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Resumen

En este artículo analizamos y comparamos las limitaciones y el potencial de la ayuda externa y las microfinanzas como enfoques arriba-abajo y abajo-arriba para la financiación del desarrollo de los países pobres. No sólo sostenemos que el sistema de ayuda internacional debe ser revisado, sino también que las microfinanzas son un instrumento complementario, sostenible y que crea mejores incentivos para el desarrollo. Después de calcular los efectos potenciales de la industria microfinanciera sobre el empleo y el PIB, a través de un simple ejercicio empírico, proponemos como recomendación política la redirección de un pequeña parte de los recursos de la Ayuda Oficial al Desarrollo (AOD) a las microfinanzas con el objetivo de proporcionar otras opciones a las poblaciones más desfavorecidas.

Palabras clave: microfinanzas, ayuda externa, políticas financieras de desarrollo.

Abstract

In this paper, we review and compare the potential and limitations of foreign aid and microfinance as a top-down and bottom-up approaches to financing the development process in poor countries. We not only sustain that reviewing foreign aid is a must for the future of the least-developed countries but also posit that microfinance is a complementary and financially sustainable approach that creates better incentives for development. After calculating the potential effects of microfinance over employment and GDP through a simple empirical exercise, we propose a policy recommendation of redirecting a very small share of official development aid (ODA) resources to microfinance in order to provide options for the most underprivileged populations.

Keywords: microfinance, foreign aid, financial development policy.

1
Introduction

From World War II to the beginning of the twenty-first century, foreign aid has been the main financial instrument for developing international cooperation. Though foreign aid in the form of official development assistance (hereafter ODA)[1] from all donor countries reached a record total of USD 165.4 billion in 2012 and has amounted to USD 5 trillion over the past 50 years (OECD 2014), there is increasing controversy in Academia as to its expected effects on the receiving countries (Easterly 2008 and Gibson *et al.* 2009).

Alternately, microfinance (hereafter MF) has emerged in recent decades as a complementary approach to financing development. It is a bottom-up financial tool developed in a businesslike way with a sustainable focus. Microfinance has undergone an exponential increase from 1997 to 2012. The gross loan portfolio of the worldwide microfinance industry reached USD 93.7 billion in 2012 (Mix Market 2012). As in the case of ODA, there is some uncertainty as to the impact of microfinance on poverty, growth, and the beneficiaries' wellbeing (Duflo *et al.* 2013; Roodman 2012; Bateman 2010; Dichter 2007; Hulme 2007).

In this paper, we review and compare the potential and limitations of these two approaches—ODA and microfinance—in financing development and ask why ODA continues to increase and seems to be considered the main tool in financing development. Beyond ODA aimed at the construction of public goods—infrastructure, health, or education—the foreign aid system is riddled with welfare policies usually designed with little or no connection to receptors' needs. These policies are often designed to serve territorial political powers. Our policy recommendation to the international community is therefore to redirect a very small portion of the top-down policies (ODA) to the microfinance industry to provide options for the most underprivileged population. Following this recommendation, the paper will analyze the potential effect of these resources on employment generation and increase in income when more funds are allocated through MF strategies.

The paper is organized as follows: Section 2 reviews the most relevant literature on the effectiveness of ODA and presents basic data on ODA, its principal potential, and its limitations in financing development. Section 3 reviews the characteristics of and basic data on MF, and sets forth how MF should work to avoid some of ODA's least effective practices. Section 4 presents an empirical exercise to analyze the potential impact of MF on employment and GDP when some ODA resources are transferred to the MF industry. Section 5 presents the policy recommendation and our conclusions.

1 This paper follows the OECD's Development Assistance Committee (hereafter DAC) definition as «those flows to developing countries and multilateral institutions provided by official agencies, including state and local governments, or by their executive agencies. It includes all transactions which meet the following tests: 1) it is administered with the promotion of the economic development and welfare of developing countries as its main objective; and 2) it is concessional in character and conveys a grant element of at least 25 per cent». http://www.oecd.org/dataoecd/29/21/2754804.pdf

2
Foreign aid as a development finance tool

2.1. The effectiveness of aid in growth

Over the past 60 years, the question of whether aid has a macroeconomic impact on growth has been studied from a variety of ideological and methodological perspectives. Two main but opposing positions on the effectiveness of aid can be defined, although the evidence is still ambiguous and the debate continues (Easterly 2008 and Sachs 2011).

Foreign aid emerged after World War II as a top-down tool to help poor countries. The imperative of an external financial flow to reduce the internal and external gaps of the economies of poor countries was obvious (Nurkse 1953; Rosenstein-Rodan 1961; Chenery and Strout 1966). Hence, massive aid programs were initiated in the 60s. In the 70s, however, the effectiveness of aid was increasingly examined from both liberal and heterodox perspectives, as illustrated by Bauer (1972) and Hayter (1971), respectively.

Over the following decades, the scientific community made a great effort to demonstrate the usefulness of aid with new, more rigorous analytic and quantitative methods. Some studies obtain positive results (Levy 1988), while others, among them Singh (1985), provide positive but barely significant results. The outcomes of a third group are clearly negative (Mosley *et al.* 1987 and Mosley 1980). Many of these studies do not treat the endogeneity of foreign aid, which may explain their contradictory results (Arndt *et al.* 2010).

In the 90s, new research with a broader empirical base and improved methodological strategies corroborated the ineffectiveness of ODA on growth. According to Boone (1996), aid neither increases investment nor improves human development indicators, but it does increase the size of government. In general, researchers in the 90s maintained a pessimistic view of the effectiveness of aid, bringing about a significant decrease in the amount of foreign aid provided by a majority of donor countries (OECD 2014).

In the new century, Burnside and Dollar (2000) find that aid works in «good policy environments». This view that aid boosts economic growth, reduces poverty, and improves social indicators within good policy environments has led the World Bank to increase aid budgets worldwide (Easterly 2003). Other authors have attempted to confirm these results. Some, such as Hansen and Tarp (2001), Collier and Dollar (2002), and Sachs *et al.* (2004), obtain similar results supporting the effectiveness of aid. After dividing aid into three categories, Clemens *et al.* (2012) find that aid aimed at supporting investment in infrastructure and productive sectors stimulates growth.

Other authors obtain contradictory results. Easterly *et al.* (2004) demonstrate that the findings of Burnside and Dollar's study are inconsistent when the sample period is changed or missing data in the sample are reduced. Lensink and White (2001) find that aid begins to have negative effects above a certain level. Banerjee *et al.* (2006) conclude that Burnside and Dollar's results are not convincing. Rajan and Subramanian (2008) determine that aid does not affect growth at all. For all of these authors, neither short-impact aid nor any other type of aid has positive effects on growth. Moreover, they find no difference between the impact of bilateral and multilateral types of aid on growth. Djankov *et al.* (2006) find that foreign aid has a negative impact on democracy and economic growth in developing countries. The main problems with the impact of ODA on growth identified in these studies are the erratic nature of aid, the lack of quality data, the low ratio of aid to GDP in most recipient countries, the endogeneity problem, and the use of weak instruments (Tarp 2006).

Finally, after an extensive review of the recent literature, Arndt *et al.* (2010) conclude that the expected impact of aid on growth is positive but minimal. Further, two meta-analyses performed recently show opposing results. While Doucouliagos and Paldam (2011) find that aid is ineffective in promoting growth, Mekasha and Tarp (2013) prove that the effect of aid on growth is positive and statistically significant.

Despite these differences, the entire development community, from Sachs to Easterly, believes that foreign aid is needed to stimulate progress throughout the developing world, but with some adjustments and new approaches. Even Easterly (2008) proposes *Reinventing Foreign Aid.* It is clear that ODA is a necessity for certain large-scale development projects. Addressing the much-needed essentials of health, education, and basic infrastructure can only be accomplished with sufficient financial muscle (Sachs 2011). The private sector is not likely to invest in social projects where economic returns are dubious.

2.2. Some stylized facts on ODA

According to data on ODA published by the OECD's Development Assistance Committee (DAC), total gross ODA from all donors has increased steadily from USD 38 billion in 1960 to USD 165.4 billion in 2012 (Figure 1).[2] Total gross ODA amounts to USD 5 trillion cumulatively over the last fifty years.

Considering the evolution of the two main types of ODA from 1960 to 2012, bilateral ODA has increased at an annual compound growth rate of 2.5%, while the figure for multilateral ODA is 4.1% (Figure 2). Today, around 75% of total ODA is bilateral, and 25% is multilateral (OECD 2014). Moreover, both bilateral and multilateral ODA flows include grants and concessional loans or loans whose

2 Total net ODA increased from USD 36.8 billion in 1960 to USD 150.9 billion in 2012.

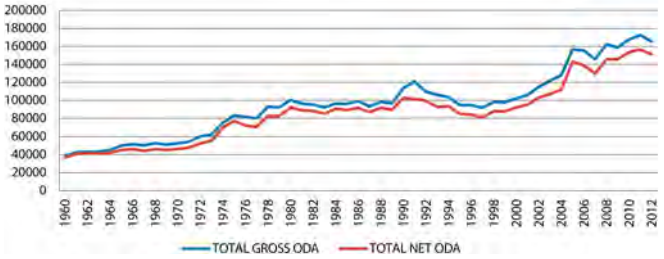

Figure 1
Total Gross and Net ODA (1960-2012).
Source: OECD (DAC database). DAC1: Official and Private Flows, main aggregates
Note: Total Gross and Net ODA measured in 2012 constant prices.

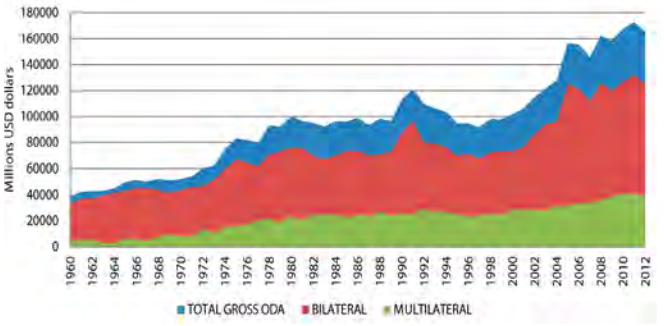

Figure 2
Total ODA divided into Bilateral and Multilateral (1960-2012).
Source: OECD (DAC database). DAC1:
Official and Private Flows, main aggregates

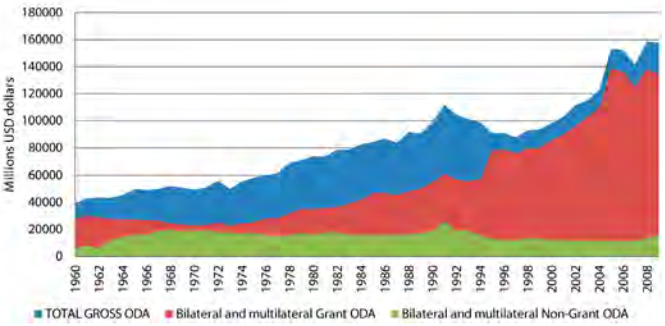

Figure 3
Total ODA divided into Grant and Non-Grant (1960-2009).
Source: OECD (DAC database). DAC1:
Official and Private Flows, main aggregates

Continent	USD Millions	%
Asia	1,077,446.31	34.11
Africa	1,224,826.42	38.78
MENA	263,221.22	8.33
Latin America	338,682.5	10.72
Europe	162,415.7	5.14
Oceania	92,065.99	2.91
	3,158,658.14	100.00

Table 1
Accumulated Net ODA received by continent (1960-2010).
Source: OECD (DAC database). DAC1: Official and Private Flows, main aggregates
Note: Eastern European countries are the principle recipients of ODA in Europe.

grant component is at least 25%. As can be observed in Figure 3, the grant component of ODA has increased over the years. In fact, at present almost all aid flows are grants.

Data by continents (Table 1) show that, over the last five decades, Africa has received almost the 40% of total net ODA and Asia 34.1%, followed by Latin America (10.7%), Middle East and North Africa (8.3%), Europe (5.1%) and Oceania (2.9%).

One of the explanations for constant increases in ODA stems from moral and ethical social movements in developed countries, which condemn unacceptable standards of living in poor countries and lobby

their governments to solve the problem (Sachs 2011 and Ellerman 2007). A second reason is primarily academic. The argument that aid is vital to the development of poor countries prevailed in international organisms as well as in academic institutions. For a long time, the objectives and analyses of academic papers focused not on demonstrating the effectiveness of aid but rather on the amount and growth of aid over time (García-Montalvo 2008 and Easterly 2003). It became apparent, and is currently verified, that the linearity of the approach was distorted by an excess of optimism. Finally, some economic interests and privileges, such as political and geostrategic influence over certain regions, would clearly be endangered if the system were to reduce funding (Alesina and Dollar 2000). At any rate, the debate on the effectiveness of ODA is still rages today.

2.3. Lessons learned from the aid system

While no one doubts its importance, ODA has not achieved the desired benefits despite the passage of time and the amount of resources employed (Boone 1996; Rajan and Subramanian 2008; Easterly 2003, 2008; Djankow *et al.* 2006, 2008). Over the past 50 years, Africa has received USD 1224 billion (OECD 2014), but aid appears to have had no impact on either growth or poverty (Figure 4). In other words, Africa has largely missed the opportunity for enhanced growth provided by aid (Collier and Gunning, 1999). According to Easterly (2003 and 2007) and Djankov *et al.* (2006), the top quarter of aid recipients received more than 15% of their GDP in the past four decades, although their per capita growth was near zero. Using data from the OECD's DAC and World Development Indicators (hereafter WDI), Figure 4 shows that GDP growth and poverty have remained practically unchanged over the period studied, even as average annual aid increased yearly. It appears that aid follows an entirely separate path from both growth and poverty.

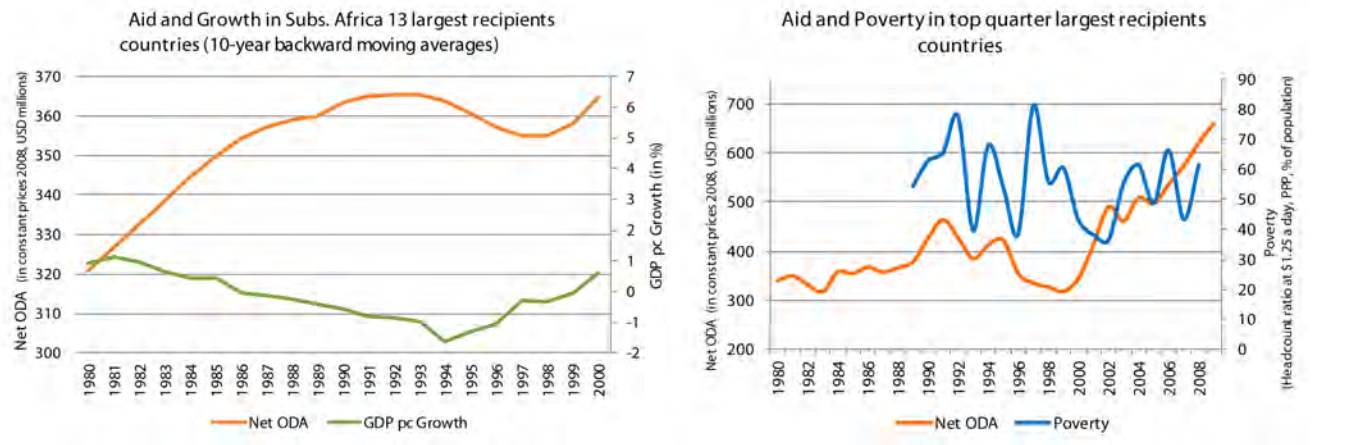

Figure 4
Tracking Aid, growth and poverty in largest ODA recipients.
Source: OECD DAC International Development Statics and WDI

The question, then, arises as to why foreign aid is not working as it should. If we analyze the «worst practices» of both donors and recipients, we can summarize the reasons as follows:

Aid distorts free market rules. Large aid flows, i.e. large volumes of free financial resources, obstruct market principles and mechanisms. When a good is free, its demand will be perfectly elastic and it will be demanded although misused. The price will therefore not signal the utility of the good. The absence of this type of feedback from aid beneficiaries to the aid system has been widely reported (Martens *et al.* 2002; Svensson 2008; Easterly 2008). Further, supply does not function correctly either, since the cost of resources is not signaled. The end result is an overall misuse of the good.

Moreover, the grant component of ODA has increased over the years. In fact, at present almost all aid flows are grants. The average repayment rate[3] of ODA from 1960 to 2010 was the astoundingly low figure of 9.42%.

Lack of accountability in the aid system. The fact that there are many agencies working in each recipient country and that a country's economic growth depends on many other factors besides foreign aid (Easterly, 2008) leads to a lack of accountability. Who is responsible for the correct use of aid resources? Who is responsible for poor results in poverty reduction and economic growth? Basically, these resources are free and no one is held responsible for how they are used.

Aid creates perverse incentives in at least five ways. First, the foreign aid system does not reward good economic results, nor does it punish poor outcomes. Aid flows continue unfettered by results (Van de Walle 2001). Aid encourages rent-seeking behavior. When a developing country, with weak institutions and a low degree of government accountability, receives windfalls of resources year after year, it is likely that individuals will engage in rent-seeking activities to appropriate part of the aid flows for themselves (Djankov *et al.* 2008). Corrupt governments following poor policies receive as much aid as less corrupt ones (Alesina and Weder 2002). Easterly and Pfutze (2008) find that the flow of aid from donors does not react to changes in levels of corruption.

Secondly, the current foreign aid system may actually decrease economic growth. Aid, which involves large, free and ever-increasing financial flows, can be seen as a natural resource. Sachs and Warner (2001) find that countries with rich natural resources grow at a slower pace than other countries. According to Boone (1996), large and free aid flows encourage public spending and consumption and increase the size of government but neither boost investment nor improve human development indicators. Moss *et al.* (2008) explain that aid can result in excessive and unsustainable government consumption and public deficit.

3 Understood as the difference between gross and net ODA http://www.oecd.org/dac/stats/international-development-statistics.htm

Thirdly, aid does not encourage institutional development. Studies of tax effort suggest that taxation (i.e., domestic revenue mobilization) is a good proxy for institutional development. Governments that depend on aid are not motivated to improve tax administration and will thus see no need to develop or improve public goods or services, since they do not need economic or political support from their populations (Moss *et al.* 2008; Bräutigam and Knack 2004; Remmer 2004).

Fourthly, governments in poor countries have little incentive to use aid productively if doing so will «engender political activism that threatens the current political elite» (Easterly 2003:20).

Finally, the pattern of aid allocation flowing from donor to recipient countries does not coincide with the economic needs of receiving counties, but rather with political and strategic benefits for the donors (Alesina and Dollar 2000). Easterly (2003) explains that governments of high-income countries may grant aid for very different objectives than reducing poverty, objectives such as rewarding allies or promoting their own exports.

Lack of ownership and sustainability in the aid system. Programs and projects are usually designed according to the criteria of the donor and are implemented according to donor indications. Without recipient ownership, recipient countries will not make the commitments needed to ensure optimal development of projects (Gibson *et al.* 2009). This fact also leads to a *lack of sustainability*. It is a well-known fact that the current foreign aid system has initiated hundreds of projects all over the world which have been abandoned as soon as the donor withdraws (Gibson *et al.* 2009).

Foreign aid is extremely fragmented among many efforts, countries, and sectors causing a lack of coordination within the system and thus hindering efficient program development and achievement of desired results. The aid system is composed of several agencies that have not previously arrived at consensus on specific global objectives (Easterly, 2008) and thus often duplicate objectives and tasks or even work toward contradictory goals. There is frequently little synergy in the actions. Djankow *et al.* (2008) find that the presence of multiple donors in a given country renders aid less effective. Moreover, the bureaucratic infrastructure needed to administrate aid in poor countries is usually deficient, and its creation implies heavy overhead costs for recipients (Easterly 2008 and Djankow *et al.* 2008).

All of these factors together lead to debilitated institutional development. Djankow *et al.* (2006) find that aid worsens democracy and the rule of law and increases corruption. Further, Collier (2009) demonstrates that ODA could inadvertently be used by recipient governments to strengthen military forces.

Nevertheless, varying kinds of ODA flows[4] must be differentiated, since not all have the same outcomes. Some ODA flows target the strengthening of institutions and education, for which the impact on growth may take place over the long-term. Other aid flows, emergency and humanitarian, are essential for survival in disasters but not for long-term economic growth. For example, Collier and Hoeffler (2004) find that aid is associated with economic development and recovery in certain fragile post-conflict situations. Finally, other ODA flows financing infrastructures and health services are essential and non-replaceable even though their management and results may be poor and deficient.

Recent literature on the link between aid and growth has revived the micro-macro paradox (Mosley *et al.* 1987 and Arndt *et al*. 2010). While it is difficult to discern any systematic effect of aid on growth (Rajan and Subramanian 2008), ODA seems to be effective at the microeconomic level. Indeed, foreign aid has been effective where projects have had narrow and monitorable goals directly meeting the needs of the poor (Schultz 2004; Kremer and Miguel 2007; Banerjee and He 2008; Banerjee and Duflo 2011; Karlan and Appel 2011).

3
Microfinance as a financial tool for development

Microfinance is primarily a tool that reduces disparities in access to financial resources, constituting a more recent bottom-up approach to financing development focused mainly on the individual. Microfinance was born in response to the lack of access to financial services affecting millions of people in the world excluded from the formal financial system (Helms 2006). The poor have always been evaluated as high-risk clients due to their lack of guarantors and collateral. They are not considered creditworthy and therefore are thought to be unable to save or repay a loan or launch a business that could generate profits. The only option for many has been to ask for help from relatives, which was not always available, or turn to local moneylenders who had traditionally charged interest rates well above market rates (Morduch 1999; Armendáriz and Morduch 2010). Thus, in most cases, the poor faced great difficulties in acquiring the capital needed to save or to start productive initiatives and improve their well-being (Robinson 2001). The World Bank estimates that 2.7 billion people globally have no access to formal financial services (Chaia *et al.* 2009 and World Bank 2011) and must therefore rely on informal financial services that may be more costly and less reliable (CGAP 2010).

4 The principle types of ODA flows are emergency and humanitarian aid mainly for disasters and emergencies; long-term investments usually aimed at building democracies; aid for education and health programs and aid to combat environmental degradation; aid for infrastructure and public goods which mainly involves investments in roads, irrigation systems, ports, etc. and productive sectors; and aid to support the balance of payments of the receiving country.

The pioneers of microfinance believed that every human being has potential and that the greatest obstacles to developing that potential are structural, being lack of access to financial resources one of the most significant (Yunus 2003). Microfinance offers small-scale loans, savings accounts, insurance, housing loans, and other financial services to the poor (CGAP 2009). Small-scale loans unlock the productive potential of the economically active poor by growing small businesses. Savings accounts help to balance their consumption patterns and provide for unexpected negative events. Insurance allows them to leave micro-business earnings intact in the event of illness and medical expenses, or natural disasters. Microfinance is granted to those with no collateral and normally uses social pressure as joint liability (Armendáriz and Morduch 2010).

Microfinance thus provides the possibility of overcoming the constraints on poor and excluded populations through access to financial services such as savings, micro-insurance, and microloans. Microfinance services help the poor to improve their financial security, allow them to take advantage of new business opportunities, and enable many poor people to expand and diversify their economic activities and increase their incomes (Robinson 2001). But the potential of MF not only consists of opening new possibilities to the excluded but involves the social network and institutional capital created in the process of providing MF (Matin *et al.* 2007).

In the light of ODA's pros and cons and the lessons learned, MF should be developed under the following premises:

MF should conform to market rules and be built on accountability. Microfinance Institutions (hereafter MFIs) seek to avoid dependence on external funding[5] and reach sustainability. They must adapt to the criteria of profitability and market efficiency. MFIs should neither forgive the debts of their clients nor promote the culture of «free aid». Moreover, given the increasing commercialization of the microfinance sector, MFIs should submit to credit-rating agencies as a sign of financial transparency. They should also adhere to existing market rules in order to access international capital markets in search of more funding and submit to national financial regulation requirements to avoid undesired speculation and the creation of financial bubbles. Hence, a small business set up through MF must be efficient and profitable in order to compete with other microenterprises and survive in the market. When an MFI or an entrepreneur depends on subsidies or subsidized loans, the probability of failure is very high (Robinson 2001). As soon as external funding is no longer available, the MFI or entrepreneur will face real costs and begin to suffer losses.

Whereas practically all ODA involves grants, MF involves loans that must be repaid. Both lenders (MFIs) and borrowers (micro-entrepreneurs) must return the principle plus interest on the loan

5 Although a large majority of MFIs depend on subsidies in the first years of activity, well-managed MFIs focus financial planning from the start on attaining financial self-sufficiency (Gueyié and Fischer 2009).

received. As noted before, ODA repayment rate is 9.42%. However, the average repayment rate on MF is 97% (MIX Market 2012).

MF should be built on sustainability. As stated above, MF aims to build a self-sustainable system that can increasingly reach a larger number of beneficiaries. The concept is based on giving small loans to launch small businesses that provide a regular source of income with which to repay the principal plus interest. Repayment of loans with an interest rate guarantees capitalization on the MFIs, providing further financing for other small enterprises and achieving a sustainable system unlike that of ODA, which requires large annual contributions from donor countries (González-Vega 1996). Although some authors believe there is a trade-off between outreach and sustainability (Manos and Yaron 2009), currently 71% of MF providers reporting to MIX Market are profitable and need no further external subsidies (Rosenberg 2010). Instead of giving subsidized credit to the poor, MF should be built on permanent, dynamic, customer-oriented institutions that cover most or all of their budgets with fees and interest (Gueyié and Fischer 2009; Roodman 2012).

The MF system should try to create adequate incentives. MF creates adequate incentives, since well-managed MFIs reward good economic results but punish negative outcomes. Normally, an MFI using bad practices or achieving poor results will soon be forced out of the market. It will have problems with rating agencies and find it difficult to get financing in international markets. Further, MF creates personal incentives for growth since it has the potential to stimulate and increase borrowers´ self-esteem and self-confidence as they discover they are able to receive a loan, invest money, and finally repay the debt.

MF should be built on ownership. MF aspires to listen to the voice of the underprivileged (Matin *et al.* 2007). The pioneers of MF proposed that it was time to consult impoverished individuals directly to discover the causes of their poverty and motivate them to move toward progressive independence. There is a difference between a top-down instrument created far from the day-to-day reality of the poorest and a bottom-up instrument designed to directly meet their needs. MF puts the necessary financial resources within reach of the poorest so that they can develop skills and potential by founding their own microenterprise where they are the sole owners and managers. It will be in their best interest to make the effort to survive and grow, since growth of the business is the path to repayment of the loan and access to future credit. The possibility of improving depends on the success of their business.

3.1. Some stylized facts on Microfinance

According to the most recent report of the Microcredit Summit Campaign (Reed 2013), microcredit underwent an exponential increase from 1997 to 2011, rising from 7.6 million *poorest clients*[6]

6 According to the Summit Report, «poorest clients» are those people living on less than USD 1.25 a day, adjusted for PPP.

who received microcredit at the end of 1997 to 124 million at the end of 2011. The total number of clients[7] reached by the 3703 MFIs reporting to the Summit was 195 million people in 2011. According to data from the MIX Market (2012), the gross loan portfolio of the 1255 worldwide MFIs reporting data to this institution amounted to USD 93.7 billion in 2012.

When microcredit is analyzed at the regional level (Table 2), great disparities can be observed in the way this instrument is used and in the coverage rates from one region to another. Specifically, as shown in the following table, in 2010, 1746 (47.8%) of the 3652 MFI who reported their data at the summit were located in Asia. These institutions reached 125.5 million poorest clients or 91.4% of total poorest clients in the developing world. Meanwhile, the 1100 MFIs existing in Africa and the Middle East reached 6.5% of these poorest clients and the 647 MFIs in Latin America reached 2.1%. More important is the regional coverage ratio, which shows the proportion of total poorest families living in each region that are reached by microfinance. In Asia, the coverage rate reaches 68.8% which means that 125.5 million poorest families of the 182.4 million existing in Asia are receiving microcredit. In Latin America, this figure is 32.4% and in Africa 11.2%. When analyzing the data, it is interesting to note that, while ODA has traditionally been directed to Africa, MF has been widely developed in Asia.

Region	Number of MFI	Number of poorest in 2010 Nº (mill)	%	Coverage Ratio %
Asia and the Pacific	1,746	125.5	91.4	68.8
Latin America & Caribbean	647	2.9	2.1	32.4
Africa and the Middle East	1,100	8.9	6.5	11.2
Developing World Totals	**3,493**	**137.3**	**100**	
North America & Western	86			
Eastern Europe & Central Asia	73	0.13		3.7
Industrialized World Totals	**159**			
TOTAL	**3,652**			

Table 2
Regional Breakdown of Microfinance Data (2010).
Source: Maes and Reed 2012.

3.2. Potential, limitations and effectiveness of microfinance

The growth of MF is driven by hundreds of stories of clients who have improved their lives because of MF services. These stories are mostly accurate and real, but there have also been many cases in which clients have not managed the loans correctly and thus become worse off. Cases of over-indebtedness and repayment prob-

7 All microcredit clients, not only the poorest.

lems with microcredit in India in 2010 and previously in other countries such as Bolivia, Bosnia-Herzegovina, and Morocco have proven that microcredit can also be a debt trap (Roodman 2012; Maes and Reed 2012). There is also evidence that MFIs have used unethical and bad practices in some cases and have over-indebted their poor borrowers (Hossain 2013). Just as conventional finance has harmed clients in the context of the current international crisis, microcredit has also been detrimental to loan recipients due to the dual nature of credit, which can be a source of opportunity or a shackle (Wagner 2012). Therefore, as has occurred with ODA, telling only the good news about microcredits may lead to an overestimation of this tool. Hence caution should be exercised, since MF is still an immature and unproven tool in some areas (Dichter 2007).

Access to financial services may improve the well-being of many poor people, but this is not an automatic process (Roodman 2012). According to Ellerman (2007), it is a fantasy to believe that all poor people will have the necessary entrepreneurial skills and knowledge to start a business simply by having access to finance. This is especially true for the extremely poor, who need food, shelter, and training before they can make use of financial resources (Robinson 2001) and for whom human or emergency aid is more appropriate. Further, due to circumstances beyond their control (illness, floods, etc.) or bad decisions, borrowers may encounter difficulty in repaying loans, be threatened by group members and MFI staff, or have their possessions seized, thus eliminating future possibilities (Hulme 2007).

Following a path similar to that of ODA, the so-called micro-macro paradox is also becoming a reality in the case of MF. While there is few evidence revealing the positive effect of MF on the macroeconomic activity (Ahlin and Jiang 2008; Sodokin and Donou-Aeonsou 2010; Buera *et al.* 2012), several micro-evaluations have reported that well-managed MFIs have been able to create millions of saving accounts and smooth consumption in the poorest families, start new businesses, generate new jobs and maintain those already existing among the economically active poor, raise durable consumption, increase decision-making power in women, reduce fertility, improve the education and health of children, and build new social capital among microfinance clients (Pitt and Khandker 1998; Khandker 2005; Khandker *et al.* 2013; Robinson 2001; Goldberg and Karlan 2008; Dupas and Robinson 2013; Feigenberg *et al.* 2010; Karlan and Ziman 2010; Karlan and Apple 2011; Deloach and Lamanna 2011). Nevertheless, there are also several studies questioning if MF does harm. Recently, there have been published some randomized control trials (RCT)[8] with mixed results. Also, some other authors directly allude to negative impacts such as unchanged poverty levels, increased inequality, positive short-run outcomes —but never long-run ones— and exploitation of women (Bateman and Chang 2009; Van Rooyen *et al.* 2012; Rogaly

8 Duflo *et al.* (2013), Crépon *et al.* (2011); Augsburg *et al.* (2012); Angelucci *et al.* (2013); Attanasio *et.al.* (2011).

1996). After thorough research, Roodman (2012) finds little evidence that the microfinance movement has lived up to its claims of achieving development or reducing poverty in the last thirty years.

In this context, this paper attempts to analyze the potential effect on employment generation and income increase when some funds are transferred from ODA to be used through MF strategies.

4
Policy recommendation: from ODA to MF

As mentioned above, ODA's total volume continues to increase over time. This fact will probably cause a controversial scenario because of the uncertain effectiveness of ODA. Is there any alternative? We propose that a minute part of multilateral ODA be deployed through MF programs. The proposal is not to eliminate or substitute ODA, as this would be unfeasible and unadvisable. Our goal in this section is to perform a simple empirical exercise by simulating the transfer of 5% of multilateral ODA[9] to the MF industry and analyzing the effect of this additional resource on the generation of employment and income when these funds are channeled through MF.[10]

We use data on net ODA from the OECD DAC. GDP and labor market data are drawn from World Development Indicators, World Bank. MF data is taken from MIX Market. The sample comprises all countries within the low-income and lower-middle-income economies of the World Bank. The base sample is composed of 65 countries (Appendix I).[11]

The starting point for the exercise is the annual average net ODA received by each country from 2005 to 2009[12] (Column A in Appendix I). Since multilateral ODA is 27.1% of total net ODA, Column C shows our calculation of the multilateral ODA received by each country over this period. As this paper proposes to transfer 5% of multilateral ODA to the MF sector, this amount is shown in Column D. Given the average loan balance per borrower in the MF sector in each country (Column G), it is possible to calculate the number of new microcredit loans disbursed in each country (Column E). Based on the assumption that each new microcredit creates one new job position,[13] Column E also shows the new jobs created with these resources. Also, bearing in mind that job positions promoted by MF are usually «micro jobs» or self-employment within the informal economy, it has been assumed that the GDP per person employed in MF could be equivalent to the lowest decile of the distribution. Therefore, the effect of MF on GDP (Column N) could be calculated multiplying «the number of new job positions created with MF (Column E)» by «a tenth of the GDP per person employed».

9 We chose the proposed figure of 5% of the total volume of multilateral ODA for reasons of practicality. It would be impossible to perform this experiment through bilateral aid, since it would be unfeasible to reach an agreement with all of the donating governments.

10 This proposal is guided by some international development organisms that are willing to increase their budgets towards microfinance. At their 2010 summits in Toronto and Seoul, the leaders of the G-20 countries elevated financial inclusion to a central priority of their economic development agenda (CGAP 2010).

11 Countries for which there are no data on GDP, ODA or the microfinance sector have been eliminated.

12 This time frame was chosen to avoid any potential distortion derived from the financial international crisis that began in 2008-2009.

13 Based on Al-Manum *et al.* (2010), Balkenhol (2006) and Latourte (2003), we have assumed that microfinance has positive effect on employment. More precisely, following these authors we have assumed that each new microcredit creates at least one new job.

Finally, being aware that 5% reduction in ODA could have some direct or indirect cost in terms of employment generation,[14] in Column P we have estimated the employment reduction when 5% of multilateral ODA is transferred to the MF industry by dividing this 5% ODA in each country (Column D) by the GDP per person employed[15] (Column M). The net impact of the proposed policy recommendation on employment and its growth rate are in the last two columns (Q and R).

All these figures allow us to calculate the overall and the regional impact on employment, GDP, and their growth rates. Regarding the overall impact in the entire sample, as it can be seen in Column D and E, if USD 946 million were transferred from multilateral ODA and diverted to disbursing new microcredit loans, 3.25 million new jobs could be created (Column Q), and the employment growth rate for the sample countries as a whole would be 0.27% (Column R). Similarly, with the transfer of this amount of USD 946 million to MF, the GDP would increase a total of USD 1,740 million (Column N), which would mean a growth rate of 0.02% (Column O). Given the volume of employment and the level of relative poverty in the sample, we believe these results are reasonable. Regarding the regional impacts on employment and GDP, Appendix I shows that transferring resources from ODA to MF has not the same effect in all the regions. The highest net impact on employment and GDP growth occurs in Africa followed by MENA. Specifically, the net employment growth rate in Africa is 0.68% and the GDP growth rate is 0.07%, compared to the total world average of 0.27% and 0.02%, respectively. In other words, devoting more resources to microfinance in Africa has a stronger impact on job creation in comparison to other parts of the world. A challenging result, bearing in mind that Africa is still the poorest region in the world, despite all the ODA resources transferred to this continent.

The foregoing represents only the direct effects of granting this 5% of resources to the MF sector. One must also add the indirect effects, whose repercussions are even more significant. From the moment microcredit are repaid (Column J show us the data on the repayment rate[16] of the MF sector), a dynamic and recurring process takes place. Year after year, these resources are again available to be loaned, leading to a multiplier effect of the initial capital impulse, generating a significant impact on the employment and GDP of each country and therefore on the whole. The true advantage of microfinance is that each «dose» costs much less in subsidies when MF is managed correctly. MFIs can continue providing services year after year with no further subsidy needed and can expand those services to reach many millions of low-income clients (Rosenberg 2010).

14 Following Boone (1996); Rajan and Subramanian (2008); Easterly et al. (2004); Lensink and White (2001) and Djankov et al. (2006), who have found that aid does not affect growth at all, we have not consider any cost in terms of GDP.

15 If ODA creates any employment, we assume it is in the formal productive system with middle or high salaries. In the case of MF we assumed it is self-employment with very low salaries.

16 The 10-year time series data from MIX Market show that the annual loan loss rates have averaged at or below 2.5% of portfolio during the whole period (Rosenberg 2010).

5
Conclusions

The foreign aid system needs to be reviewed, and this process could include the concept of MF. ODA is a top-down tool that tends to eliminate incentives, while MF is a bottom-up tool that allows individuals to take responsibility for their own destiny. This may be the reason why the repayment rate in the MF industry reaches 97% while the repayment rate in ODA is barely 10%.

MF is a promising way to enable financial inclusion for the poor. When offered to the excluded, MF gives them the possibility of unlocking their productive capacities. Today, around 124 million people in the poorest families are receiving microcredit and are generating new jobs, raising investment, increasing incomes, and balancing consumption. Work created in the private sector of any economic fabric is the basis on which developed economies have been built, both in the past and in the present.

This paper has presented a simple empirical exercise showing the potential of microfinance. The effects on employment generation and GDP growth are substantial and should be taken into account. By transferring 5% of multilateral ODA to MF, 3.25 million new jobs could be created in all of countries in the sample, spurring an overall employment growth rate of 0.27%. Further, the GDP would increase a total of USD 1,740 million, which would mean a growth rate for the sample countries of 0.02%. All over the poor world, millions of projects funded by the microcredit system are delivering the promise of a better future for millions of people.

6
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Appendix I

	Country	Net ODA. Annual average received during the years 2005-2009 *	GDP PPP 2009	Multilateral ODA. Annual average received during the years 2005-2009**	5% of multilateral ODA	New MC disbursed and employment created with D ***	Data on No. of MFI in 2009	Data on Average loan balance per borrower in 2009	Data on No. of active borrowers in 2009
		USD millions	USD millions	USD millions	USD millions	Units	No.	USD	Units
		A	**B**	**C= 27% of A**	**D=5% of C**	**E=D/G**	**F**	**G**	**H**
Asia	Afganistan	4333,1	35758,7	1169,94	58,50	183953,29	15	318,0	295044
	Bangladesh	1570,6	208633,9	424,06	21,20	184834,00	28	114,7	20571831
	Cambodia	679,6	25745,5	183,49	9,17	16495,15	14	556,2	1100000
	India	1935,9	3430806,3	522,69	26,13	151065,94	88	173	21000000
	Indonesia	1523,8	876799,4	411,43	20,57	40727,18	16	505,1	286124
	Mongolia	271,4	8542,9	73,27	3,66	2279,71	2	1607,0	384317
	Nepal	661,8	30754,2	178,69	8,93	46735,80	18	191,2	586952
	Pakistan	2202,1	401998,3	594,57	29,73	247529,98	23	120,1	1441141
	Philippines	457,2	295825,8	123,44	6,17	12596,33	59	490,0	47858
	Sri Lanka	866,1	87973,4	233,85	11,69	52323,77	13	223,5	911029
	Vietnam	2651,2	234047,0	715,82	35,79	206408,30	15	173,4	7798660
	Average	**1559,3**				**104086,3**		**406,6**	**4947541,5**
	TOTAL	**17152,8**	**5636885,5**	**4631,2**	**231,56**	**1144949,4**	**291,0**		**54422956,0**
Africa	Angola	312,9	97624,6	84,47	4,22	3889,27	1	1086,0	8582
	Benin	540,5	12234,2	145,94	7,30	8673,33	7	841,3	143473
	Burkina Faso	996,3	16983,2	269,00	13,45	71810,20	7	187,3	152736
	Burundi	501,1	2956,5	135,30	6,76	23769,68	1	284,6	14112
	Cameroon	1151,1	39085,6	310,80	15,54	18693,43	7	831,3	197784
	C African R	189,3	3041,6	51,12	2,56	2038,33	1	1254,0	2757
	Chad	430,5	13230,0	116,24	5,81	10509,49	2	553	23281
	Congo Rep	596,0	14174,1	160,92	8,05	9055,71	2	888,5	75036
	Ivory Coast	727,9	32557,1	196,53	9,83	4605,52	3	2133,7	47409
	Ethiopia	2887,0	70276,5	779,49	38,97	284716,31	18	136,9	2312408
	Gambia	90,9	2190,4	24,54	1,23	2670,62	2	459,5	13289
	Ghana	1377,0	33602,8	371,79	18,59	63903,40	30	290,9	358717
	Guinea	242,3	9580,1	65,42	3,27	10878,70	3	300,7	70817
	Kenya	1298,0	56837,2	350,46	17,52	48366,00	14	362,3	1458809
	Liberia	612,5	1422,1	165,37	8,27	145058,68	1	57,0	20438
	Madagascar	844,7	18686,5	228,07	11,40	17632,99	7	646,7	65596
	Malawi	792,6	11894,4	214,00	10,70	77649,49	5	137,8	119385
	Mali	974,8	14005,6	263,20	13,16	49791,15	9	264,3	172234
	Mozambique	1872,7	18402,8	505,63	25,28	75130,61	8	336,5	90258
	Niger	579,3	9366,7	156,41	7,82	13469,77	2	580,6	48894
	Nigeria	5096,2	309578,3	1375,97	68,80	499990,55	5	137,6	439902
	Rwanda	798,5	9710,9	215,60	10,78	12656,75	6	851,7	45571
	Senegal	970,3	20676,0	261,98	13,10	17682,30	8	740,8	249645
	Sierra Leone	436,9	4179,4	117,96	5,90	83543,20	4	70,6	37443
	Sudan	2271,8	84821,4	613,39	30,67	108627,98	3	282,3	20266
	Swaziland	54,8	5378,3	14,79	0,74	79,83	1	9262,0	4544
	Tanzania	2452,3	52313,2	662,12	33,11	177037,70	7	187	233341
	Togo	231,1	5110,6	62,40	3,12	2708,48	4	1152,0	96244
	Tonga	31,7	421,6	8,56	0,43	1072,83	1	399,0	698
	Uganda	1692,7	36153,3	457,03	22,85	46483,83	10	491,6	431439
	Zambia	1304,3	16780,0	352,16	17,61	118095,57	5	149,1	31340
	Average	**1043,8**				**64848,1**		**818,0**	**225369,3**
	TOTAL	**32358,0**	**1023274,9**	**8736,7**	**436,83**	**2010291,7**	**184,0**		**6986448,0**

microfinance sector									
Gross loan portfolio in 2009	Repayment rate ****	Microfinance sector growth rate	Total Labor force in 2008 *****	GDP per person employed ******	New GDP created with D *******	GDP growth rate	Cost (on employment) of 5% ODA reduction ********	Net impact on employment	Employment growth rate
USD millions	%	%	No.	USD/Units	USD millions	%	Units	Units	%
I	J	K=(E*100)/H	L	M=B/L	N=E*(M/10)	O=(N*100)/B	P=D/M	Q=E-P	R=(Q*100)/L
109,43	91%	62,35	9303902,4	3843,4	70,7	0,20	15220,14	168733,15	1,81
2347,26	100%	0,90	76765042,2	2717,8	50,2	0,02	7801,50	177032,50	0,23
828,74	99%	1,50	7530222,1	3419,0	5,6	0,02	2683,45	13811,70	0,18
51,12	99%	0,72	449888200,3	7625,9	115,2	0,00	3427,05	147638,88	0,03
90,05	99%	14,23	112803749,1	7772,8	31,7	0,00	2646,58	38080,60	0,03
553,63	100%	0,59	1402792,5	6089,9	1,4	0,02	601,57	1678,14	0,12
97,49	100%	7,96	12935304,5	2377,5	11,1	0,04	3757,81	42977,99	0,33
209,91	90%	17,18	55836770,5	7199,5	178,2	0,04	4129,21	243400,77	0,44
10,01	98%	26,32	37880025,7	7809,5	9,8	0,00	790,34	11805,99	0,03
269,62	100%	5,74	8289089,2	10613,2	55,5	0,06	1101,68	51222,08	0,62
3978,48	100%	2,65	45606688,5	5131,9	105,9	0,05	6974,32	199433,99	0,44
776,9	**1,0**	**12,7**		**5872,8**				**99619,6**	
8545,7			**818241787,0**		**635,4**	**0,01**	**49133,64**	**1095815,8**	**0,13**
9,32	100%	45,32	8006411,5	12193,3	4,7	0,00	346,40	3542,87	0,04
117,79	95%	6,05	3581042,8	3416,4	3,0	0,02	2135,81	6537,52	0,18
139,26	99%	47,02	6905902,2	2459,2	17,7	0,10	5469,22	66340,98	0,96
4,02	100%	168,44	4405097,0	671,2	1,6	0,05	10079,33	13690,35	0,31
220,59	95%	9,45	7522289,0	5196,0	9,7	0,02	2990,75	15702,68	0,21
3,46	99%	73,93	2018046,0	1507,2	0,3	0,01	1695,93	342,40	0,02
10,74	95%	45,14	4187543,2	3159,4	3,3	0,03	1839,53	8669,96	0,21
72,35	100%	12,07	1555021,3	9115,1	8,3	0,06	882,72	8173,00	0,53
62,74	95%	9,71	8122616,7	4008,2	1,8	0,01	2451,63	2153,89	0,03
409,63	100%	12,31	38152271,6	1842,0	52,4	0,07	21158,78	263557,54	0,69
3,57	97%	20,10	742994,7	2948,1	0,8	0,04	416,25	2254,37	0,30
131,21	95%	17,81	10647454,2	3155,9	20,2	0,06	5890,31	58013,09	0,54
10,05	94%	15,36	4718158,4	2030,5	2,2	0,02	1610,89	9267,80	0,20
1113,06	98%	3,32	18173411,9	3127,5	15,1	0,03	5602,90	42763,10	0,24
1,17	100%	709,75	1539019,5	924,1	13,4	0,94	8947,85	136110,83	8,84
43,33	96%	26,88	9354355,7	1997,6	3,5	0,02	5708,52	11924,47	0,13
36,17	99%	65,04	6108602,8	1947,1	15,1	0,13	5495,26	72154,23	1,18
87,62	98%	28,91	3669973,8	3816,3	19,0	0,14	3448,34	46342,80	1,26
62,17	98%	83,24	10755925,4	1710,9	12,9	0,07	14776,29	60354,32	0,56
10,56	95%	27,55	4593125,0	2039,3	2,7	0,03	3834,96	9634,82	0,21
63,97	97%	113,66	48620127,1	6367,3	318,4	0,10	10805,03	489185,52	1,01
20,54	98%	27,77	4815263,4	2016,7	2,6	0,03	5345,29	7311,46	0,15
292,61	98%	7,08	5244832,6	3942,2	7,0	0,03	3322,80	14359,50	0,27
2,62	99%	223,12	2101047,9	1989,2	16,6	0,40	2965,12	80578,08	3,84
3,90	97%	536,01	13099549,4	6475,1	70,3	0,08	4736,47	103891,51	0,79
42,09	100%	1,76	444595,5	12097,0	0,1	0,00	61,12	18,71	0,00
591,33	100%	75,87	20782369,1	2517,2	44,6	0,09	13151,99	163885,71	0,79
98,05	92%	2,81	2867387,7	1782,3	0,5	0,01	1750,62	957,86	0,03
0,28	100%	153,70	41582,2	10138,7	1,1	0,26	42,22	1030,61	2,48
313,53	98%	10,77	13642259,7	2650,1	12,3	0,03	8622,88	37860,95	0,28
6,50	95%	376,82	4687474,8	3579,8	42,3	0,25	4918,78	113176,80	2,41
128,5	**1,0**	**95,4**		**3897,4**				**59670,6**	
3984,2			**271105752,2**		**723,4**	**0,07**	**160503,97**	**1849787,7**	**0,68**

	Country	Net ODA. Annual average received during the years 2005-2009 *	GDP PPP 2009	Multilateral ODA. Annual average received during the years 2005-2009**	5% of multilateral ODA	New MC disbursed and employment created with D ***	Data on No. of MFI in 2009	Average loan balance per borrower in 2009	No. of active borrowers in 2009
MENA	Iraq	11352,4	101468,5	3065,15	153,26	143768,69	6	1066,0	48033
	Jordan	687,4	30245,5	185,61	9,28	8730,32	8	1063,0	159518
	Morocco	1048,7	132663,4	283,15	14,16	36014,88	10	393,1	919025
	Syria	124,0	90593,6	33,49	1,67	2247,41	2	745,0	21327
	Tunisia	424,4	78368,5	114,59	5,73	17052,59	1	336,0	123041
	Yemen	344,5	52879,7	93,01	4,65	33700,11	7	138,0	4691
	Average	**2330,2**				**40252,3**		**623,5**	**212605,8**
	TOTAL	**13981,5**	**486219,1**	**3775,0**	**188,75**	**241514,0**	**34,0**		**1275635,0**
Latin America	Bolivia	722,8	39580,0	195,16	9,76	6575,78	23	1483,9	872655
	Ecuador	232,3	102291,8	62,73	3,14	1961,43	44	1599,0	15175
	El Salvador	211,2	37100,7	57,02	2,85	1996,54	14	1428,0	13157
	Guatemala	457,9	60114,1	123,64	6,18	9171,99	19	674	12509
	Haiti	789,2	10486,2	213,08	10,65	29261,74	6	364,1	109842
	Honduras	599,4	26044,4	161,84	8,09	12483,65	17	648,2	164789
	Nicaragua	840,4	13773,8	226,91	11,35	12237,51	24	927,1	391375
	Paraguay	103,0	26073,3	27,80	1,39	1165,96	6	1192,0	67479
	Average	**494,5**				**9356,8**		**1039,5**	**205872,6**
	TOTAL	**3956,2**	**315464,4**	**1068,2**	**53,41**	**74854,6**	**153,0**		**1646981,0**
Europe	Armenia	329,4	15871,0	88,94	4,45	1597,52	10	2783,7	223123
	Georgia	593,3	19018,7	160,18	8,01	2389,92	11	3351,2	151993
	Moldova	260,2	9241,7	70,26	3,51	1189,87	2	2952,5	23396
	Tajikistan	301,9	12449,9	81,52	4,08	3279,27	26	1243,0	109737
	Ukraine	558,3	263950,0	150,73	7,54	1358,42	2	5548,0	13963
	Uzbekistan	185,0	72486,9	49,95	2,50	2030,49	21	1230	3092
	Average	**371,3**				**1974,2**		**2851,4**	**87550,7**
	TOTAL	**2228,1**	**393018,2**	**601,6**	**30,08**	**11845,5**	**72,0**		**525304,0**
Oceania	P Nguinea	349,6	13947,1	94,40	4,72	3936,42	1	1199,0	4974
	Samoa	52,5	715,4	14,18	0,71	2387,27	1	297,0	4795
	Average	**201,1**				**3161,8**		**748,0**	**4884,5**
	TOTAL	**402,1**	**14662,6**	**108,6**	**5,43**	**6323,7**	**2,0**		**9769,0**
All Total	**Average**	**1095,0**				**54527,8**		**945,2**	**1013548,3**
	TOTAL	**70078,6**	**7869524,6**	**18921,2**	**946,06**	**3489778,9**	**736,0**		**64867093,0**

Source: ODA data from OECD`s (CAD dababase) is measured in Constant Prices (2008 USD millions); GDP PPP measured in constant 2005 international USD and Labor Ma

Note: The sample comprises all countries within the low-income and lower-middle-income economies of the World Bank, that is, all countries showing GDP per capita below 3,

have been excluded since their data is unreliable. Kosovo and Thailand have also been excluded because they have not received ODA in net terms in the last five years. Any c

Note*: Net ODA has tended to level off over the last 5 years, which is why we have chosen this timeframe.

Note**: Since 27% of total ODA is multilateral, we have used these data to calculate multilateral ODA in each country.

Note***: We assume that each new microcredit creates a new microenterprise, and therefore, even in the worst scenario, one new job is created.

Note ****: The variable used to show repayment rate is the "write off" from the MIX Market.

Note *****: Total labor force (from WDI, World Bank) comprises people ages 15 and older who meet the ILO definition of the economically active population: all people who sup

It includes both the employed and the unemployed.

Note ******. GDP per person employed is gross domestic product (GDP) divided by total labor force in the economy.

Note *******. Bearing in mind that job positions promoted by MF are usually "microjobs" or within the informal economy, we have assumed that the GDP per person employed in

Note ********. Assuming productivity=GDP/labor force (which is the same as GDP per person employed), 5% ODA reduction will decrease the employment in GDP/GDP per pe

microfinance sector									
Gross loan portfolio in 2009	Repayment rate ****	Microfinance sector growth rate	Total Labor force in 2008 *****	GDP per person employed ******	New GDP created with D *******	GDP growth rate	Cost (on employment) of 5% ODA reduction ********	Net impact on employment	Employment growth rate
36,02	100%	299,31	7456791,5	13607,5	195,6	0,19	11262,69	132506,00	1,78
117,47	99%	5,47	1878268,2	16102,9	14,1	0,05	576,32	8154,01	0,43
611,70	88%	3,92	11793737,2	11248,6	40,5	0,03	1258,59	34756,29	0,29
18,18	98%	10,54	6732879,3	13455,4	3,0	0,00	124,44	2122,98	0,03
41,36	100%	13,86	3789601,5	20679,9	35,3	0,04	277,07	16775,52	0,44
0,61	100%	718,40	5957945,6	8875,5	29,9	0,06	523,98	33176,12	0,56
137,6	**1,0**	**175,3**		**13995,0**				**37915,2**	
825,3			**37609223,3**		**318,4**	**0,07**	**14023,09**	**227490,9**	**0,60**
1854,27	98%	0,75	4409738,4	8975,6	5,9	0,01	1087,15	5488,63	0,12
29,11	99%	12,93	5737041,4	17830,1	3,5	0,00	175,90	1785,53	0,03
26,47	97%	15,17	2497814,4	14853,2	3,0	0,01	191,95	1804,60	0,07
6,11	98%	73,32	5296301,4	11350,2	10,4	0,02	544,65	8627,34	0,16
51,61	89%	26,64	4379669,0	2394,3	7,0	0,07	4449,83	24811,91	0,57
217,17	97%	7,58	2813639,1	9256,5	11,6	0,04	874,19	11609,46	0,41
472,31	95%	3,13	2278805,9	6044,3	7,4	0,05	1877,04	10360,48	0,45
86,13	98%	1,73	2936572,4	8878,8	1,0	0,00	156,53	1009,43	0,03
342,9	**1,0**	**17,7**		**9947,9**				**8187,2**	
2743,2			**30349582,0**		**49,8**	**0,02**	**9357,24**	**65497,4**	**0,22**
391,20	99%	0,72	1604009,5	9894,6	1,6	0,01	449,44	1148,08	0,07
402,83	97%	1,57	2274708,5	8360,9	2,0	0,01	957,91	1432,01	0,06
51,26	96%	5,09	1477360,8	6255,5	0,7	0,01	561,60	628,27	0,04
110,08	98%	2,99	2810505,8	4429,8	1,5	0,01	920,14	2359,13	0,08
134,34	93%	9,73	23089261,0	11431,7	1,6	0,00	659,26	699,16	0,00
8,78	100%	65,67	12259918,6	5912,5	1,2	0,00	422,41	1608,08	0,01
183,1	**1,0**	**14,3**		**7714,2**				**1312,5**	
1098,5			**43515764,2**		**8,5**	**0,00**	**3970,76**	**7874,7**	**0,02**
5,97	99%	79,14	2854026,5	4886,8	1,9	0,01	965,81	2970,60	0,10
1,42	98%	49,79	62115,7	11517,9	2,7	0,38	61,56	2325,71	3,74
3,7	**1,0**	**64,5**		**8202,4**				**2648,2**	
7,4			**2916142,2**		**4,7**	**0,03**	**1027,37**	**5296,3**	**0,18**
268,8	**1,0**	**70,4**		**6432,2**				**50808,8**	
17204,3			**1203738250,9**		**1740,3**	**0,02**	**238016,07**	**3251762,9**	**0,27**

rket data come from WDI (World Bank); Microfinance data come from Mix Market database.

945 dollars. Zimbabwe, Democratic Republic of the Congo, Lao P.D.R. and Micronesia Fed State

ther exclusion is due to missing observations on MF data. Base sample is composed of 65 countries.

ply labor for the production of goods and services during a specified period.

MF could be equivalent to the lowest decile of the distribution.

rson employed (See footnote 15 in the paper)