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Types of financial institution and their supply of  
financial services: the case of microfinance in  
Europe

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# Types of financial institution and their supply of financial services: the case of microfinance in Europe<sup>1</sup>

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**Abstract:** The profit-oriented financial sector has grown in importance and influence, leading some authors to talk about a financialised economy. The question we raise in this paper is what is the role of non-profit oriented financial institutions and public programmes in the microfinance segment. We conclude that in this market there is a large diversity of institutions and non-for profit organisations have a significant role. Our analysis also shows that the diversity of institutional forms is important to foster market dimension, guarantee a good cover of the several vulnerable groups and a diversified offer of other services besides microcredit. Moreover, some specific institutions have an effect on the composition of the market in terms of personal and business loans, on loans terms, loans size, credit to targeted clients, and offer of other financial services. Moreover, we study how financial institutions cluster around some key variables. Finally, we fuzzy cluster microcredit national markets and describe how institutions types differ across the clusters.

**Key words:** microfinance, financial institutions

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## 1. Introduction

Microcredit differs from traditional credit because of the small size of loans, alternative collateral requirements, and traditional methods of credit evaluation (Evers & Jung, 2007). There are two types of microcredit: microcredit for business start-ups and social microcredit (Lämmermann, 2010). The aim of the latter type of microcredit is to help excluded persons finance their social and economic integration.

In most developed countries, the financial sector has grown in importance and influence, leading some authors to talk about a financialised economy (Epstein, 2005, p. 1). This phenomenon is visible in the expansion and emergence of new financial markets and institutions that follow a market logic characterised by the demand for quick and large profits. The question that we raise in this paper is whether financial services provided by profit-oriented mainstream banks have developed to the point of reaching the poorest in the society; or whether the development of finance in this segment of the financial market is left mainly to non-profit oriented financial institutions and to public programmes.

Cooperative and mutual financial institutions have distinct characteristics from commercial banks – profit oriented banks owned by shareholders - (EACB, 2010; Fonteyne, 2007): they are customer owned and oriented entities, they are democratic controlled by members, they have a pyramidal structure, they assign a very significant proportion of profits to constituting reserves, they are predominantly domestic and retail oriented and have strong links with the local economy, and their approach to business is more conservative. The main objective of these institutions is not to maximise profits, but to work for their members and the wider community, with a special emphasis on small businesses. As a result, cooperative and mutual institutions may have a prominent role in the development of the microcredit market.

Government financial institutions overcome market imperfections by financing projects that are socially important but have a low profitability (Andrews, 2005).

In the case of microcredit private profits are small or negative but the social impact is large and this means that public-owned financial institutions may play a significant role in promoting microcredit. In general, Governments are interested in using microcredit to reduce unemployment, promote social inclusion of excluded groups, and promote the growth of microenterprises. The achievement of these goals may justify the Government's direct intervention (by granting loans) or indirect intervention (by subsidising programmes for which MFIs grant loans) in this market.

More generally, non-profit oriented financial institutions may have a different behaviour in the microcredit market by being largely oriented to low-profitability segments of the credit market. Our hypothesis is that different types of institutions, divergent in some fundamental vectors (private/public ownership, profit /non-profit oriented, different governance structures, etc.), originate different outcomes in the microcredit market. The Structure-Conduct-Performance paradigm, initially developed by Mason (1939), argues that market structure affects conduct, and this in turn determines the performance of firms and sectors. Market structure includes many aspects such as the number of firms, their dimension, competitive intensity, unionization rates in the industry, and types of organizations. In our paper we focus on the latter aspect and its influence on product characteristics (interest rates, diversification of offer, etc.) and on sector performance (risk, dimension, welfare impact, etc.).

Microfinance Institutions (MFIs) have distinctive characteristics from commercial banks, namely they aim to make a social impact and obtain a reasonable return/risk relationship; practice higher interest rates; have higher cost-to-income ratio due to the small size of loans; grant uncollateralised loans; sometimes use group lending; have a closer relationship with borrowers; combine credit with advisory services; and use step lending techniques where larger loans are granted after successful repayments (Kraemer-Eis & Conforti, 2009). Indeed, MFIs in general pay little attention to their profitability and operational costs are covered by the public subsidies and private charity funds on which institutions depend (Evers & Jung, 2007).

The main goals of these institutions is not profitability, but the inclusion of people at risk of poverty, job creation, and the development of microenterprises (five employees or less) and SMEs. This is achieved predominantly by financing start-ups and existing microenterprises. In descending order of importance, clients targeted are financially excluded individuals, women, unemployed persons, self-employed, and immigrants (Mark and Tilleben, 2007). Interestingly, women are underrepresented and are the recipients of only 38% of loans (2010/11 European Microfinance Network (EMN) survey).<sup>2</sup>

There is still limited availability of diverse microfinance products and it is mainly business or personal microcredit that are offer. Nevertheless, some MFIs offer other financial products: savings products (17% of institutions have this product), insurance (9%), current/checking accounts (6%), mortgages (4%), and money transfer services (2%) – 2010/11 EMN survey.

Microcredit in Europe is still a young sector in which two thirds of the institutions entered after 2000 (2010/11 EMN survey), but it has grown fast. According to data from the 2010/11 EMN survey , the number of loans between 2003 and 2011 increased 7.5 times (from 27,000 to 204,080), and the amount allocated multiplied by 5 (from 210 million euro to 1047 million euro). In other words, the average annual growth rate during that period in the number of loans was 28.7% and in the amount allocated was 22.2%. We can situate the sector in a start-up or consolidation phase. The majority of the actors are small, with 46% of the organisations not granting more than 100 credits per year (2010/11 EMN survey).

Savings and cooperative banks are the main traditional actors in microcredit in Europe (European Commission, 2003). However, the microcredit market currently has a variety of institutions, which differ in structure, goals, means and approach (Guichandut & Underwood, 2007). This variety is due to the diversity of regulatory environments in the sector (Underwood, 2006). While NGOs in some countries can grant credit, only banks and governments agencies can do

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<sup>2</sup> This is the regular survey on the European microcredit sector conducted by the European Microfinance Network, given in the bibliography as Bendig et al. (2012).

so in other countries like Spain, Germany and Finland. The UK is another example of specific regulation where NGOs have the legal status of Community Development Financial Institutions (CDFIs).

Given the diversity of actors, the focus on microcredit varies widely from organisation to organisation and it is not the main activity for many of them: for 34% of the key MFIs<sup>3</sup> microcredit represents less than 50% of their activity (2010/11 EMN survey). However, Bendig et al. (2012) identify an increase in the number of institutions working only with microcredit.

Evers & Jung (2007) identify four distinct business models in Europe. Firstly, NGOs with a microfinance driven approach that offer predominantly financial products and also business support services to increase the repayment rate.

Secondly, NGOs with a target group driven approach, for whom the main target groups are women, unemployed, ethnic minorities, migrants, and youth. This group of NGOs only provides financial services to certain clients to complement other social services (mainly related with employment) and business support.

Thirdly, supporting programmes in existing institutions (examples are ICO in Spain, OSEO in France, and Finnvera in Finland) and development banks. These institutions target or attract different clients to the traditional microcredit client. Some programmes grant loans directly (e.g. Finnvera), but others do it through bank partners. In the latter case, it is more difficult to reach non-bankable clients, which are not very attractive for banks.

Fourthly, the specialised units of banks granting microcredit are a recent development. For example in Spain, Caixas offer microcredit directly on their branches or in specialised units. In this model, it is essential to have cooperation with social partners that refer clients and help supply information for the credit process. Until now, units' operational costs have only been partially covered by the microcredit business.

Guichandut & Underwood (2007) add other two models performed by financial institutions. On the one hand, credit unions, namely in Poland and Romania and

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<sup>3</sup> A Key MFI is defined in the 2010/11 EMN survey as an institution that belongs to the EMN and/or received EU funding or technical support through JASMINE or EPMF.

to a lesser extent also in Ireland and the UK. They limit credit to union members and for purposes other than business start-up. On the other hand, some mainstream banks and financial institutions provide consumer loans that are used for business purposes. Additionally, some commercial banks play an important role as partners of microcredit providers that are unable to grant credit themselves.

The typical growth path is the one where MFIs start as NGOs financed by donations and/or public money, and then change to formal financial institutions (Kraemer-Eis & Conforti, 2009). Another three models of commercialisation are possible (Kraemer-Eis & Conforti, 2009): downscaling banks (existing commercial banks or financial institutions start in the microfinance business), “linkage banking” (cooperation between banks and MFIs), and “Greenfield” (creation of new formal financial institutions specialised in microfinance).

In sum, the main actors in the microfinance sector are NGOs, programmes in existing institutions and development banks, and financial institutions (mainly commercial banks, savings and cooperative banks, and credit unions).

The structure of the paper is as follows. Section 2 describes the main characteristics of the types of financial institutions and their supply of microfinance products. Section 3 groups institutional types in clusters in light of their key characteristics. Section 4 relates market characteristics and institutions' types using country level data. Section 5 uses a fuzzy cluster analysis to group national microcredit markets according to their most salient characteristics. Finally, Section 6 summarizes and draws overall conclusions.

## **2. Description of the types of financial institutions and their supply of products**

The empirical analysis in this paper is based on the documents “Overview of the Microcredit Sector in European Union” supported by the EMN. These documents only include the institutions that responded to the questionnaire, in 2010/11 154 responded out of the 376 contacted (using a non-random sampling

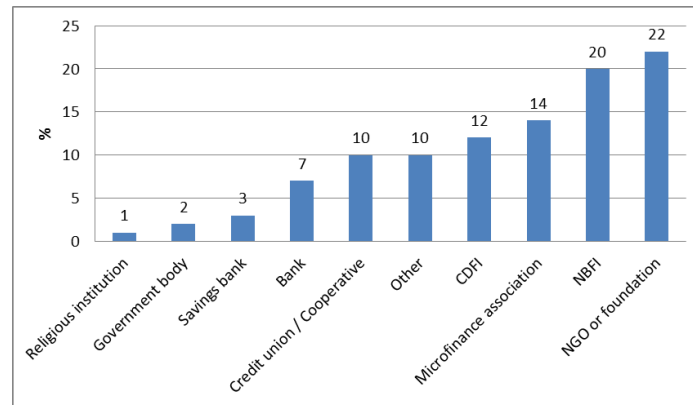




approach).<sup>4</sup> All “key” institutions (EMN members, JASMINE and EPMF supported or funded institutions, and all other key MFIs) in a country were contacted. The very small organisations providing less than ten loans a year are not captured by this survey.

Even though it is rare for the surveys to break down data by institution type, we are able to study the institution missions, loans granted, average institutions’ size, business models, average loan size, target groups’ outreach, offer of other financial products and services, recovery rates, and profit-orientation per country.

Graph 1 – Types of institution (share of the total number of institutions)<sup>5</sup>



Note: n=147. Source: EMN 2010/11 survey

The three most representative types of institution in terms of number of institutions are NGOs and foundations (22%), non-bank financial institutions – NBFIs - (20%) and microfinance associations (14%) - Graph 1. Only a small proportion of institutions are banks and savings banks: 7% and 3%, respectively.

<sup>4</sup> The various surveys do not allow us to obtain a representative evolution of the market because the institutions responding to each edition are different.

<sup>5</sup> Letter n is the number of institutions that responded to this question.



However, the most important institutions in terms of total number of loans and value of loans granted are banks, followed by microfinance associations and NGOs or foundations (Table 1). Banks are by far the institutions with the largest scale in terms of value and number of loans granted per institution, followed by savings banks and then microfinance associations.

In Western Europe NGOs and foundations (32.3%), NBFIs (21.7%) and microfinance associations (11.5%) are the most representative type of institution - Graph 2. In Central and Eastern Europe (CEE) NBFIs are the most representative type of institution (47.7%), but NGOs or foundations (15.4%) are less numerous than in Western Europe and microfinance associations do not exist at all. In contrast, credit union/cooperatives and banks (18.8% and 18.3%, respectively) are both more important in CEE than in Western Europe.

Analysing the distribution of the several types of institutions per country, we perceive that only NGOs or foundations and NBFIs are negatively and significantly correlated ( $-0.4467$ ,  $p\text{-value}=0.0253$ ). Interestingly, NGOs or foundations are negatively and significantly correlated with the proportion of profit-oriented institutions in a country ( $-0.5113$ ,  $p\text{-value}=0.0253$ ) and NBFIs are positively and significantly correlated with the proportion of profit-oriented institutions ( $0.5882$ ,  $p\text{-value}=0.0081$ ).

Turning now to some country salient characteristics, more than 50% of the respondent institutions in Bosnia and Herzegovina, Hungary, Ireland, the Netherlands, and Spain are NGOs or foundations (Table 14, in Annex). In Spain savings banks are the second most important type of institution, but notice that banks' foundations in Spain manage the funds that saving banks assign to social work. In France and Germany, microfinance associations are the most important institutions, representing 44% and 39% of the total number of institutions respectively. In Italy NGOs or foundations are the most numerous institutions (38%). The UK is an exception in the microcredit landscape with CDFIs representing 80% of the total number of institutions, because NGOs working in microfinance in the UK have CDFI status.

Table 1 – Loans by type of institution

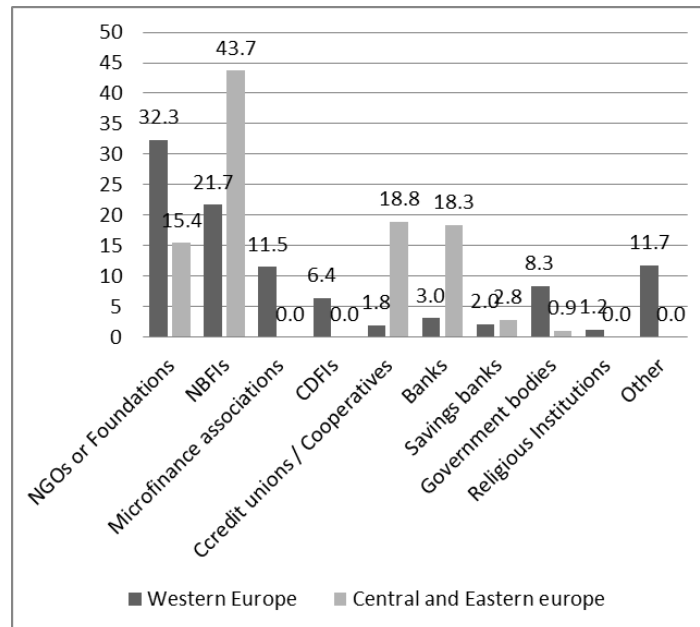
	Institutions that responded to the survey (1)	Value of loans (euros) (2)	Number of loans (3)	Value of loans per institution (euros) (2)/(1)	Number of loans per institution (3)/(1)
Bank	5	365,462,072	59,554	73,092,414	11,911
CDFI	12	10,038,417	2,691	836,535	224
Credit union /cooperative	11	21,444,517	8,417	1,949,502	765
Government body	2	4,464,795	382	2,232,398	191
Microfinance association	13	162,983,296	28,405	12,537,177	2,185
NGO or foundation	22	69,482,546	29,665	3,158,298	1,348
Non-bank financial institution	24	95,868	36	3,995	2
Religious institution	2	95,868	36	47,934	18
Savings bank	2	28,740,825	5,590	14,370,413	2,795
Other	11	136,907,573	9,433	12,446,143	858
Total	104	799,715,777	144,209		
Weighted average				7,689,575	1,387

Note: n=104, which corresponds to a response rate of 70% of the 147 institutions that responded to the whole survey. Source: EMN 2010/11 survey (Bendig et al, 2012)

Some institutions are specific to one or a small group of countries: religious institutions are only found in Italy, CDFIs are present only in the UK, and Government bodies only in Austria, Romania and Spain; savings banks are specific to France, Macedonia, and Spain.



Graph 2 – Institutional types in Western and Central and Eastern Europe (as % of the total number of institutions in each area)

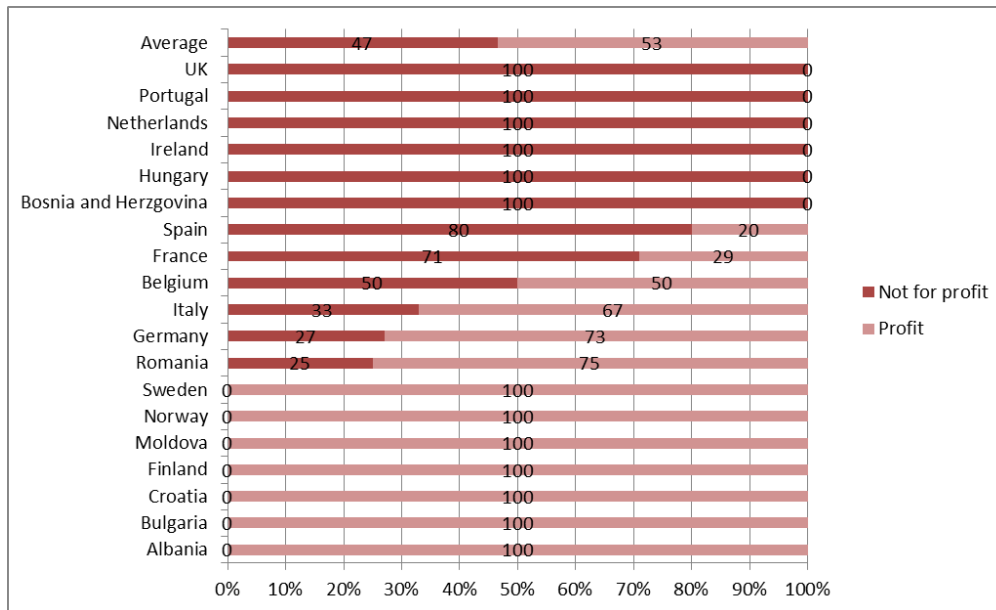


Note: n=147. Simple average computed based on country data. Source: EMN 2010/11 survey (Bendig et al, 2012)

The profit orientation of *key MFIs* also varies greatly across European markets. On average, 46.6% of institutions are non-profit. Looking at the largest countries, we observe that non-profit oriented institutions dominate in France, Spain and the UK, while profit oriented institutions are prevalent in Italy and Germany. In Eastern Europe, we have data on the largest microcredit markets of Bosnia-Herzegovina, Romania, and Albania but lack data on Poland, which is also a large market. In the three countries for which we have data, whereas profit-oriented institutions dominate in Albania (100%) and Romania (75%), Bosnia-Herzegovina has only non-for-profit organisations.



Graph 3 – Share of profit and non-profit institutions per country (Key MFIs only)



Note: n=69. Source: EMN 2010/11 survey (Bendig et al, 2012)

Using country-level data to compute the correlation between the share of profit-oriented institutions and the proportion of institutions of each institutional type, we observe that there is a significant and positive correlation between profit-oriented institutions and both NBFIs (0.5480) and CUs (0.4098), and a negative and significant correlation with NGOs or foundations (-0.4891). These results indicate that NBFIs and CUs tend to be more present in markets in which profit-oriented institutions are more representative; on the other hand, NGOs or foundations are more present where profit-oriented institutions are less important.

The three most chosen mission statements are job creation (72%), microenterprise promotion (51%) and social inclusion and poverty reduction (50%) - Table 2. With the exception of religious institutions, the most chosen mission statement across all institutional types includes either job creation or micro enterprise promotion. The most popular mission statement for religious institutions was social inclusion and poverty reduction. All saving banks have chosen both social inclusion and poverty reduction and job creation as mission

statements. Overall, social inclusion and poverty reduction is most frequently given as the mission of religious institutions and savings banks (100% of the institutions have this mission), followed by non-bank financial institutions (52%), CDFIs (50%), NGOs or foundations (43%) and credit union/cooperative (43%). Looking at the correlation between stated missions by institutional type, there is a negative correlation between the types of institutions that has promoting social inclusion/poverty reduction as its mission, and those promoting microenterprises and SMEs (Table 3). On the other hand, the types of institutions' whose mission is to promote SMEs also tend to include the promotion of microenterprises. Moreover, the types of institutions that have financial inclusion as their mission also tend to promote job creation.

Table 2 – Mission statements per institutional type

	Social inclusion and poverty reduction	Job creation	Microenterprise promotion	SME promotion	Financial inclusion	Women's empowerment
Bank	30	80	90	60	40	20
CDFI	50	94	94	56	88	50
Credit union /cooperative	43	64	64	57	29	57
Government body	33	67	100	33	33	33
Microfinance association	24	65	71	65	53	41
NGO or foundation	43	63	0	0	0	0
NBFI	52	74	81	41	48	59
Religious inst.	100	50	0	0	50	0
Savings bank	100	100	0	25	75	50
Other	21	64	50	71	21	14
Total average	50	72	51	41	44	33

Note: n=137. EMN 2010/11 survey (Bendig et al, 2012)

Table 3 – Correlation between mission statements per institutional type

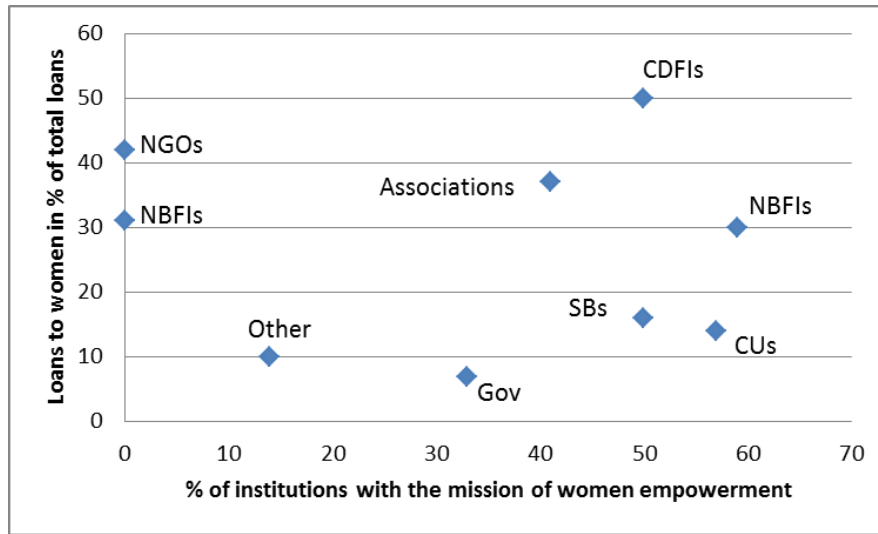
		Social inclusion and poverty reduction	Job creation	Microenterprise promotion	SME promotion	Financial inclusion	Women's empowerment
Job creation	Correlation	0.195	1				
	Sig.	0.59					
Microenterprise promotion	Correlation	-.658*	0.176	1			
	Sig.	0.039	0.626				
SME promotion	Correlation	-.667*	0.228	.705*	1		
	Sig.	0.035	0.527	0.023			
Financial inclusion	Correlation	0.454	.676*	0.181	0.172	1	
	Sig.	0.187	0.032	0.616	0.635		
Women's empowerment	Correlation	-0.015	0.555	0.486	0.466	0.546	1
	Sig.	0.968	0.096	0.155	0.175	0.103	

Note: Each correlation is computed using 10 observations, \* Correlation is significant at the 0.05 level (2-tailed).

The coherence between the declared mission and the actual actions undertaken by the institutional types is an interesting issue to study. We looked at two pairs of variables. Firstly, the share of institutions that declared women's empowerment to be their mission and the proportion of loans to women. Secondly, the percentage of institutions whose declared mission was social inclusion and poverty reduction and the share of loans to clients below poverty line. We expect a high correlation between the variables in each pair.



Graph 4 – Relation between mission and credit activity: the case of female clients

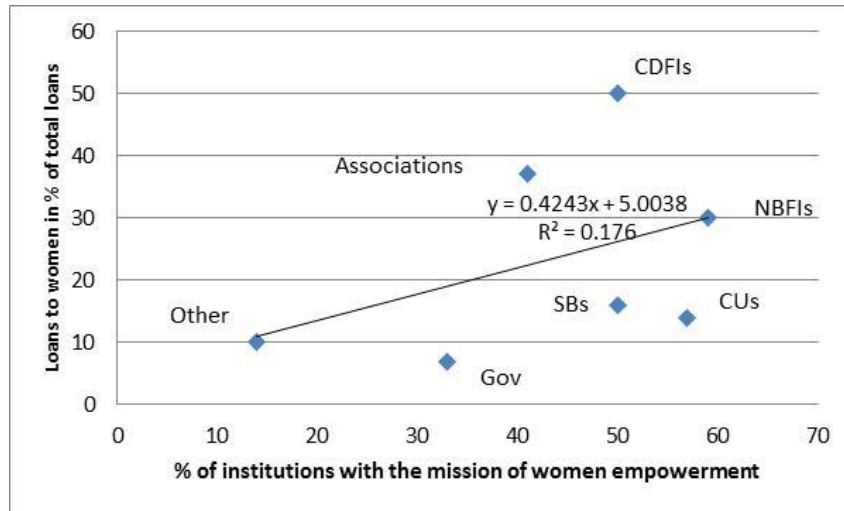


Note: SBs: savings banks, Gov: government bodies, NGOs: NGOs or foundations, Associations: microfinance associations. n=91 for the question on credit and n=137 for the question on missions. Source: EMN 2010/11 survey (Bendig et al, 2012)

Looking at the first pair, two salient cases are the NGOs or foundations and NBFIs that do not declare women’s empowerment as their mission, but grant a considerable share of loans to women (Graph 4). We then remove these two cases, and draw a regression line between the share of institutions that declared women’s empowerment as their mission and the proportion of loans to women (Graph 5). There is considerable discrepancy between mission and practice in the institutions below this line, namely: Credit Unions, Saving banks and Government bodies.



Graph 5 – Relation between mission and credit activity: the case of female clients



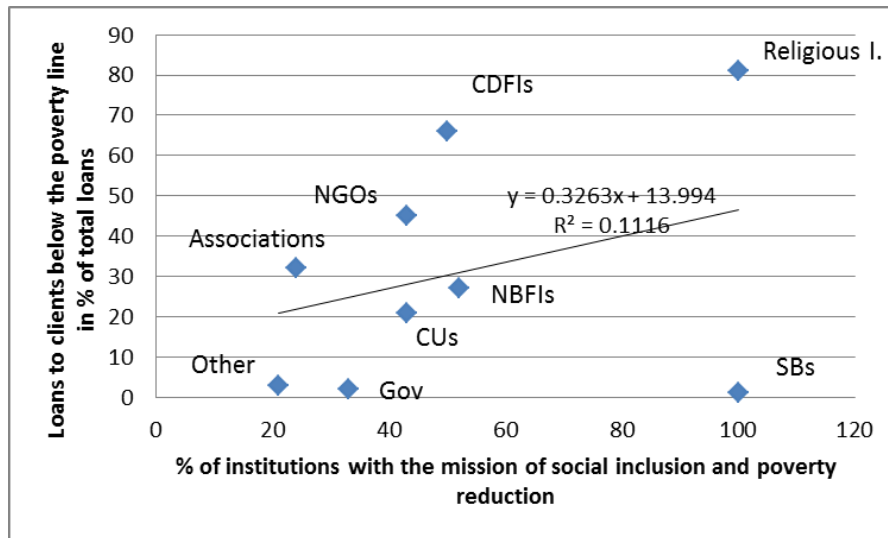
Note: SBs: savings banks, Gov: government bodies, and Associations: microfinance associations. n=91 for the question on credit and n=137 for the question on missions. Source of data: EMN 2010/11 survey (Bendig et al, 2012)

Similarly, when we analyse the proportion of institutions with a mission of social inclusion and poverty reduction and the share of loans to clients below the poverty line, we observe that the types of institutions below the regression line are NBFIs, Credit Unions, and especially Saving Banks and Government bodies (Table 6).

We have just noted the distinction between the lending activities of institutions with different missions. Lenders can be divided in two types: microenterprise lenders and social inclusion lenders (Bendig et al, 2012). The first model targets “nearly-bankable” clients that usually need funds to finance microbusinesses. The latter focuses on “non-bankable” clients, i.e. the lower segment of the microcredit market. In general, these clients use credit as a way of transiting from un- to self-employment, and they need intensive business advisory services. Bendig et al (2012) divide MFIs in these two models using the average loan size divided by the Gross National Income (GNI): the larger the relative size of the loan, the closer the institution is to being a microenterprise lender.



Graph 6 – Relation between mission and credit activity: the case of poor clients

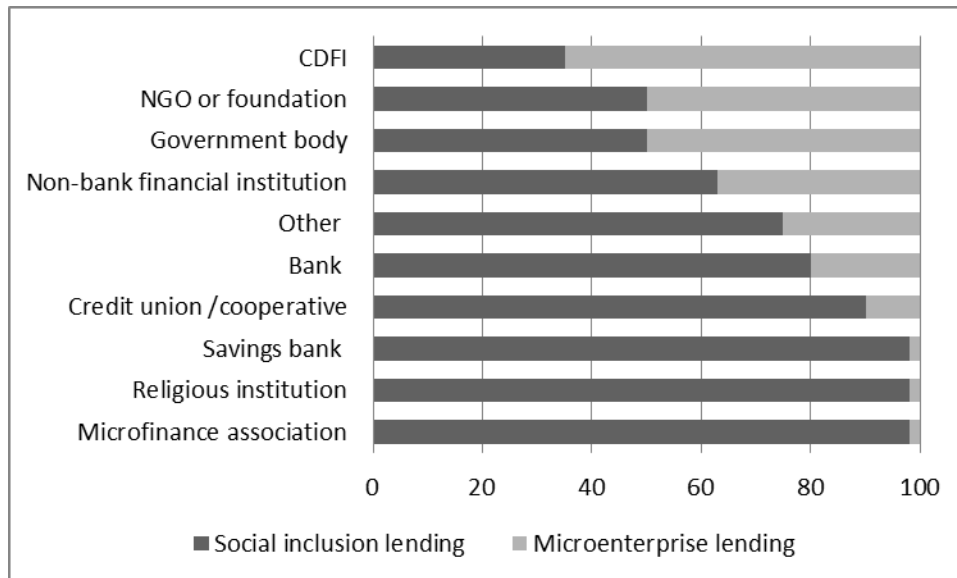


Note: SBs: savings banks, Gov: government bodies, NGOs: NGOs or foundations, Associations: microfinance associations. n=62 for the question on credit and n=137 for the question on missions. Source of data: EMN 2010/11 survey (Bendig et al, 2012)

Institutions dedicated to social inclusion loans are preponderant in the large majority of institutional groups. This type of lending is more prevalent in microfinance associations (100%), savings banks (100%), credit unions (90%), and banks (80%) - Graph 7. The large proportion of banks that use the social inclusion lending model is quite surprising. It is only in the CDFI group that the majority of institutions (65%) use microenterprise lending. This probably occurs because these institutions sometimes offer loans over the 25,000 euro threshold. The number of government bodies and NGOs or foundations dedicated to microenterprise lending or to social inclusion lending is similar (50% share for each model). Since NGOs or foundations, CDFIs and Government bodies are more oriented to job creation and enterprise promotion, we suggest that institutions with these types of missions are lending larger amounts (a similar reasoning is defended by Jayo et al. (2010)). This is confirmed by the average loan size by mission statement in Graph 8.



Graph 7 – Share of lending model across institutions' type

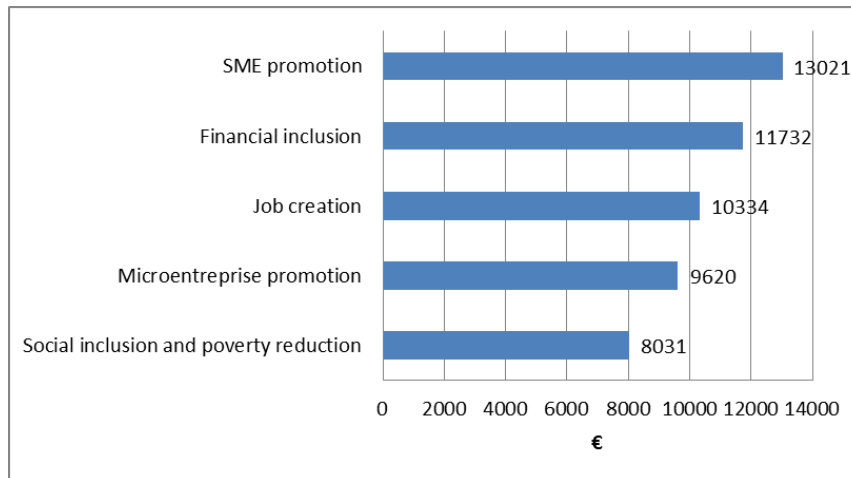


Note: n=105. Source: EMN 2010/11 survey (Bendig et al, 2012)

Clients outreach per lending model is surprising. MFIs with a microenterprise lending model have more clients below the poverty line than MFIs with a social inclusion model, 27% and 22% respectively. MFIs with a social inclusion model compared with MFIs with a microenterprise model have more credit to start-up enterprises (51% and 36%, respectively) and to women (56% and 39%, respectively). This data seems to suggest that the division between the microenterprise and the social inclusion models is more related with the loan size than to the targeted clients. In other words, the divide between the two models is more closely associated with the separation between near-bankable and non-bankable clients.



Graph 8 – Average loan size per mission statement

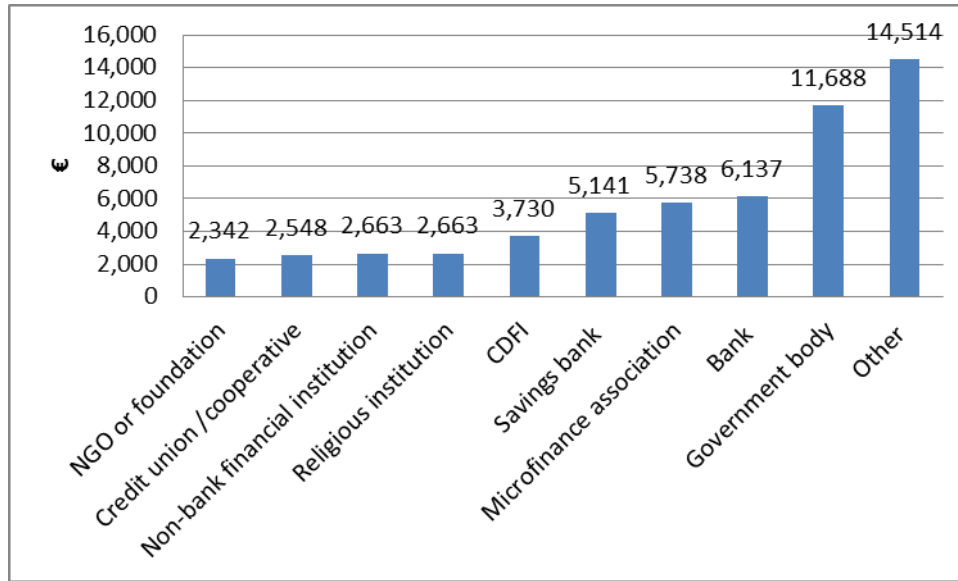


Source: EMN 2008/09 survey (Jayo et al, 2010)

Among the largest MFIs in terms of loans granted for business purposes, eight out of ten focus on social inclusion lending (Bendig et al, 2012). Three of these eight for profit and three for non-profit (two did not provided information on this item), and five dedicated between 75% and 100% of their activity to micro-lending. Moreover, there are two prototypes of MFIs that achieved a large dimension, which we describe next (Bendig et al, 2012). Firstly, banks (including promotional banks) with profit-oriented micro-credit programmes with more than 75% of their activity dedicated to financial services. Secondly, non - profit oriented NBFIs or microfinance associations that dedicate more than 75% of their activity to microcredit. In conclusion, profit-orientation does not seem to be important for MFIs to reach a large dimension, while a high degree of specialisation in micro-lending seems to play a role.



Graph 9 – Average loan size per institutional type



Note: n=104. Source: EMN 2010/11 survey (Bendig et al, 2012)

Turning now to the loan size without correcting for the GNI per capita, we observe that the average size of loans from Government bodies is very large at 11,688 euros. Banks, microfinance associations and savings banks display an average sized loan of between 5,100 and 6,100 euros. CDFIs have a slightly lower average of 3,730 euros. Finally, the average size of loans from Religious institutions, NBFIs, CUs, and NGOs or foundations is very small: between 2,300 and 2,700 euros. Yet again, this indicates that institutions with mission statements of social inclusion and poverty reduction have a lower average loan size than institutions with missions targeting the promotion of microenterprises and SMEs and job creation.

Table 4 – Share of target groups from total number of loans by institutional types (2011)

	Proportion of loans granted to		
	Women	Clients below poverty line	Ethnic minorities/immigrants
Bank	n.a.	n.a.	8
CDFI	50	66	2
Credit union /cooperative	14	21	1
Government body	7	2	6
Microfinance association	37	32	8
NGO or foundation	42	45	6
Non-bank fin. institution	30	27	9
Religious institution	31	81	33
Savings bank	16	1	20
Other	10	3	4
Weighted average	27	29	10

Note: n=91 (women), n=62 (clients below poverty line), n= 73 (ethnic minorities/immigrants). Source: EMN 2010/11 survey (Bendig et al, 2012)

One way of assessing the social impact of MFIs is by looking at the outreach to target groups. CDFIs, NGOs or foundations and microfinance associations are most focused on lending to women with 50%, 42% and 37% of their lending to this group, respectively (Table 4). As for credit to clients below poverty line, the institutions with the largest share of loans granted to this group are religious institutions (81%), CDFIs (66%), NGOs and foundations (45%), and microfinance associations (32%). On the other hand, the institutions granting more credit to ethnic minorities or immigrants are religious institutions (33%) and savings banks (20%). The clients targeted per type of institution vary greatly, indicating microcredit reaches a number of vulnerable segments of the population more easily if there are several types of institutions contributes.

In 2009, 48% of the MFIs offered other financial services, and the remaining 52% did not offer other services. This indicates a significant specialisation of institutions (Bendig et al, 2012). In 2011 the proportion of institutions not offering any other service went down to 47%. The three services offered most in 2012 were: personal microloans with 34% of the institutions offering the

product, debt counselling (18%) and saving products (17%) – 12<sup>th</sup> column in Table 5.

Debt counselling is supplied pre-dominantly by NGOs or foundations, with a small presence of banks and saving banks (Table 5). The two latter institutions should engage more in debt counselling to achieve a better repayment rate and a greater social impact.

Table 5 – Offer of other financial services per institutional type

	Share of the institution in the offer of the service (2009) - %									Herfindahl I. (2009)	Share of the service (2011) - %
	CDFI	CU	Gov B.	NGO	NBFI	Bank	Savings B.	Other	Total		
Debt counselling	0	15	2	44	8	2	5	23	100	0.28	18
Mortgages	0	29	0	0	0	15	42	14	100	0.30	4
Money transfer services	0	0	16	0	0	34	50	0	100	0.39	2
Insurance	0	8	0	25	26	0	41	0	100	0.31	9
Savings products	0	19	0	20	0	21	40	0	100	0.28	17
Personal microloans	16	21	0	18	16	8	11	11	100	0.16	34

Note: The last column has the proportion of institutions that stated they had offered the respective service. The sum is not 100% because 47% of the institutions declared that they do not offer any other service. Source of the data: EMN 2008/09 and 2010/11 surveys (Jayo et al, 2010, and Bendig et al, 2012, respectively).

Mortgages are granted mainly by savings banks, banks and credit unions. This product is offered largely by banking institutions because it requires access to long term financing sources. Money transfer services are also dominated by savings banks and banks. Meanwhile, insurance is mainly offered by savings banks, non-bank financial institutions, and NGOs or foundations. Saving products are offered by banks, saving banks, credit unions and NGOs or foundations. Non-bank financial institutions are not represented because they cannot receive deposits. Finally, the offer of personal microcredit loans is spread almost equally across the different types of institution.

Calculating the Herfindahl index across institutional types<sup>6</sup>, we observe that the lowest concentration (0.16) is in the supply of personal microloans, which is also the product offered by most microfinance providers – 11<sup>th</sup> column of Table 5. Debt counselling and savings products are also frequently offered, but have a larger concentration level (0.28) than personal microloans, which however is still smaller than for the remaining products. The most sophisticated products present larger concentration. The largest is observed in money transfer services (0.39), followed by insurances (0.31) and mortgages (0.30).

Table 6 –Indicators of the offer of other financial services per institutional type

	Institutional type							
	CDFI	CU	Gov B.	NGO	NBFI	Bank	Savings B.	Other
Num. of services offered	1	5	2	4	4	5	6	3
Average share in the 6 services (%)	5.1	17.3	5.4	21.1	12.8	17.9	39.0	10.1
Coeff. of variation	1.60	0.65	1.47	0.63	0.94	0.74	0.49	0.84
Corr. share of each instit. and share of all providers	0.83	0.36	-0.48	0.49	0.34	-0.44	-0.79	0.29

Note: the indicators were calculated with the data from Table 5.

The simple exercise of counting the number of other products offered allows us to conclude that savings banks offer all the six products and banks and credit unions offer five –Table 6. A significant proportion of the offer of mortgages (42%), money transfer services (50%), saving products (40%) and insurance

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<sup>6</sup> The index changes between the lowest level of concentration of 1/8 and the highest level of concentration of 1.



(67%) come from savings banks. In Spain, savings banks and their foundations offer several other financial products together with microloans. On the other hand, the institutions offering fewer products are CDFIs (only one) and Government bodies (two products). However, Government bodies offer a considerable proportion of money transfer services, which are offered by only a few types of institutions.

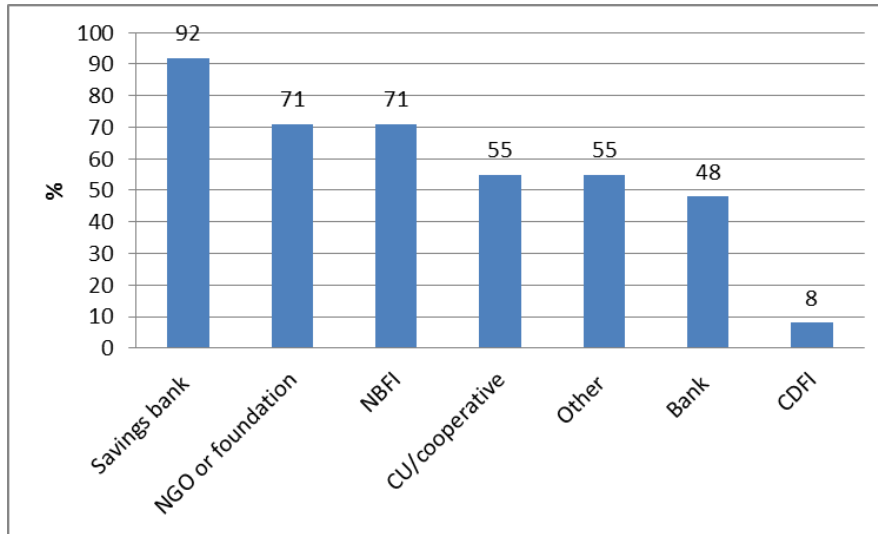
Another indicator characterising the offer of an institutional type is its average share on the six products (Table 6). This indicator confirms that savings banks, credit unions and NBFIs have a prominent position, but puts NGOs in second place in the offer of other services. Government bodies and CDFIs maintain the lowest position.

One institution may be concentrated on the offer of some products, neglecting the offer of others. The balance of the offer of services by each institution's type can be assessed by the coefficient of variation of its share on the six products. The institutions with the most balanced offer of other services are savings banks followed by NGOs and credit unions (Table 6). As expected, the less balanced offer is done by CDFIs and Government bodies.

It is interesting to assess which institution types provide the most and the least widespread services. We therefore computed the correlation between each institution type's share in the offer of the service and the proportion of microfinance providers that declared they offered this service (Table 6). If an institution offers a wide range of services that are frequently offered, the correlation is high. We observe that savings banks, banks and Government institutions offer the least widespread products due to their concentration in money market services, mortgages and insurance. CDFIs, NGOs and CUs have the closest alignment with the most widespread products. This analysis shows the importance of the diversity of institutions so as to ensure the supply of a wide range of products.



Graph 10 – Recovery rate per institutional type (2009)



Source: EMN 2008/09 survey (Jayo et al, 2010)

Finally, saving banks have the highest recovery rate (92%), followed by NGOs or foundations and non-bank financial institutions (both with 71%) - Graph 10.<sup>7</sup> On the other hand, CDFIs have the lowest recovery rate (8%).

In conclusion, it is important to have a diversity of institutional forms so as to guarantee that different vulnerable groups are covered and a range of other services are offered. Table 7 shows the most salient institutions with regards several characteristics. Three institutions stand out for their prominent role in the market: NGOs, saving banks and microfinance associations (Table 8).

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<sup>7</sup> Recovery rate: [(value collected) / (value due for the first time under the contract terms)]\*100.

Table 7 – The institutions that stand out for several characteristics

Characteristics	Institutions
Most numerous institutions	NGOs, NBFIs, Associations
Institutions granting larger number of loans	Banks, Associations, Savings banks
Institutions that individually have larger operations of microcredit	Banks, Associations, Savings banks
Most numerous institutions by geographical area Western Europe: Central and Eastern Europe:	NGOs, NBFIs, Associations NBFIs, CUs, Banks
Mission Institutions most focused on the mission of social inclusion: Larger disparity between mission and activity:	Savings B., Religious Inst., NBFIs CUs, Savings B., Gov. Bodies
Lending model: institutions most focused on each type of clients Non-bankable: Near bankable:	Associations, Savings B., CUs. CDFIs, Gov. Body, NGOs
Target groups: institutions dedicated most to  Women: Below poverty line: Ethnic minorities and immigrants:	CDFIs, NGOs, Associations  Religious Inst., CDFIs, NGOs Religious Inst., Savings B.
Other services Institutions offering more and the most balanced range of services: Institutions offering the products least offered in the market:	Savings B., NGOs, CUs. Saving B., Banks, and Gov. Bodies.
Recovery rate: institutions with large recovery rates	Savings B., NGOs, and NBFIs.

Note: Associations stands for Microfinance associations.

Table 8 – Main characteristics of the key institutions

Institution	Main characteristics
NGOs	<p>Institutions that grant most loans</p> <p>Good number of loans to women and poor clients</p> <p>Broad and balanced offer of other services</p> <p>Good recovery rate</p>
Savings banks	<p>Large size of each microfinance provider</p> <p>Mission of social inclusion</p> <p>Large number of to non-bankable clients</p> <p>Good amount of loans to ethnic minorities and immigrants</p> <p>Large and balanced offer of other services</p> <p>Good recovery rate</p>
Microfinance associations	<p>Institutions that grant most loans</p> <p>Large size of each microfinance provider</p> <p>Good service to non-bankable clients</p> <p>Good amount of loans to women.</p>

### 3. Grouping institutions' types using cluster analysis

MFIs differ in many ways, and we are interested in knowing which institutions resemble more each other. We therefore performed a cluster analysis with some selected characteristics of the institutions. Since our unit of observation are the types of institutions (which are only ten), we had to choose only three characteristics, namely: average size of institution (number of loans granted per institution), share of institutions with the social inclusion model (*i.e.* that serve non-bankable clients), and proportion of total credit to ethnic minorities and immigrants. The latter variable is also related with the institutions' missions: it is positively and significantly correlated with the proportion of institutions whose mission is social inclusion/poverty reduction (0.831), but negatively and significantly correlated with the proportion of institutions that have microenterprise promotion as mission (-0.637) and the proportion of institutions with the mission of SMEs promotion (-0.637). The proportion of credit granted for social inclusion is assessed using the proxy calculated by Bendig et al. (2012), which weighs the size of loans granted relative to the country's GNI per capita.



We use hierarchical clustering due to the continuous nature of the variables. Variables are standardised since they are measured in different scales and we used the Euclidean distance and the furthest neighbour method to agglomerate institutions in clusters. The number of clusters was chosen in such a way that the next iteration (which would reduce the number of clusters in one) originated a considerable increase in the coefficient measuring the distance between the elements of the cluster.

Results point to their being four clusters (Table 15). Cluster One includes religious institutions and savings banks, Cluster Two is composed of CUs/cooperatives, microfinance associations, and others institutions, Cluster Three includes Government bodies, NGOs or foundations, NBFIs and CDFIs, and finally Cluster Four comprises only banks.

Cluster One almost exclusively serves non-bankable clients and 100% of the institutions have social inclusion and poverty reduction as their mission (Table 9). The size of the two institutions types that compose the cluster are very different; whereas savings banks are the second largest type of institution, religious institutions are among the smallest.

Cluster Two also serves mainly non-bankable clients (87.6%), but to a lesser extent than Cluster One. The proportion of institutions with the mission of social inclusion and reducing poverty is only 29.3%, and the size of institutions is near the average. Cluster Four is quite similar to Cluster Two except that each bank grants a very large number of loans. Finally, although Cluster Three has a larger share of institutions with the mission of social inclusion and reducing poverty than Clusters Two and Four, it has a smaller proportion of non-bankable clients (49.50%). The average size of institutions is the smallest of the four clusters.

Table 9 - Cluster composition and characteristics

Cluster	Institutions types	Average number of loans per inst.	Average % of inst. with mission social inclusion	Average % of inst. with social inclusion lending model
1	Religious I.; Savings banks	1406.5	100%	98.00%
2	CUs, Associations, Other	1269.3	29.33%	87.67%
3	CDFIs, NBFIs, Gov. Bodies; NGOs or Found.	441.2	44.5%	49.50%
4	Banks	11911.0	30%	80.00%

#### 4. Relationship between market characteristics and types of institutions: A country level analysis

In this point we make a country level analysis of the correlation between some key market characteristics and the types of institution present in the market. The latter is assessed by the share (in terms of number of institutions) of each institutional type in the country. Additionally, we study whether the proportion of profit oriented institutions has any effect on market outcomes. Another important goal of this analysis is to determine whether the level of country's development (measured by GDP per capita) and its financial development has any effect on the microcredit market. The market characteristics assessed are the number of loans, number of loans for personal and business purposes, interest rate, loans size, term of loans, loans to non-bankable, loans to target groups, proportion of clients graduating to mainstream finance, credit risk of institutions, specialisation of institutions, and offer of other financial products.

We start by making the simple correlation between market characteristics and the proportion of each institution type in the market (all significant correlations are presented in Table 16). When we find a statistically significant correlation, we deepen the analysis by regressing the market characteristic on the institution type controlling for the country level of development (measured using GDP per capita) and the financial sector development (assessed by the credit-

to-GDP ratio).<sup>8</sup> The GDP per capita is in PPP (constant 2011 international dollar), and the credit-to-GDP ratio is the credit granted by the financial sector to the private sector divided by the nominal GDP – the regressions can be seen in Table 17. These variables and the active population were obtained from World Development Indicators (WDI) Database of World Bank. The three-month interbank rate is used to explain the microcredit interest rate and was retrieved from Eurostat, with the exception of Norway where it was obtained from OECD. The interbank rate was not available for Albania, Bosnia, Macedonia, Moldova and Serbia so we used the deposits rate from WDI.<sup>9</sup>

Institution types are not significantly correlated with the size of the market in terms of loans and loans per capita (including business and personal loans).<sup>10</sup> Moreover, the latter variable is not correlated with the financial sector development, but is negatively correlated with GDP per capita.<sup>11</sup> Regression analysis shows that a 1% increase in GDP per capita reduces loans per capita by 1.6%. This is explained by the fact that there is a greater demand for microcredit in less developed countries due to widespread poverty.

Likewise, institutional types are not correlated with the *value* of loans to GDP<sup>12</sup>, but GDP per capita has a negative effect on that variable, with an estimated elasticity of -3.36%. The effect is greater than for the number of loans.

As regards personal loans only, savings banks are positively correlated with the number of personal loans per capita. This effect is still valid when we control for GDP per capita and domestic credit to GDP. An increase of 1 p.p. in the

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<sup>8</sup> We delete variables sequentially when they are not statistically significant, starting with the one with highest p-value.

<sup>9</sup> We excluded Sweden from the analysis because only one microcredit was reported in 2011.

<sup>10</sup> In order to obtain the per capita values for all loans' variables we used the active population as this is the universe that can use microcredit.

<sup>11</sup> Given the small number of observations, we say a coefficient is statistically significant when it is different from zero at a 10% significance level.

<sup>12</sup> GDP in current US dollars was obtained from WDI. Then, the GDP was converted to euros using the euro/dollar exchange rate (annual average) from Eurostat. The value of microcredit loans was obtained from the EMN survey in euros for all countries.

importance of savings banks increases personal loans per capita by 9.2%. In addition, the country's level of development is negatively affected by personal loans per capita: a 1% increase in GDP per capita reduces personal loans by 3.56%. The latter effect is more negative than for the total number of loans.

Credit unions and religious institutions are associated with markets with a smaller proportion of business loans. This correlation is robust to the introduction of GDP per capita and domestic credit to GDP as control variables. A 1 p.p. increase in credit unions reduces the share of business loans in total loans by 0.33 p.p., and an increase of 1 p.p. in religious institutions reduces the share of business loans by 2.9 p.p. We expect business loans to be granted by institutions with a mission promoting enterprises. As a result, we expected religious institutions to have a negative impact on the proportion of business loans, as they are very directed towards social inclusion. However, the negative impact of credit unions on the proportion of business loans is more surprising as social inclusion if not their strong.

NBFIs are positively correlated with the average market interest rate, but this effect disappears when we control for the interbank interest rate, GDP per capita and domestic credit. Interest rate is only affected positively by the interbank money market (IMM) interest rate.

As for the loan size as a proportion of GNI, we observe that it is positively correlated with NBFIs. The regression with control variables confirms the effect of the institutional variable: a 1 p.p. increase in the proportion of NBFIs implies the loan size increasing by 0.004 of the GNI (this corresponds to 0.87% of the average loan size).

In contrast, loan term is negatively correlated with the proportion of NBFIs and positively correlated with the proportion of government bodies. This result is robust to the control of the income per capita and the development of the financial sector. However, the effects are relatively small: a 1 p.p. increase in the proportion of government bodies increases the average term by 0.21 months. A 1 p.p. increase in NBFIs reduces the average term by 0.11 months. Government bodies target microenterprises and SMEs lending, which usually have a longer term.



Turning now to the social service of microfinance institutions, NGOs or foundations have a negative correlation with the share of loans to non-bankable clients, and this relationship is robust to the introduction of the control variables. A 1 p.p. increase in NGOs or foundations is associated with a 0.3 p.p. decrease in the proportion of loans to non-bankable clients. This evidence confirms the data from Graph 7, where we see that NGOs or foundations have the second largest proportion of institutions dedicated to microenterprise lending, which is focused on near-bankable clients.

Next, we studied the correlation between institution types and credit to target groups. Firstly, the proportion of CDFIs and the proportion of loans to people below the poverty line have a positive and significant correlation. The regression analysis indicates that an increase of 1 p.p. in the presence of CDFIs in the market increases loans to the poor by 0.75 p.p. This is in line with the analysis made in Section 2 where we saw that CDFIs granted a large proportion of loans to poor clients. The GDP per capita does not affect the proportion of loans to poor clients.

Secondly, the proportion of loans to women is not significantly correlated with any institutional type or GDP per capita. Loans to minorities and immigrants are only positively correlated with NBFIs and credit unions. With a multivariate regression, only credit unions have a positive effect on credit to minorities and immigrants. This result is surprising given that credit unions grant a small proportion of loans to this group of clients (Table 4), so it is probably driven by some factor that we are not controlling for.

NBFIs have a negative correlation with the proportion of clients graduating to mainstream finance, while savings banks and banks have a positive correlation. After controlling for GDP per capita and the level of development, only savings banks and banks maintain the positive effect on the graduation of clients to mainstream finance. This indicates that savings banks and banks operating in both mainstream finance and microcredit probably integrate easily microcredit clients in conventional finance.

On analysing whether credit risk indicators differ across institution types, we find that although NBFIs have less credit risk, this relation does not stand after



introducing the control variables. Result shows that domestic credit to GDP is the only determinant of credit risk, and with a positive impact. In more developed financial systems, MFIs are probably left with the riskiest clients, which translate into more credit risk on the balance sheets.

Microfinance associations are positively correlated with the proportion of institutions that are between 75% to 100% dedicated to microcredit.<sup>13</sup> This effect disappears after introducing the control variables. On the other hand, the regression indicates that the level of dedication to microcredit is smaller in more developed economies.

Many MFIs complement microcredit by offering other financial products. The proportion of institutions that *do not* offer any other product only correlates negatively with the proportion of savings banks. This result is confirmed by the regression analysis, which also indicates that GDP per capita and financial sector development do not affect the proportion of institutions not offering other products. The negative effect of savings banks in the dependent variable is in line with the analysis of Section 2 where we saw that savings banks have a large and balanced offer of other services.

It is an interesting to determine whether the diversity of institutions effects the microcredit market. We therefore computed the Herfindahl index in each country using the institution types as the unit of observation. If the Herfindahl index is 1, then one institution type controls all the market, but if it is 1/10 each institution type has an equal *number* of institutions. The computed Herfindahl index was correlated with all the variables that describe the national markets, and a significant and positive correlation was identified only with the number of loans granted. The correlation with loans per capita is negative but not statistically significant. However, the effect on loans per capita is significant after introducing the control variables. An increase of 0.01 in the Herfindahl index implies a 2.26% decrease in loans per capita. This seems to contradict

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<sup>13</sup> Other main activities include business incubator, traditional banking, financial education programmes, entrepreneurship training, BDS, and other.



the opinion of some (eg Bendig et al, 2012) that institutional diversity limits the development of the microfinance sector in Europe.

In addition to the institutional type, the profit orientation of institutions is another important variable. Therefore, we correlated the proportion of profit-oriented institutions in a market with all the variables that characterise a national market. The only significant correlation found was with credit risk (PAR 30). But this relationship becomes non-significant after introducing the control variables. Interestingly, the correlation between the proportion of profit-oriented institutions and that of credit to poor clients is -0.4720 and is almost significant at 10% (p-value of 0.1035). However, in a multivariate regression with CDFIs (which proved also to affect loans to poor clients), profit-orientation continues to be statistically insignificant, now with a larger p-value (0.345).

In conclusion, the characteristics of microcredit markets are affected by GDP per capita, the financial development of the country (assessed by domestic credit and interest rates) and the institutions' types (Table 10). On this latter aspect, institutional diversity leads to an increase in microcredit loans per capita. Moreover, some specific institutions have an effect on the composition of the market in terms of personal and business loans, loans term, loan size, credit to non-bankable clients and to the poor, graduation of clients to mainstream finance, and the offer of other financial products.

Table 10 - Summary of the statistically significant determinants of market characteristics

Dependent Variable	Main determinants (sign of the effect on dependent variable in brackets)
Loans per capita	GDP per capita (-); Herfindahl I. (-)
Personal loans per capita	GDP per capita (-); Savings Banks (+)
Loans to GDP	GDP per capita (-)
Share of business loans	CUs (-); Religious I. (-)
Interest rate	IMM rate(+)
Loan term	NBFIs(-); Gov. bodies (+)
Loan size	NBFIs(+)
Loans to non-bankable clients	NGOs(-)
Loans to poor clients	CDFIs(+)
Clients graduating to mainstream finance	Banks(+), savings banks(+)
Credit Risk	Domestic credit to GDP (+)
Specialisation in microcredit	GDP per capita (-)
No offer of other financial services	Savings banks(-)

## 5. Identifying clusters of countries

The aim of this section is to identify clusters of countries in terms of the microcredit market. We want to group countries by looking at more than one characteristic of the market, but given the limited number of countries, we choose only three variables to describe the market: number of loans per capita, interest rate, and average loan size to GNI. The first variable indicates the size of the microcredit market, the interest rate characterises the financial conditions offered to clients, and the loan size describes the types of clients microcredit suppliers prefer to serve. We have 16 countries with these variables to conduct the cluster analysis, i.e. the sample size is N=16. We stress that the results achieved must be viewed with caution due to small sample size.

We use a fuzzy cluster analysis to identify clusters because we do not expect countries to necessarily belong to a single cluster but rather to share characteristics of several clusters (Hwang, DeSarbo, & Takane, 2007). This technique allows a more detailed description of the microcredit market and does

not forces any hybrid market to belong to a cluster as in the traditional cluster analysis.

The output of a fuzzy cluster analysis is a decomposition of the dataset into  $c$  fuzzy clusters (or typologies), where each country is represented by a unit sum vector of  $c$  non-negative coordinates. Explicitly, the country  $k$  would be represented in the  $c$ -fuzzy partition by the vector of membership degrees,

$$\mathbf{g}_k = (g_{1k}, g_{2k}, \dots, g_{ck}), k = 1, 2, \dots, N \quad (\text{eq.1})$$

The generic coordinate  $g_{ik}$  of (eq. 1) is the membership degree of country  $k$  in fuzzy cluster (or typology)  $c$ . This coordinate vector belongs to the unit simplex  $\mathcal{S}_c$ , where

$$\mathcal{S}_c = \left\{ \mathbf{g}_k = (g_{1k}, g_{2k}, \dots, g_{ck}) : \mu_{ik} \geq 0 \text{ and } \sum_{i=1}^c g_{ik} = 1 \right\} \quad (\text{eq. 2})$$

Partial membership of a country in a typology is a number between zero and one that indicates how close or far the country is from that typology. A Zero membership means no membership at all, whereas full membership in a cluster is represented by 1. Vectors  $\mathbf{g}_k$  with one coordinate equal to one and all the remaining equal to zero are called prototypes. The particular combination of indicators that occurs in prototypes should be used to label a typology.

In order to partition the sample of countries, we used the Bezdek (1981)'s fuzzy  $c$ -means algorithm of over 3 variables. The optimal cluster solution for the data matrix was obtained through an exhaustive search by varying the number of clusters  $c$  from 2 to 5.<sup>14</sup> The latter is the *smallest integer higher than  $\sqrt{N}$*  which is often considered an upper bound for the number of clusters is the data. For cluster validation purposes, we used the Xie & Beni (1991) index, which pointed to  $c = 4$  as the optimal number of clusters.

Since in practice it is difficult to have a membership of exactly one to a typology (Table 18), we have to choose a limit above which there is membership to a typology. Our choice was 0.8 and the countries belonging to each typology are

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<sup>14</sup> The calculations were carried out in a MATLAB environment. The termination criterion was fixed to  $\varepsilon = 10^{-3}$  and the maximum number of iterations to 1000.

listed in Table 11. Seven countries do not belong to any of these typologies, which indicates the existence of fuzziness in line with our prior assumption and corroborates the adequacy of the methodology. Essentially, we have two typologies for Western Europe (Group One and Three), one for Eastern Europe (Group Four), and one mixed (Group Two).<sup>15</sup> Groups One and Three have larger GDP per capita than groups Two and Four.

Group 1 is composed of only Spain; it is characterised by the largest market size, an average interest rate, and by institutions that target mainly non-bankable clients (because the average loan size is small). Typology Two has the highest average interest rate, the market size is small and has the strongest focus on non-bankable clients. Group Three is characterised by the lowest market size, a high offer of products to near-bankable clients, and a low interest rate. Finally, Typology Four includes only Lithuania and is characterised by the strongest focus on near or even bankable clients, the lowest interest rate, and an average market size.

Table 11 – Typologies and their characteristics

	Typology One	Typology Two	Typology Three	Typology Four
Countries	Spain	Bulgaria, UK	Austria, Belgium, Germany, Latvia	Lithuania
Interest rate (%)	7.0	14.5	6.25	6.0
Loans per capita	1.14	0.18	0.11	0.49
Loan size to GNI	0.26	0.20	0.48	1.34
Profit oriented institutions (%)	20	50	61.5	-
Herfindahl	0.32	0.60	0.69	1.00
GDP per capita (\$ PPP)	31,732	25,162	35,919	22,411

<sup>15</sup> In Group 3 Latvia is the exception among Western European countries.

The hybrid markets share characteristics of the four typologies. However, we will only highlight each country's membership to the two clusters with which it shares most characteristics. Firstly, we have two large Eastern European markets between Typologies One and Two. Poland is close to Typology One ( $g_1=0.54$ ) owing to the large size of the market, but also shares characteristics with Typology Two ( $g_2=0.32$ ) due to the high interest rate. Romania is close to Group Two ( $g_2=0.67$ ) because of the high interest rate, but it also shares some characteristics with Group One ( $g_1=0.16$ ) as a result of the large market size.

Italia and France are located between Typologies One and Three. France is closer to Typology One ( $g_1=0.73$ ) as a result of the large size of the market, but also shares the low interest with Typology Three ( $g_3= 0.15$ ). On the other hand, Italy is closer to Group Three due to its low interest rate and small market size. However, Italy also shares characteristics with Group One and Two ( $g_1=0.09$  and  $g_2=0.07$ ) due to its dedication to non-bankable clients.

The Netherlands is the only country that predominantly shares characteristics of Typology Two and Three. The Netherlands is closer to Typology Three ( $g_3=0.75$ ) owing to the small market and loan size, and has affinity with Typology Two ( $g_2= 0.15$ ) as a result of its high interest rate.

Finally, Ireland and Hungary predominantly share characteristics of Groups Three and Four. Ireland is nearer to Group Three ( $g_3= 0.78$ ) as a result of its small market, but it shares characteristics with Typology Four ( $g_4= 0.09$ ) as a result of its large loan size. Hungary is closer to the Typology of Lithuania ( $g_4=0.67$ ) because of its focus on non-bankable clients, but has the small size of the market in common with Typology Three ( $g_3=0.24$ ).

We can identify striking differences when we examine the institutional characteristics of Typologies (Table 12). NGOs or foundations have a prominent position in Typology One (53%) as savings banks are the second most important type of institutions (15%). In Group Two CDFIs (40%) and CUs (33.5%) pre-dominate. In this group CDFIs are important in the UK and CUs in Bulgaria. Typology Three has three main types of institutions with similar

importance: Banks (28%), Government bodies (25%) and microfinance associations (22.2%). Finally Group Four only has NBFIs.<sup>16</sup>

Typology 1 clearly has fewer profit-oriented institutions than Typologies 2 and 3. The Herfindahl index is also the smallest in Group 1, indicating the greatest balance among institutions. In contrast, Typology 4 has the largest Herfindahl index.

Table 12 - Typologies and institutional types (%)

	Typology One	Typology Two	Typology Three	Typology Four
NGOs or foundations	53	7.5	0.75	0
NBFIs	0	19	14	100
Microfinance associations	8	0	22.25	0
CDFIs	0	40	0.75	0
Gov. bodies	8	0	25	0
CUs	8	33.5	0.75	0
Banks	8	0	28	0
Savings banks	15	0	0	0
Religious I.	0	0	0	0
Others	0	0	8.25	0

## 6. Conclusion

The microfinance market is a niche of the financial market where there is a large diversity of institutions and non-for profit organisations have a significant presence. Three institutions stand out for their prominent role in the market: NGOs, saving banks and microfinance associations. Together these institutions' types have a leading role in terms of loans disbursed, in reaching to non-bankable clients and specific vulnerable groups, in the offer of other services, in

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<sup>16</sup> The small number of observations in each cluster prevents to study if the differences are statistically significant.



large organisational dimension, and good recovery rate. Our analysis shows that the diversity of institutional forms is important to foster market dimension, guarantee a good cover of the several vulnerable groups and a diversified offer of other services.

The top ten MFIs institutions are banks, NBFIs and microfinance associations. Profit orientation does not seem to be important to be among the largest institutions, while a high degree of specialisation in micro-lending seems to play a role.

Using as reference some key variables, we found four clusters of institutions: Cluster One includes religious institutions and savings banks; Cluster Two is composed by CUs/cooperatives, microfinance associations, and others institutions; Cluster Three includes Government bodies, NGOs or foundations, NBFIs and CDFIs; and finally Cluster Four includes only banks. Cluster One and Two serve essentially non-bankable clients, and in Cluster One all institutions have as mission the promotion of social inclusion. Cluster Four is also dedicated to non-bankable clients, but organisations have a very large dimension. Finally, cluster Three is the more dedicated to near-bankable clients. Looking at the characteristics of microcredit markets using country data, we conclude that they are mainly affected by GDP per capita, the institutions' types present in it, and in lesser extend by the level of financial development (assessed by domestic credit and interest rates). Regarding institutions' types, institutional diversity is important to increase microcredit loans per capita. Moreover, some specific institutions have an effect on the composition of the market in terms of personal and business loans, on loans terms, loans size, credit to targeted clients, and offer of other financial services.

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## 8. Annex

Table 13 – Number of participating institutions in each country

Country	Number of institutions	Country	Number of institutions
Albania	5	Lithuania	1
Austria	1	Macedonia	3
Belgium	2	Moldova	2
Bosnia-Herzegovina	8	Netherlands	1
Bulgaria	8	Norway	1
Croatia	2	Poland	1
Finland	1	Portugal	1
France	9	Romania	9
Germany	33	Serbia	1
Hungary	15	Spain	13
Ireland	1	Sweden	1
Italy	14	UK	20
Latvia	1	Total	154

Table 14 – Types of institutions per country

	NGOs or Foundations	NBFIs	Microfinance associations	CDFIs	Credit unions / Cooperatives	Banks	Savings banks	Government bodies	Religious Institutions	Other
Albania	0	60	0	0	20	20	0	0	0	0
Austria	0	0	0	0	0	0	0	100	0	0
Belgium	0	50	50	0	0	0	0	0	0	0
Bosnia and Herzg.	63	37	0	0	0	0	0	0	0	0
Bulgaria	0	38	0	0	62	0	0	0	0	0
Croatia	0	0	0	0	100	0	0	0	0	0
Finland	0	100	0	0	0	0	0	0	0	0
France	11	11	44	0	0	11	11	0	0	11
Germany	3	6	39	3	3	12	0	0	0	33
Hungary	89	0	0	0	11	0	0	0	0	0
Ireland	100	0	0	0	0	0	0	0	0	0
Italy	38	15	8	0	8	8	0	0	15	8
Latvia	0	0	0	0	0	100	0	0	0	0
Lithuania	0	100	0	0	0	0	0	0	0	0
Macedonia	33	0	0	0	33	0	33	0	0	0
Moldova	0	100	0	0	0	0	0	0	0	0
Netherlands	100	0	0	0	0	0	0	0	0	0
Norway	100	0	0	0	0	0	0	0	0	0
Poland	0	0	0	0	0	100	0	0	0	0
Portugal	0	0	0	0	0	0	0	0	0	100
Romania	0	89	0	0	0	0	0	11	0	0
Serbia	0	100	0	0	0	0	0	0	0	0
Spain	53	0	8	0	8	8	15	8	0	0
Sweden	0	100	0	0	0	0	0	0	0	0
UK	15	0	0	80	5	0	0	0	0	0

Note: n=147. Source: EMN 2010/11 survey (Bendig et al, 2012)

Table 15 – Determination of the number of cluster

Stage s	Coefficient
1	.103
2	.517
3	.551
4	1.294
5	1.988
6	2.385
7	8.098
8	14.720
9	18.151

Note: Stage indicates the iteration to constitute the cluster. Coefficient is the Euclidean distance between the two furthest observations in the new cluster constructed in the respective iteration, and was obtained from SPSS.

Table 16 – Correlation between institution types and market characteristics

	Correlation	p-value	Observations
Loans per capita / GDP per capita	-0.4502	0.0311	23
Value of loans to GDP / GDP per capita	-0.6193	0.0182	14
Value of loans per capita / NBFIs	0.5549	0.0611	12
Value of loans per capita / Gov. B.	0.8244	0.0010	12
Personal loans per capita / Savings B.	0.5716	0.0662	11
Proportion of loans to business loans/ CUs	-0.5595	0.0158	18
Proportion of loans to business loans/ Religious Inst.	-0.5331	0.0227	18
Interest rate / NBFIs	0.4574	0.0282	23
Loan size / NBFIs	0.4944	0.0436	17
Loan term /NBFIs	-0.4839	0.0193	23
Loan term / Gov. B.	0.4629	0.0261	23
Share of loans to non-bankable clients/NGOs or Found.	-0.4995	0.0983	12
Share of loans to poor clients / CDFIs	0.6756	0.0029	17
Share of loans to minorities / NBFIs	-0.4131	0.0788	19
Share of loans to minorities / CUs	0.4953	0.0311	19
Share of clients graduating to mainstream finance /NBFIs	-0.4550	0.0578	18
Share of clients graduating to mainstream finance / Banks	0.5308	0.0284	17
Share of clients graduating to mainstream finance / Savings Banks	0.4343	0.0815	17
Credit risk / NBFIs	-0.4515	0.0792	16
Share of institutions dedicated only to microcredit / Microfinance Inst.	-0.5053	0.053	14
Share of institutions offering no other financial product / Savings B.	-0.4205	0.0649	20
Herfindahl index / loans	-0.4628	0.0228	24
Herfindahl index / loans per capita	-0.2829	0.1805	24
Proportion of inst. Profit oriented / credit risk	-0.4817	0.0955	13

Table 17 – Regression analysis of the main determinants of microcredit market characteristics

Variable	Coefficient	Std. Err.
<b>Dependent: log loans per capita</b>		
Log PIB per capita	-1.6425**	0.6942
Domestic credit to GDP	-0.0049	0.0074
Herfindahl Index	-2.2623**	1.0275
Constant	17.2812**	6.5580
N=23; R2:0.5073; F(3,19)=6.52 (p-value=0.0032)		
<b>Dependent: log value of loans to GDP</b>		
Log. PIB per capita	-3.3619**	1.2154
Domestic credit to GDP	0.0021	0.0102
Constant	38.2674***	11.5491
N=14; R2=0.5696; F(2,11)=7.28 (p-value=0.0097)		
<b>Dependent: personal loans per capita</b>		
Savings banks	0.0922**	0.0378
Log GDP per capita	-3.5659**	1.1925
Domestic credit to GDP	0.0136	0.0103
Constant	30.8276**	11.2686
N=11; R2:0.7754; F(3,7)=8.06 (p-value=0.0113)		
<b>Dependent: Proportion of loans for business purposes</b>		
CUs	-0.3319***	0.0999
Religious Institutions	-2.9029***	0.7407
Log GDP per capita	10.7088	6.9488
Domestic credit to GDP	-0.0381	0.0665
Constant	-13.7094	65.8917
N=18, R2: 0.6968; F(4,13)=7.47 (p-value=0.0024)		
<b>Dependent variable: Interest rate</b>		
NBFIs	0.0383	0.0394
Interbank interest rate	1.5506**	0.7165
Log GDP per capita	-4.6973	3.2262
Domestic credit to GDP	0.0469	0.0317
Constant	47.8492	32.6613
N=21, R2: 0.6047, F(4,16)=6.12 (p-value=0.0035)		

Note: the variables that were not statistically significant are dropped sequentially, starting with the one with the lowest p-value. But in the presentation of results we left non-significant variables when their elimination did not improve the statistical significance of any other variable.

Table 17 (continuation) – Regression analysis of the main determinants of microcredit market characteristics

Variable	Coefficient	Std. Err.
<b>Dependent: loan size</b>		
NBFIs	0.0041*	0.0019
Log GDP per capita	0.0357	0.2118
Constant	0.0183	2.1946
N=17; R2: 0.2460; F(2,14)=2.28 (p-value=0.1386)		
<b>Dependent: loan term</b>		
NBFIs	-0.1146*	0.0548
Government bodies	0.2181**	0.0981
Constant	38.2950	2.6239
N=22; R2: 0.3613; F(2,19)=5.37 (p-value=0.0141)		
<b>Dependent: Proportion of non-bankable clients</b>		
NGOs or foundations	-0.0031*	0.0017
Constant	0.6730***	0.0708
N=12; R2:0.2495; F(1,10)=3.32 (p-value=0.0983)		
<b>Dependent: proportion of loans to clients below the poverty line</b>		
CDFIs	0.7551**	0.2509
Log GDP per capita	-2.0525	8.8432
Domestic credit to GDP	-0.0215	0.1312
Constant	32.7496	80.3209
N=17; R2=0.4669; F(3,13)=3.80 (p-value=0.0373)		
<b>Dependent: proportion of loans to immigrants/ethnic minorities</b>		
NBFIs	-0.1003	0.0664
CUs	0.2020*	0.0998
Constant	12.1215***	3.6913
N=19; R2=0.3396; F(2,16)=4.11 (p-value=0.0362)		
<b>Dependent: proportion of clients graduating to mainstream finance</b>		
Banks	0.5078**	0.2076
Savings banks	1.1486*	0.5838
NBFIs	-0.1729	0.1614
Domestic credit to GDP	-0.1219	0.1181
Constant	27.4079	16.0344
N=17; R2=0.5682; F(4,12)=3.95 (p-value=0.0286)		



Table 17 (continuation) – Regression analysis of the main determinants of microcredit market characteristics

<b>Dependent: credit risk (PAR 30)</b>		
NBFIs	-0.0532	0.0705
Log GDP per capita	-3.1227	5.0573
Domestic credit to GDP	0.1445*	0.0629
Constant	32.6732	47.8020
N=16; R2:0.4825; F(3,12)=3.73 (p-value=0.0420)		
<b>Dependent: proportion of institutions dedicated 75%-100% to microcredit</b>		
Log GDP per capita	-37.6491**	16.5058
Domestic credit to GDP	0.0554	0.1438
Constant	450.4435**	156.6151
N=14, R2: 0.4025; F(2,11)=3.70 (p-value=0.0589)		
<b>Dependent variable: proportion of institutions offering no other financial service</b>		
Savings banks	-1.9065*	1.0346
Log GDP per capita	4.1363	18.0608
Domestic credit to GDP	0.0454	0.1980
Constant	1.1461	167.9257
N=20, R2: 0.1935, F(3,16)=1.28 (p-value=0.3152)		

Table 18 – Degree of belonging to each typology

	g1	g2	g3	g4
Austria	0,04774	0,04034	0,043021	0,8689
Belgium	0,015107	0,02051	0,036477	0,92791
Bulgaria	0,00173	0,99481	0,000809	0,002655
France	0,73778	0,061594	0,043427	0,1572
Germany	0,01108	0,011686	0,012552	0,96468
Hungary	0,03723	0,046286	0,67101	0,24547
Ireland	0,036991	0,081306	0,095356	0,78635
Italy	0,094791	0,077581	0,055689	0,77194
Latvia	0,009034	0,010604	0,005924	0,97444
Lithuania	0,013015	0,010215	0,95429	0,02248
Netherlands	0,04364	0,15962	0,044977	0,75177
Poland	0,54207	0,32503	0,041526	0,091372
Romania	0,16852	0,67127	0,063874	0,096342
Spain	0,95429	0,018175	0,01018	0,017357
UK	0,042524	0,83739	0,021654	0,098427

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#### THE ABSTRACT OF THE PROJECT IS:

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation? ; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?

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