'super-ladder': yields so high (or augmented by a windfall) as to enable the borrower to dispense with microfinance services.

II: the normal ladder: borrower balances yield and risk through a sequence of loans, with stable or increasing levels of labour and capital input.

III (case studies 3 and 4)**:** 'the snake': coping mechanisms unable to cope with increased levels of risk; borrower quits the capital market.

13

The experience of the case studies illustrates the interaction between factors of production, shocks and institutions such as microfinance interventions. In case study 1, at the top end of the small business market, the lender provided sufficient *financial* capital, and in case studies 2 and 3 the lender and the clients between them constructed sufficient *social* capital, to provide a buffer (level of risk efficacy) against the shock. The rate of return function, in figure 3, was pulled up by effective institutional defences against risk. By contrast, in case study 4 both social and financial capital assets collapsed, in a vicious circle: the failure of the client's financial safety-net, in the shape of an insurance policy, depleted her own self-confidence and willingness to push on in face of adversity, some of which was caused by a decline in her social networks. *The combination of shock, lack of assets, and lack of institutional support,* rather than any one of these in isolation, kept the client in the poverty trap and kept the level of the rate of return (r) below its critical level (r*)

A particularly important consequence of the achievement of control over risk efficacy is an increase in what in the model of the Appendix is referred to as the 'regeneration multiplier': that is, the extent to which money injected into areas of social deprivation such as Easterhouse, the Manor (Sheffield 2) and West Belfast remains within those areas, and thereby is able influence dimensions of the social environment such as crime rates and quality of school provision.

We now seek, using data from Sheffield, Glasgow and Belfast, to simulate the 'critical values' of the key parameters which determine whether individuals escape from the trap.

3.Empirical findings: social impact[6]

We examined the income and employment dynamics of 45 entrepreneurs and their employees in Belfast, Sheffield and Glasgow over a period of two years, from 2000 to 2002, with a follow-up survey in November 2003.The transition matrix for these households over the years examined was as given in Table 2:

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[6] nb will need to be completely rewritten when we have some proper data from the EF survey

14

Table 2. Sample data: transitions from employment and unemployment into self-employment (period March 2000 – March 2003)

Status post 2003 / Status Pre 2000	Employed or unemployed, business failed					Self-employed, business still trading (plus amount of employment created 2000-3)				
	S	G1	G2	B	*Total*	S	G1	G2	B	Total
Employed						1	3+16			4+16
Self-employed			2	1	3	1+1	8+84	1	10+12	20+97
Unemployed: less than 6 months More than 6 months	1				1	3+1	4+15	1	4+2 1	12+18 1 *sub-total, transitions out of unemployment = 31*
Full-time education						1	1			2
Other						2				2
Grand totals	*1*		2	*1*	*4*	8+2	16+115	2	15+14	41+131

Code: S= Sheffield; G1= Developing Strathclyde Ltd./ Glasgow Regeneration Fund; G2 = Scottish Enterprise (previously Wellpark Enterprise Trust) B=ASPIRE,Belfast.
Sample size: 45, subdivided as indicated. 'Sustainable exits' from unemployment are shaded.

Descriptive data for our three inner-city samples are provided in Table 3. Average income and assets of the entrepreneurs we surveyed, and of their employees were within the bottom tercile for the UK. Sixty out of 131 people (self-employed people plus employees) were below the poverty line (less than half average earnings) in 2000, and of these thirty-three (twelve self-employed and eighteen employees) made the transition out of poverty between 2000 and end 2003. There is evidence that levels of education and of social capital were significantly higher among clients of community development finance institutions who although financially excluded were able to access credit from specially designed institutional sources (ie. for whom G* is relatively high), and this interaction takes an important role in our later analysis.

Table 3. The samples: summary statistics for survey areas

Criterion	Interviewee group sample mean	Control group sample mean	t-statistic for differences between sample means
Initial conditions:			
Further or higher education((%)	*34.2*	*8.3*	*4.81***
Financial exclusion[7]	*69.0*	*94.0*	*1.24*
Client summary data:			
Turnover (£/annum)	106750	33000	
Assets	12775	3800	
Employment generation (2000-2003): DSL(Glasgow) ASPIRE (Belfast) SENTA(Sheffield)	**4.4** 7.8 1.4 0.5	**2.3** 3.3 1.0 0	*2.08**
Employment generation amongst previously unemployed (2000-2002): DSL(Glasgow) ASPIRE(Belfast) SENTA(Sheffield)	**1.0** 2.3 0.2 0.3	**0.7** 1.7 0 0	*0.42*
Social capital indicator(%) DSL ASPIRE SENTA	**0.37** 0.50 0.37 0.66	**0.16** 0.05 0.50 0.25	*1.78**

Source: survey interviews, Feb-March 2002 and follow-up interviews, Nov 2003 (raw data can be inspected in Mosley and Steel (2002b), Appendix) ** denotes significance of the t-statistic at the 1% level and * denotes significance at the 10% level.

Definitional notes:

The *control group* (n=7) consists of clients S7, B5, B14b,G3, G5,G7,G17, who had either not received their loan yet or else in 2002, too recently to have gained obvious benefit from it. The *treatment group* (n=38) consists of the other borrowers.

Financial exclusion: had ever been refused a loan or overdraft by a commercial bank or other financial institution.

Employment generated: person-years of employment created per firm since January 2000.

Social capital/community-building indicator: answered yes to the initial question: 'Do you feel part of a social network with other small businesses?' which on enquiry was expanded into 'Do you consciously exchange ideas with other businesses, customers or suppliers in the process of formulating your own business strategy?

It is clear that the range of benefits which microfinance institutions are able to provide goes beyond the conventional quantitative measures listed in Table 3. There are a number of potential externalities, in particular in the field of the possibility of improving several dimensions of the inner-city environment, from social relationships to house prices, through an impetus which begins with action to counter financial exclusion. There is evidence that achieving these externalities may require financial diversification. One model for this is provided by 'homesteading schemes' (Henderson 2003): the essential approach is to provide a housing loan with a guaranteed or subsidised return for tenants on 'problem estates' with a high level of crime, vandalism and drus abuse, with the intention that this will gove them an equity stake in their local community. The loan is conditional on specified improvements to the housing stock by the tenant, and may be backed by a buyback guarantee, such that the risk attached to the tenant's investment is minimised. In terms of the externalities it provides, this product is therefore a natural for CDFIs – but it will require financial innovation far beyond what they have typically embraced, requiring a combination of equity, insurance and loan products – and, in the hands of one CDFI, it has already helped to turn house values around, and apparently reduce crime rates, on the Foxhill estate, one of the most deprived areas of Sheffield.

Mindful of the range of channels through which impacts are produce, we now proceed to estimate 'poverty exit functions' for the members of the population described in Tables 1 and 2 according to the model described in the previous section. Certain peculiarities and limitations of the analysis should be explained at the outset. In the first place, the dependent variable is *change in income,* estimated separately for businesses, for employees and for those who made the transition across the poverty line. The sample size is therefore 109 entrepreneurs and their employees, of whom, as earlier discussed, 34 had made it above the poverty line by the time of the resurvey.

Table 4. Poverty exit functions: alternative specifications

	OLS estimation. Dependent variable: income increase amongst:			
	Whole sample (n=109)		Exits from poverty only (n= 34)	Entrepreneurs only (n=45)
Equation	1a	1b	2	3
Regression coefficients on independent variables:				
Constant	-30905** (2.75)	-8126 (1.18)	6447 (0.14)	-34392** (3.98)
Amount of borrowing from community development finance institutions 2000-2002(G*)			-21890 (0.92)	0.27 (0.47)
Financial exclusion (F)				-0.34** (3.19)
Physical capital	0.27** (3.53)	0.28** (4.25)		
Social capital (S)	1884 (0.55)		4426 (0.58)	684.6 (0.53)
Human capital 1 (H): formal qualifications	9152* (2.39)		31429** (3.94)	4698 (1.28)
Human capital 2(H) Applied training related to current enterprise	1823 (0.39)		-27557 (1.64)	4550 (1.12)
Interaction term:human capital 2 * defences against risk		3124** (3.53)		
Shocks (Z)	-4116* (2.40)	1672 (0.21)	11754 (0.43)	
Institutional defences against risk (E)	9423** (2.56)		18971* (2.18)	
Ethnic minority dummy		-2660 (0.41)	-21890 (0.92)	
New Deal dummy				22115** (3.67)
Wage uncertainty $\sigma(W_s)$				
R^2	0.51	0.43	0.66	0.65
N	109	109	34	63

Variable definitions: (nb. symbols refer to notation in Table 1*):*
Financial exclusion (F): had ever been refused a loan or overdraft by a commercial bank or other financial institution.
Human capital 1(formal): scored higher education =3, education 16-18=2, education to 16 only = 1.
Human capital 2(informal): no applied training =0, applied training in last three years 4 weeks or less=1, applied training in last three years 4 weeks or more =3.
Social capital/community-building indicator(S): graded 1-3 on the basis of the answers to the following questions:
(1)'Do you have personal or professional contacts with other small businesses in the same area?
(2)Do you have personal or professional contacts with other small businesses outside the immediate neighbourhood?

(3) 'Do you have personal or professional contacts with staff of government or NGOs associated with supporting the small business sector (e.g. Business Links, etc)'.

Institutional defences against risk: graded 1-3 on the basis of : mentoring organised by the microfinance provider; business contacts organised by microfinance provider; emergency loans, financial advice or insurance advice arranged by microfinance provider.

New Deal: 1 if interviewee accepted New Deal recruits during last year, 0 otherwise.

Ethnic minority dummy: 1 if white, 0 if non-white.

Shocks dummy: 1 if has experienced income decline of 20% or more in the last year, 0 otherwise.

Notes. Figures in parentheses below coefficients are Student's t-statistics.* denotes significance of a coefficient at the 5% level and * denotes significance at the 1% level.

The preliminary conclusions from Table 4 suggest, among the variables in our model, a negative role for shocks and a positive role, in transitions across the poverty line, for physical capital and for human capital in the formal sense of educational qualifications. Institutional defences against risk are, are we surmised from our case studies, very important particularly in the transition across the poverty line , as in the story of Figure 3 above: they opened the gateway to opening the poverty trap in some cases, and their absence kept that trap shut on the subject of Case Study 4. Indeed, human capital in the practical sense of applied training was only significant when interacted with protection against risk, suggesting that the two factors of production have to work together to be effective, as in Case Studies 1 and 3. For entrepreneurs, previous experience of financial exclusion and also the ethnic minority dummy exerted a continuing negative influence on the change in income, but the latter variable was not significant. Loan size, somewhat worryingly for the CDFIs, had no significant role in poverty transition.

4. Estimated fiscal impact

We now estimate the fiscal impact of the community development finance sector, as it is and in the presence of various hypothetical policy changes. We do this in two different ways. First, we begin from a crude estimate of change in unemployment within the sample due to microfinance, which (Table 1) is 31 from a sample of 45 clients, or 0.67 jobs created for every new microfinance client . At estimated average earnings within the three sample areas, this equates to a saving on unemployment benefit payments of £0.3 million on what would otherwise have been paid. If grossed up to an estimated 32,500 clients of microfinance institutions in the UK (table 5) we get an estimate of 21,900 (2.4 per cent of the national unemployment total) individuals exiting from unemployment as a consequence of microfinance lending over the period 2000-02, which given the estimated distribution of earnings for the sample implies a saving of £178 million on the national social security budget). A second approach to the same calculation is to compare the change in the self-reported receipts of social security payments (Appendix 2) of microfinance clients between the before-loan period (2000) when in many cases they and their employees were receiving social security payments, and the same self-reported payments in the comparison year (2003). This approach has the merit of picking up interactions between the supply of financial services, unemployment benefit and other social security

payments, which may be considerable[8] . This approach yields the estimates listed in table 5.

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[8] For example, not only may the supply of microfinance in a direct way reduce unemployment and thus the payment of unemployment benefit, but also in an indirect way it may improve health, for example because the supply of financial services encourages a more purposive attitude to diet and exercise. In such a case, not only does unemployment benefit decline, but sickness benefit as well.

Table 5. Estimated fiscal impact: contribution of microfinance to reduction of unemployment and social protection expenditure (2000-3) on different assumptions

Assumption	Within-sample change in unemployment due to microfinance	Corresponding fiscal impact (change in social security budget) £million	Corresponding national-level fiscal impact (change in social security budget) £million
Impact of community development finance institutions on central government social security spending: 1)*By simple extrapolation:* Unemployment benefits	31	0.3	178
2)*By self-reporting of social security payments:* Unemployment benefits		0.4	237
Sickness, disability and other benefits		0.15	88
Total		0.55	325
Policy simulations i.Financing of start-up businesses only		Decrease to 0.28 (-27%)	Saving decreases to 165(-27%)
ii.Change in New Deal subsidy to £60/week within regeneration areas		Increase to 0.64(+9%)	Saving increases to 354(+9%)
iii.Increase in labour intensity (as per DSL)		Increase to 0.97(+42%)	Saving increases to 573(+42%)
iv. Increased risk protection expenditure by CDFIs, as per 'best cases' in sample		Increase to 0.57(+4%)	Saving increases to 338(+4%)

Sources and methods.
Row 1(simple extrapolation): within-sample change in unemployment due to microfinance (Table 1), multiplied by unemployment benefit due according to the earnings distributions in Appendix 2, grossed up to national level using an estimate of 250 microfinance institutions in UK (verbal estimate from Department of Trade and Industry Small Business Service)
Row 2 (self-reported social security payments): average social security payments to microfinance operators and their employees in year before loan, *less* current payments to the same group (£3736/annum unemployment benefit, £1417/annum other benefits) times number in sample (109), grossed up to national level using an estimate of 250 microfinance institutions in UK (verbal estimate from Department of Trade and Industry Small Business Service)
Policy simulations:

We now examine the sensitivity of these estimates to changes in policy and institutional design:
Targeting: Some organisations, such as SENTA within our sample, concentrate on lending to start-up businesses only, often on the premiss that a focus on smaller and more vulnerable businesses will do more to stimulate the market. In Table 5 we simulate this policy by imagining that the employment and fiscal impact is the same for all organisations within our sample as it is for SENTA. The consequence is to *reduce* the fiscal saving, because start-up businesses do not in general, certainly within our sample, create so much employment, nor therefore reduce the social security budget, so much as established small-to-medium enterprises.

National policies: The fiscal impact is also sensitive to the size of the 'regeneration multiplier': which within our samples is only 0.22, one-third of the overall employment multiplier of 0.67. A possible approach to this problem is to raise the New Deal employment subsidy (currently £40 per week applicable for a maximum of 26 weeks) to £60 per week, and/or to increase the eligibility period of the subsidy to nine months. This would raise the regeneration multiplier and target the New Deal subsidy on areas of highest social deprivation. In our simulation, this leads to a reduction in social security payments below the base case of 9%.
Regional and local NGO policies. The impact of microfinance services is sensitive not only (as demonstrated by Table 1) to the level of a client's human capital but specifically to the level and effectiveness of training and mentoring provided either by CDFIs themselves or (more commonly) by independent service providers established by local authorities or NGOs. These forms of human capital have an especially important impact: as we discovered in Table 4, the payoff to appropriate risk-protection expenditures by the supplying institution is crucial and significant. In Table 5 we simulate this form of institutional innovation by examining the effect of increased risk-protection expenditure by CDFIs. We do this in a slightly unorthodox way,by overriding the estimating equation (1b) in Table 4 and substituting the assumption that for all low-income clients institutional defences against risk were at their highest possible level of 3. The impact turns out to be minor. .

However, there is little doubt that, beyond this, many individual CDFIs would be able to increase their impact further by amendments in their interest rate

policies, diversification of their financial product mix, and improvements in their defences against asymmetric information problems.

5. Lessons for policy

We have provided evidence, we believe, of substantial social and fiscal impact already achieved by the UK CDFI sector, but also of substantial and so far unfulfilled potential.

The starting-point for our analysis is that for most people, especially at low incomes, labour is the main source of income, and therefore the reduction of poverty depends on the expansion of the market for labour and of poor people's role within it. The section of the market under examination here, which is self-employment, has in recent years been growing under the impetus of trends towards lesser security in other labour markets, which in principle gives the CDFI approach a fair wind, as does government approval of its 'financially sustainable' approach to redistribution. But at present sustainability is a long way off for most CDFIs, and the supply side of the market has been quite slow in adapting for the context of UK inner-cities what are now quite a robust set of rules of thumb for the organisation of finance without collateral.

In search of a way forward, we attempted to adapt to the UK context a class of 'poverty trap' models typically applied to less developed countries, in which the rate of return falls, and the discrepancy between actual and potential output increases, as income falls. To counter this vicious circle, policy and institution-building need over the long term to counter the natural and relational factors which define the trap, the most severe of which is risk. Policies to increase the *risk efficacy,* or ability to defend against risk, of low-income people therefore form a crucial and necessary element in the strategy of CDFIs, as of other anti-poverty institutions. Indeed, our empirical analysis finds that several of the traditionally key factors in expanding the incomes of the poor, such as social capital and some elements in human capital, are not in themselves statistically significant except in association with institutional defences against risk. Thus the realisation of many elements in the potential contribution of CDFIs, including the fiscal one, waits on an effective solution of this problem of institutional design.

Some of this solution is already coming, not from the CDFIs themselves, but from complementary agencies within government, which in industrialised countries (including those of Eastern Europe) occupy a much larger share of the structure of support for microfinance than in most developing countries, where a minimalist finance-only model is much commoner.   In several cities (Birmingham is the illustration most salient in our case studies), there is clear support for the approach of Maloney et al. (2000) and Lowndes and Wilson (2001)) that, far from social capital being a factor of production created purely by individuals, local government can also act as an agent in its construction, and thereby supply what on the evidence of Table 4 is a key input in the emergence of sustainable small businesses. But other parts of the solution come from the imaginations of the managers of microfinance institutions themselves. We have observed the great importance

in this context of *insurance against shocks,* and microfinance institutions can assist in providing this, both by linking up with appropriate insurers and even more importantly by institutional support (emergency lending, mentoring and advice) which in many ways anticipates the need for and provides a quasi-substitute for insurance.

We have observed that many escapes from the poverty trap are achieved by employees rather than by entrepreneurs, which draws attention to the importance of growing along a labour-intensive production function, which ironically was in our sample secured better by small-to-medium firms than by start-up enterprises which represent the typical target for 'poverty-focussed' initiatives. In achieving this, a key variable in the exit-from-poverty process is the 'regeneration multiplier'. This varied greatly across our samples, being highest in Glasgow and lowest in Sheffield. We surmise that the regeneration multiplier varies negatively with the wage level and positively with the level of human capital inside regeneration areas[9]; but beyond this, it may require innovation in the range of financial products, as discussed in relation to the Sheffield 'homesteading' scheme in section 3 above. It may be that expenditure in support of regeneration areas by initiatives to source labour and materials locally could be a useful addition to this policy agenda. To find out whether these hypotheses are true is an important part of the agenda for future research.

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[9] For example: hiring within regeneration areas within our sample was highest in Drumchapel, Glasgow, which had the lowest wages, the highest levels of human capital and the highest levels of local government support expenditure.

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Appendix 1:The model

There are four building-blocks within our model: labour supply and demand in the 'self-employed small business sector' and other sectors; risk attitudes and investment within the self-employment sector, investment, risk-sharing, and the impact of policy; and rates of return. The notation is presented in Table 1.

Table A1. Notation

R	rate of return
R*	risk (probability of livelihood in small business sector falling below specified level)
ρ	risk-aversion coefficient
Y	Income
A	Assets
A_h	Skills (human capital assets)
S	social capital
a_4	Regeneration area multiplier (see equation (6) and Appendix)
E	Institutional defences against risk (mentoring,emergency loans, etc)
F	Measure of financial exclusion(experience of being refused a loan)
G*	Government 'pro-small business' expenditure
G**	'insurance' expenditure by government and NGOs
W_s	Wage in self-employment = total hourly remuneration from work
B	Value of social security benefits (per hour)
$\sigma(W_s)$	Uncertainty of self-employed wage
V	vulnerability index

(1a)***Labour supply***
Parker et al. (2005) discover from US data that supply of labour to the self-employment sector is positively associated with wage uncertainty, where the self-employed 'wage' is defined as the hourly total remuneration from work (Parker et al 2005:191). The presumption is that employees work harder when wage uncertainty increases to make the deterministic element in their income larger. In addition we may expect that labour supply will vary positively, as per conventional micro theory, with the wage offered and negatively with the level of benefits:.

$$L_s \, (S) = \text{constant} + a_1 w_s + a_2 B + a_3 \, \sigma(W_s) \qquad\qquad \textbf{(1)}$$

(1b) *Labour demand*
We operate with a simple labour demand function in which demand for labour in the self-employment sector responds to the wage offered, the wage uncertainty measure, the turnover of the business and a measure of access to credit or financial exclusion, F, which we interpret as the frequency of having been turned down for a loan:

$$L_d \, (S) = \text{constant} + a_4 W_s + a_5 \, \sigma(W_s) + a_6 Y + a_7 F \qquad\qquad \textbf{(2)}$$

With respect to business income, it will be recalled that we discovered within our three city samples a kink in the demand curve for labour (Figure 2 above), which we ascribe to the influence of risk: any labour hiring runs the risk, unless supervised in a way that is not always feasible, of reducing rather than increasing productivity, and the consequences of the risk going wrong are much more serious for a fledgling enterprise with unestablished reputation and no financial reserves than for an established enterprise, even a small one. Enterprise G9 commented, very typically for our sample: 'I feel that the trust issue at the start of the business is too important to employ a stranger'. Because labour market impacts are the key channel of poverty-reduction the ironic implication, to be explored below, is that more poverty is reduced by lending to small-to-medium firms than by lending to start-up microenterprises.

(2)Risk attitudes and investment in the small business sector.

 Investment in the small business sector varies directly with expected profit (which in turn is influenced by macro and local economic conditions) and indirectly with the individual's risk-aversion coefficient, as defined below.

$$I = f(\Delta Y, \rho) \qquad\qquad\qquad\qquad \textbf{(3)}$$

Households' measure of risk-aversion ρ (typically the Arrow-Pratt 9 measure)[10] is determined, in the light of previous empirical work (Mosley and Verschoor 2005) as a linear function of their perceived level of vulnerability. Vulnerability, we assess as a measure with four subjective components: memories and expectations of vulnerability; expectations of short-term income variation; perceived risk of undertaking entrepreneurial behaviour; and self-respect and perceived own status(Mosley and Verschoor 2005). The risk-aversion function is of a 'satisficing' type which is asymmetric in gains and

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[10] An individual's 'Arrow-Pratt 9 measure' ρ is estimated as $(\alpha Z - \lambda) \, (\lambda^2/2 + (\alpha - Z^2/2 - \alpha\lambda))$ where Z = prize in lottery, α = probability of winning the prize, and λ is the individual's reservation price, calculated as his or her answer to the following question:

'Imagine that you are about to play a lottery with the following payoffs: \$1.5 with probability $(\alpha) = 0.75$; 0 with p=0.25. What is the minimum amount I have to give you so that you forego playing?'

losses (Kahnemann and Tversky 1979. Kahnemann 2003): risk aversion increases a great deal if vulnerability increases, but does not decline much if vulnerability declines. For detail of the vulnerability scale we used, please see the simulation below.)

$$\rho = a_8 + a_9 (V) \qquad\qquad\qquad \textbf{(4)}$$

For purposes of modelling below we shall interpret the influence of wage uncertainty on labour supply into the self-employment sector, discussed in relation to equation (1) above, as being subsumed within the vulnerability parameter V.

(3) Portfolio allocation and risk management.

Each individual household protects itself against adverse circumstance as best it can: it maximises its *risk efficacy*, the ratio of total assets to perceived risk. Within households the allocation of resources is determined by a bargaining process which at this stage we do not define : each person within a household is simply allocated a share of household assets β dependent on their individual bargaining strength. Risks are divided into two groups r_1 (caused by nature, cannot be influenced by human behaviour) and r_2 (interpersonal, can be influenced by human behaviour). Social capital S is inversely proportional to r_2. Following the empirical analysis of Dercon and Krishnan (2000, 2003) we assume that there is, for natural risks, *partial but unequal risk-sharing;* in other words, over any time period the change in the volume of assets A depends on the systematic component defined by (3) plus a share of a random shock Z , the share being determined by bargaining strength.

$$\text{Thus, change in assets } \Delta A = I((\Delta Y, \rho) + \text{ß}Z_i \qquad\qquad (5)$$

(4) Rates of return in the self-employment sector.

For both the self-employed small business sector (for which we use the subscript a) and the large business sector (subscript b), there exists a distribution of yields (r_a, σ_a; r_b, σ_b). This distribution of yields can be influenced by external agencies through the level and targeting of their expenditure:

$$r_a/r_b = a_3 + a_4 G^* + a_5 G^{**} + a_6 E \qquad\qquad (6)$$

where E consists of the availability of institutional devices to reduce risk

This function needs careful specification: indeed, there exist a range of microsimulation models which have attempted to estimate the social impact of expenditure changes in functions such as (6). In our approach there are two dimensions of impact which need modelling; the extent to which support expenditure is targeted within low-income regeneration areas (which we describe as the 'regeneration multiplier' and represent by the coefficient a_4) and the extent to which policy interventions which are not directly aimed at the self-employment sector but which, by reducing risk, impinge on its productivity and hence profitability. We represent these by the symbol G**.

Within each sector a and b, as illustrated in Figure 2, the rate of return function is, for the self-employment sector:

$$r_a^* - r_a = f(A: S, G^*, G^{**}, E) \tag{6a}$$

and for the large business sector:

$$r_b^* - r_b = f(A: S, G) \tag{6b}$$

where G^* is government 'pro-small business' expenditure and S is social capital. G^* is obviously a policy variable, but social capital is notoriously difficult to influence: in particular, it is not traded in any market and so cannot be incentivised through increases in its price. However, it can be incentivised through offers of insurance against misplaced trust, which can be engineered institutionally. In addition (Mosley and Verschoor 2005) there is evidence that social capital levels in particular communities are influenced (negatively) by intragroup inequality, and also by various elements of communities' ' social history' including experience of common adversity[11].

Taking entrepreneur's income (Y) as the product of rate of return (r) and change in assets (ΔA) and substituting from (1) and (2) into (3), (4) and (5) we have for the time path of income for each individual i:

$$Y_i = \rho(V) (A, A_h: S, G^*, G^{**}, E) \{I((\Delta Y, \rho) + \text{ß}Z_{i\}}\} \tag{6a}$$

And for that individual, the probability that he will cross the poverty line within a defined time period is the change in income multiplied by a poverty transition coefficient α:

$$\mathbf{\Delta P_i = \alpha[\ \rho(V)\ (A, A_h: S, G^*, G^{**}, E)\ \{I((\Delta Y, \rho) + ßZ_{i\}}\}\ \ ]} \tag{7}$$

This function (7) is the one which we seek to use as an explanation of the household poverty transitions discussed below. For employees in the small business sector the labour demand function (2) clearly comes into play, as for them escape from poverty is determined by the probability of being employed in the small business sector. By (2) the probability of being employed in the small business sector is dependent on small business income, credit constraints and the wage in the small business sector, and so

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[11] Two characteristics of social capital are relevant to this process of accumulation and decumulation of assets. In the first place, social capital, unlike much human and physical capital, is divisible into small units; this is advantageous for the very poor, since access to it is not restricted by capital market imperfections. However, in the second place, access to it is restricted by social barriers and cleavages which cause social linkages with one person to damage social linkages with another. Geof Wood's 'Faustian bargains' (Wood 2003), in which poor people, to reduce their exposure to risk, form patron-client relationships with richer protectors which then preclude their access to other relationships and pathways out of poverty, are an illustration of this 'non-additive' property of social capital.

we may write for the likelihood of moving out of poverty through employment in the small business sector:

$$\Delta P_i (E) = \alpha (W_s, \sigma (W_s), Y, F) [\rho(V) (A, A_h: S, G^*, G^{**}) \{I((\Delta Y, \rho) + \beta Z_{i}\}] \qquad (7a)$$

This is the reduced form estimated in Table 4 above.

Appendix 2: Data
Quantitative data
This section presents the data used to support the argument and in particular to produce Tables 4 and 5.

(This bit is in SPSS/Excel and will not reproduce electronically)

Qualitative data

The qualitative section of the appendix presents four case studies : one of triumph (where the borrower grew so rapidly as to swim free of the need for loan finance), one of disaster (collision with the 'right bank of the river'), and two of what is much commoner for small businesses than either – a crisis (i.e,a drift backwards and/or towards the right bank of the river) followed by the adoption of coping strategies , with many ups and downs around an almost-static trend of sales in real terms. These anecdotes, in turn, illustrate some possible policy lessons to take up in the final section.

Table A3. Crisis coping strategies

(a) Happy ending: crisis resolved
• *Case Study 1: 'G4' Nursery manager, Glasgow G21* As part of the process of part-privatisation an NHS hospital in Springburn, Glasgow, put its nursery facilities out to tender; the competition was won by the interviewee. Her experience is in various nurseries working for the Glasgow Education Authority, following training as a nursery nurse. After being 'given the run-around for months' and finally turned down by one commercial bank, she then approached a second bank and was told 'it's an awful lot of money for a young girl to be borrowing'. Finally, with help from the government-financed local economic development company Glasgow North, she was able to assemble a financing package from Developing Strathclyde Ltd (DSL). Having started in 1997 with three staff and a client base of four children, she now (Feb 2003) has 80 children and fifteen staff, (six of whom have come off the dole), and would like to take on an extra five staff: the fastest rate of growth of employment or turnover that we have encountered in our forty-five case studies, for all that some of the labour is part-time. In her experience motivation is the key factor – much more than qualifications and experience – in hiring decisions, and the most demotivated recruits have come via the New Deal (for 16-25). 'One (New Deal) girl came in her tracksuit and sat there on the couch chewing gum, looked out of the window and said 'Don't know…Don't know' to every question'. Her profit is £22,000 on a turnover of £195,000. She now scarcely needs DSL finance: she has 'graduated' across the left bank of the river – trajectory 1 on figure 4.
(b) Intermediate cases: business surviving, but sales have reached plateau, or crisis unresolved **Case Study 2: 'S3' Gardener, Sheffield 9** Male client in his 40s,left school at 15, with criminal record including a period in prison, initially unable to get small business loan, or even savings account, from commercial bank on account of being unemployed. In January 2000, received his first loan of £2800 from SENTA (Sheffield Enterprise Agency), which he used to buy a motor-mower. Over the two-year period since then turnover has expanded to about £15000/year. There have been three critical 'upward jumps' in this process, each of them involving a measure of associated risk. On the demand side, there has been a gradual shift from the 'domestic' to the 'institutional' market: from individuals needing help with their gardens to institutions such as businesses, churches, public houses and housing trusts wishing to offer maintenance contracts. On the cost side, the client took out a framed advertisement in the Yellow Pages , and also took on casual labour: two young men at a wage of £200/week (just above the legal minimum). This was a disaster: they wrecked his equipment, which was inadequately insured; and a maintenance contract with a housing association was lost as a consequence. At this low point, he experienced a serious hand injury, which at one stage caused fears of amputation.

How did he get through the crisis? On his account, through cutting costs (the wage-labour previously mentioned), and through support from his mentor and a key customer (a former employer who 'came up' shortly after the housing association contract collapsed). Other enterprises in the same line of business have not been an important source of support . He is now looking to re-hire an apprentice, and to supplement his existing push-mower with a tractor-driven one. Risk efficacy was augmented through the quick realisation of a mistake, through the provision of human assets in the sense of moral support by the mentor and social capital links with clients, and financial assets in the sense of an emergency supplementary loan by SENTA.

Case Study 3. 'Group A': Scottish Enterprise Lanarkshire

The group lending operation

This profile is not of an individual business, but of an entire group of eight women ,formed in 2000 in the Cumbernauld area of Lanarkshire under the supervision of the Wellpark Enterprise Trust (q.v.) in 2000, and now receives loan funding from Scottish Enterprise under the Scottish National Microfinance Programme. Although the group contains eight members all with their own enterprises, only two (discussed below) have loans outstanding from Scottish Enterprise. The group's social capital-building capacities were recently tested when the group experienced a major shock -- the loss of £5000 from group assets consequent on a bad loan being made for a publishing project, followed by the disappearance of the defaulter. The solidarity built up by the group within this crisis, and not repeat loans, has got them through it. Formally, it increased their risk efficacy until they were just able to withstand the shock.

The businesses

Client G17 runs an internet access company from home, using an initial loan of £1500 made to her using her membership of the group as security. The enterprise 'has taken over her life', but there have been dramatic drops almost to zero in monthly receipts, serious cost overruns and then the major default. 'Without the solidarity of the group I would have given up years ago'.

Clients G21 and G22 are sisters (see quotation on page xx/10), who established a bridalwear business three years ago (1999) and have been members of the group for one year. One of them works part-time in a bank, the other as a dental nurse. They work at the dress shop 'by appointment only'. When setting the business up they initially approached a commercial bank for a £1500 overdraft, but before considering this the bank insisted on details of their husbands' work and employment history, and information on available collateral going as far as a new surveyor's report on their houses. At that point they dropped their plan to seek a bank loan, renewing it a year later when they decided to branch out into bridesmaids' dresses and to seek new premises away from the broken windows of the industrial estate where they had been based. They saw an advertisement for a WIN (Women in the Network) meeting and decided to go along. A key factor in their decision to become involved in the 'then Wellpark' group lending scheme was the women-only aspect; they have received from it a loan of £4500 to develop the business.

They have no paid employees. Their cousin (who works as a cleaner) , however, designs for them increasingly. They hope that they will be able to pay her a wage in the future, when they can.

(c) **Unhappy ending: business failure, in spite of initial success**

Case Study 4: 'S1' Dressmaker and clothing retailer, Sheffield 5

Black female single parent, in her 30s; educated to secondary level; had taken, at community college, a 'black access course' in introductory business skills including letter-writing and book-keeping.   Unemployed and on benefits until she received, in January 2001, a loan of £5000 from SENTA (Sheffield Enterprise Agency), later topped up by a further £2000. Approached and was refused a loan by a commercial bank 'on the grounds that she was unemployed, lacking capital, and lacking business experience'. Was introduced to SENTA by the David Hall Partnership (DHP), the private sector consultancy which manages the New Deal for Lone Parents and for the Self-Employed in Sheffield.

The client initially opened, in one of the few ethnic-minority areas in Sheffield, a shop selling smart 'street wear', appealing at that stage mainly to the black population. She expanded her market through advertising in clothes parties and free sheets distributed through people's doors. The business proved unexpectedly seasonal, with slumps in school holidays; nonetheless it managed, with the help of judicious advertising guided by the SENTA mentor, to diversify into a broader market (basically the under-25 age group), and at its peak, In September 2001, her market was 60% white and her turnover at an annual rate of £20000/annum. A blend of mentoring and instinct - *not,* on her insistence, discussions with black traders in a similar position – had enabled her not only to grow fast, but also to jump the ethnic divide into a new market sector. Indeed, significantly for what was to come, her links with family and other members of the local black community loosened somewhat during this period: speculatively, they may have been envious of her success at this time[i].

The business was then cut down by two burglaries, in October 2001 and January 2002, the second of which also involved some damage to the premises. The proximate cause of failure was not only the second burglary as such – the premises were insured- but that the insurance company involved had taken, at the time of writing, twelve months to assess the claim, and has paid out nothing so far. The client has been pushed back below the poverty line, and is now trading 'passively' from home, without the possibility of advertising from home or a shop outlet For all its fast growth, and its ability to withstand two slumps, the business did not have the 'risk efficacy' to withstand the third.

This qualitative material illustrates, first of all, the interaction of shocks, which are in our model, with institutions, which for the most part are not. Case Study 1 received the positive shock of a suddenly opening-up market (boosted by the growing volume of government support for childcare in the late nineties), took the tide at its flood, and was led on to fortune, eventually breaching the upper boundary of the capital market (figure 4). But the entrepreneur was only able to do so because its banker (DSL/Glasgow Regeneration Fund) flexibly expanded her loan limit on a discretionary basis: this is an approach which a number of microfinance institutions, with rigid 'progressive lending' formulae, are unwilling to emulate.

Case Studies 2 to 4 all received negative shocks, the last of them so severe as to force the client to stop trading. Crime and robbery is an extremely common cause of these shocks, found in all the samples but dramatically so in Belfast where it was common during the survey period to have to pay protection money in the form of a monthly fee to UVF or IRA, as the case may be. The question is what enabled the first two of these to withstand the shock (generate sufficient risk efficacy), and the last to fail to do

so, as from this we may learn lessons which can help microfinance borrowers reduce the failure rate (and hence increase the social and employment impact) of assisted businesses. Part of the answer lies in institutional gaps and institutional behaviour, which are discussed in the next section. The other part of the story is that in case study 1, at the top end of the small business market, the lender provided sufficient *financial* capital, and in case studies 2 and 3 the lender and the clients between them constructed sufficient *social* capital, to provide a buffer (level of risk efficacy) against the shock, whereas in case study 4 both social and financial capital assets collapsed, in a vicious circle: the failure of the client's financial safety-net, in the shape of an insurance policy, depleted her own self-confidence and willingness to push on in face of adversity, some of which was caused by a decline in her social networks. *The combination of shock, lack of assets, and lack of institutional support,* rather than any one of these in isolation, kept the client in the poverty trap and kept the level of the rate of return (r) below its critical level (r*) . Institutional support has so far been absent from our quantitative analysis, and we must therefore consider in our final section how to factor it into our policy recommendations.

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[i] As Diane Elson states (1999, p.616):

'Labour market institutions have typically been constructed on the assumption that women employees were secondary earners who would draw on the assets and earnings of men…to cushion them against risk. That is, labour market institutions have assumed that women have 'extended entitlements' which do not have the force of law, but are sanctioned by accepted norms about what is a legitimate claim…Women's very act of participating in the labour market, however, may weaken their extended entitlements, if it involves stepping outside what have been accepted as the normal roles for women. The possibility of earning an income of their own may empower them to make more decision about their own lives – but it may also cut them off from support by male kin, leaving them on their own, and newly vulnerable to market forces.'

These remarks apply *a fortiori* to self-employed workers, as may be seen from the experience of Case Study 4.

For discussion

Table 4 – what other independent variables?

Is there any need/justification to use a simultaneous-equation estimating method? If so, what instruments to use?

Table 5 – what other policy simulations?

Final para – more on future research needed.

Think about how to get to a questionnaire/interview schedule from here.