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# Sida and innovative finance: The case of loan guarantee schemes

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#### Abstract

Sida is exploiting loan guarantee schemes to leverage finance from the private sector in partner countries. This paper is a literature review of the rationale for and experiences of this type of schemes, focusing on Small and Medium Enterprises. Since, credit rationing and moral hazard problems certainly occur in partner countries, loan guarantee schemes could become an important instrument for Sida. Loan guarantee schemes are popular in many countries and the overall experience seems to be positive. Unfortunately, impact evaluations are uncommon. The schemes have positive effects on short-run financial outcome of companies and, in the long run, economic outcomes are more often positive than negative.

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#### 1 Introduction

Sida is actively looking for ways to improve effectiveness and efficiency of Sweden's development cooperation. There has been a renewed focus on making alliances with the private sector by means of guarantees. This paper is a literature review taking a closer look at the theoretical rationale and empirical evidence considering loan guarantee schemes (LGSs) bearing in mind a comment from Gozzi and Schmukler (2016) that there is little theoretical analysis and empirical evidence of best design, implementation and assessment.

Johansson de Silva, Kokko and Norberg (2015) provide a mapping of existing Joint Development Initiatives (JDI) in Sweden's development cooperation, where JDIs are defined as partnerships for development between the private sector and the public sector. The authors study the extent to which actors in the business sector can act as partners in development cooperation to help fulfil the objectives of aid. Their conclusion is that the business sector can contribute innovation, financial resources and sustainable business practices, but JDIs should only be seen as complementary engagements for Sida. Furthermore, donor funding for JDIs is only motivated if development is enhanced. The authors consider guarantees as a vital JDI with a potential for leveraging<sup>1</sup> private financial resources.

A loan guarantee scheme is a debt policy instrument. Small and medium enterprises (SMEs) might have difficulties in securing loans at financial institutions (FI) due to lack of track record and/or tangible assets. By sharing the risk of defaulting firms and underperforming projects, Sida hopes to increase financial institutions incentive to lend to SMEs. Thus, the LGSs shift part of the costs of potential failure from financial institutions to Sida. The purpose is to leverage financing from the private sector facilitating different development goals, as employment creation, growth and financial inclusion.

LGSs are a common feature in many countries. Politicians appreciate these schemes since a political gain can be achieved at a low cost (Honohan 2009). Green (2003) suggested that more than 2,000 government-backed LGSs directed towards small and medium-sized enterprises (SMEs) were active in more than 100 countries by the end of the 1990s. Around 120 LGSs were active in EU between 2007 and 2013 (European Commission 2016). Gozzi and Schmukler (2016) observe an expansion in LGSs in the aftermath of the 2007 financial crisis. Furthermore, Benn, Sangaré and Hos (2017) report

<sup>&</sup>lt;sup>1</sup> Leverage is defined as the use of public finance and risk mitigation instruments to mobilise private capital (Brown and Jacobs 2011, Pereira 2015). The term financial additionality is sometimes used instead of leverage in the development finance litterature.

an increasing trend in the use of LGSs by bilateral and multilateral donors. The schemes mobilised around 10 billion USD from the private sector in 2015, compared to 7 billion three years earlier.

The paper proceeds with a short presentation of Sida's guarantee portfolio. Theory and rationale for LGSs are presented in section 3. Thereafter I present Sida's as well as international experiences considering guarantees to both SMEs and micro- firms in section 4. The paper is summarized in section 5.

#### 2 Sida's guarantee portfolio

The Swedish Government first allowed Sida in 1999 to provide guarantees on a trial basis and ten years later the guarantees were accepted as a permanent development tool (Devfin Advisors 2014). The purpose of guarantees is to leverage financing from the private sector by sharing risk. The guarantee instrument is very efficient in leveraging contributions by the private sector at potentially very low cost, since the guarantee may never need to be invoked (Johansson de Silva, Kokko and Norberg 2015).

Sida's first guarantees were provided to large projects as the rollout of the mobile telephone system into the rural areas in Uganda and the financing for the Maputo harbour in Mozambique. The portfolio has grown since then and Sida (2016) reports that its total guarantee portfolio in 2016 contains 29 projects with a total guarantee value of SEK 3.3 billion. Sida has a guarantee frame of SEK 10 billion (Devfin Advisors 2014).

Sida uses portfolio guarantees, loan guarantees, volume guarantees and portable guarantees. The focus of the paper is on portfolio guarantees and loan guarantees to SMEs. Portfolio and loan guarantees are the most common types of guarantees used by Sida (Sida 2016). Cedergren and Hellman<sup>2</sup> suggest that Sida currently is focusing on access to credit to small and medium-sized enterprises (SMEs). They believe that most micro-finance projects today are doing well without guarantees. The loan guarantee involves a single loan between identified lenders and identified borrowers, while a portfolio guarantee collects several investments or loans in one portfolio. Sida is also working with volume guarantees, which are an agreement that buyers make with suppliers about purchasing a minimum volume of products or services. This is often combined with a supply contract that determines the prices of future deliveries. Finally, Sida also exploit portable guarantees,

<sup>&</sup>lt;sup>2</sup> Interview the 9th of October 2016.

which is a letter of commitment enabling a borrower to approach a financial institute to negotiate more favourable terms.

Sida's portfolio consists of projects in the area of market development (43% of total guarantee value), environment (34%), health (20%), infrastructure (2%), and democracy and human rights (1%). Considering the regional distribution, 33% is used in Africa, 20% in Asia, 10% in Europe (Bosnia and Herzegovina) and the remaining 37% is being used in global projects (Sida 2016). Sida prefers to cooperate with other donors and in almost half of the projects Sida collaborates with USAID. Sweden, France and USA are the only bilateral donor countries with substantial guarantee programmes (Cedergren and Hellman<sup>2</sup>; Benn, Sangaré and Hos 2017). Sida also cooperates with agencies such as the Gates Foundation, International Finance Corporation (IFC) and Media Development Investment Fund (MDIF) (Sida 2016).

#### **3** Theory and rationale for guarantees

#### 3.1 Basic characteristics of a LGS

A loan guarantee is a popular debt policy instrument, when private SMEs are partially or fully rationed from obtaining loans from financial institutions (FIs). Reasons could be that the SMEs lack track record or collateralised assets. Cowling (2017) considers the role of the public sector as an insurance broker. The government is insuring the lending financial institution against a proportion of a possible default cost.

The core parameters of a loan guarantee programme are;

- 1. The level of guarantee.
- 2. The maximum size of loan.
- 3. The maximum term of loan.
- 4. The interest rate premium.
- 5. The arrangement fee.

Cowling (2017) considers the parameters to be simple to understand and they also allow for a large degree of flexibility when policy makers need to reshape or refocus the schemes. The simplicity is considered being a main reason for the success of LGSs.

The level of guarantee indicates the share of the outstanding debt that is covered by the government/Sida. Levitzky (1997) argues that the financial institutions participating in the LGS should preferably assume 30% to 40% of the risk. The FI should never assume less than 20%, since it will affect the incentives to provide and monitor the loans. If the FIs are forced to accept more than 50%, it might be difficult to find participants. Beck, Klapper and Mendoza (2010) look into 76 schemes in 46 developed and developing countries and observe that there is a large variation in offered guarantee. The median coverage is 80%. As many as 40% of the schemes offers up to 100% coverage. Many other offer less than 50%. The maximum size and term of loans are factors affecting the banks risk taking. The government would sometimes like the financial institutions to provide larger loans on longer terms than normal.

The interest rate premium is the margin the government/Sida receives for guaranteeing the loan, covering the opportunity cost of capital. The arrangement fee is intended to cover administration costs. Gozzi and Schmukler (2016) report that most schemes charge annual fees of about 2% of guaranteed amount to cover both administration and opportunity costs.

Another aspect to consider when designing a LGS is whether the management should be managed by the public sector or whether all or parts should be outsourced to FIs. There are numerous LGSs where the public sector participates in management (Gozzi and Schmukler 2016). In this paper, I focus on full outsourcing, where Sida subcontracts credit appraisal and monitoring to local financial institutions enhancing financial development and sustainability.

#### 3.2 The rationale of guarantees

When should governments and donors exploit the guarantee instrument? Honohan (2009) advocates that credit guarantee schemes offer genuine advantages to direct government lending. The credit risk is shared with a profit-oriented financial institution. Thus, credit appraisal and monitoring are outsourced. Barder and Talbot (2015) are slightly more negative to the guarantee instrument, since a moral hazard problem might occur. They mean that an instrument that insulates the banks from some or all of the risks with lending might result in the banks making less effort in finding good projects. The authors prefer instruments that raise returns for investors, such as advanced market commitments (AMCs)<sup>3</sup>.

<sup>&</sup>lt;sup>3</sup> AMCs are financial committments to guarantee a viable market for new products or technologies. For instance, Gavi, the Vaccines Alliance, has used an AMC to incentivize the development of a vaccine for pneumococcal strains (Kenny and O´Donnel, 2017).

The motivation of governments and/or donors for exploiting the guarantee instrument is that net welfare in the society should increase. The government needs to be sure that benefits in increased welfare are larger than costs. Honohan (2009) suggests three possible sources of welfare improvement. First, the financial market might perform better with LGSs. Second, welfare increases can also be attained by correcting for endowment inequality. Lack of collateral is most acute for low wealth people. Thirdly, providing access to finance to households and/or enterprises could generate positive externalities on profits and employment. These issues are discussed in section 3.3 below.

Thus, the government/donor needs to evaluate if the resulting change in credit allocation is providing improved welfare. Considering costs, the upfront cash commitment is small. Since guarantees are commitments to repay loans in case of default the underwriting costs might be low. However, no underwriting cost at all is not a favourable outcome. If the guarantees are not called, they have no value to the investors. If the investments were risk-free, banks would lend directly, obviating the problem guarantees are meant to solve (Barder and Talbot 2015). Riding and Haines (2001) report that default rates for loans backed by public guarantees in rich countries vary considerably from lower than 5% in Germany to more than 40% in the United Kingdom. Beck, Klapper and Mendoza (2010) estimate the average default rate to 6% for loan guarantees and 4% for portfolio guarantees, when investigating 76 LGSs across 46 countries. There are also operating costs that can be covered by fees and premiums paid. Honohan (2009) reports that net fiscal costs are in the range of zero to 15% per annum of outstanding guarantees, investigating some current examples of large schemes from different countries.

Benefits are more difficult to estimate. The guarantees create leverage by increasing the total volume of lending because they enable private lending that otherwise would not have happened. Sinha, Holmberg and Thomas (2013) suggest that for additionality to occur, the participating financial institutions must be willing to risk some funds of their own. Furthermore, the recipients should ideally be first time borrowers or belong to a type of business that earlier has been excluded. Barder and Talbot (2015) points out that there is an inherent trade-off between leverage and risky projects, since more leverage is created by riskier projects.

Arping, Lóránth and Morrison (2010) show in their model that credit guarantee schemes can raise welfare if the entrepreneurs are capital-constrained and face a moral hazard problem. The guarantees will enhance entrepreneurial effort incentives. However, if the guarantee schemes are excessively generous, the entrepreneurial effort might be undermined. The model also shows that

state support for the entrepreneurial sector is likely to be damaging in countries whose legal and political institutions are under-developed.

#### 3.3 Financial market development

Sida has financial sector development as a key development objective for most guarantee projects. Financial markets and institutions perform an essential function by channelling funds from creditors to borrowers as firms that have productive investment opportunities. Numerous studies suggest a positive relationship between financial development and economic growth (Roubini and Sala-i-Martin 1995, Levine 2005, Demirgüç-Kunt and Levine 2008). Thus, well-functioning financial systems promote economic growth. Furthermore, Pagano and Pica (2012) supports the results that financial development is associated with greater employment growth, but the result is only valid in poorer non-OECD countries. The authors are investigating data on 63 countries between the years 1970-2003. Thus, financial sector development might be more important in less developed countries with less well-functioning financial sectors creating obstacles to economic growth.

Particularly financial inclusion has been placed on the policy agenda in many developing countries. The expression refers to access to reasonably priced financial services by enterprises and households. Beck (2016), though, suggests that evidence on a positive impact of financial inclusion on individual and aggregate welfare has not been conclusive. The author believes that financial deepening is more vital for economic growth than financial inclusion or that a more effective credit allocation is more important than the "democratization of credits". An efficient financial system, providing savings and payment services, can help people out of poverty, even without providing them with direct access to credit services. Furthermore, the author believes that financial innovation, including new delivery channels, new products and new intermediaries, are important.

Suri and Jack (2016) support the point raised by Beck above. The authors investigate effects of introducing a transformative financial innovation as mobile money in the form of M-PESA in Kenya. They find both short-run and long run positive effects. In the short-run, mobile money allowed individuals to allocate labour, savings and risk in a more effective way. The long-run results suggest that M-PESA lifted two percent of Kenyan households out of poverty. The positive effects are more pronounced for poor women and members of female-headed households. The authors suggest that access to basic low-cost financial services such as the ability to safely store, send, and transact can reduce poverty rates among vulnerable groups.

From Sida's perspective, it is important to ensure that the scheme leads to actual leverage in the form of new capital available, instead of merely a redistribution of capital between sectors and/or regions, since many partner countries are deprived of capital. If the financial markets are reasonably efficient and only redistribution is achieved, it is likely that the LGSs create less efficient use of existing capital by disturbing the existing general equilibrium. On the other hand, if the financial markets are inefficient in distribution of loans, a reallocation of capital could be an improvement. Thus, Sida needs to examine the potential effects of the schemes very carefully.

If financial sector development is to be achieved, the LGSs need to create sustainability. Preferably, the local banks should keep the structure being introduced during the LGS considering loan appraisal criteria and processes, and not return to their old structure (Sinha, Holmberg and Thomas 2013, Pande et al 2012).

#### 3.4 Credit rationing

Stiglitz and Weiss (1981, 1983) have shown that asymmetric information is an impediment to a wellfunctioning financial system. Asymmetric information means that the parties to a financial contract do not have the same information. Normally, borrowers have much better information about the potential returns and risk associated with the investment projects than the financial institute providing the loan. Asymmetric information leads to two basic problems: adverse selection and moral hazard.

Adverse selection occurs before the loan transaction. Potential bad credit risks are the ones who most actively seek out a loan. Thus, borrowers who are the most likely to produce an undesirable outcome are most likely to get access to credit. To minimize this problem the lenders must screen out good from bad credit risks. Moral hazard occurs after the loan transaction takes place and implies that the borrowers engage in activities undesirable for the lender. The borrower might misallocate funds for her own personal use or undertake investment in unprofitable projects. The moral hazard problem results in financial institutes trying to monitor the borrower's activities (Mishkin 1997).

The adverse selection problem can lead to credit rationing (Stiglitz and Weiss 1981, 1983). According to the standard model in economics, a capital shortage would result in an increase in the interest rate. Credit rationing result in a situation where the financial institutes will deny giving credits to

borrowers even when these are willing to pay a higher interest rate. The banks are aware that higher interest rates lead to a more severe adverse selection problem with more high-risk investments.

#### 3.5 How to evaluate guarantee schemes

A guarantee scheme evaluation is quite straightforward if the government/donor considers overcoming a credit rationing problem due to asymmetric information. The benefits from this type of programmes occur directly to the enterprises in the form of outcomes such as access to finance, firm survival rate, and firm employment/wages. An impact evaluation is comparing outcomes for firms within the scheme relative to a comparison group providing a counterfactual of what would happen in the absence of the programme.

WWCLEG (2016) surveyed 1,450 policy evaluations and reviews of access to finance programmes to businesses in OECD countries. Only 27 impact evaluations met the Centre's minimum standards. The Centre prefers randomized control trials (RCTs), but also accepts quasi-experimental approaches making treatment and control groups comparable. The quasi-experimental set-ups might exploit certain restrictions on lending programmes, staggered introductions, or changes in programmes providing necessary variation. In a sense, researchers try to mimic randomized designs by using observational data to construct two groups that, as far as possible, are identical and differ only in their exposure to treatment (Deaton and Cartwright 2016).

The randomised control trials (RCTs) are often considered the gold standard of evaluation. If firms are randomly selected to either participate in the programme or not, the treatment and the control group will be comparable in terms of observable attributes. RCTs have the advantage that both the intervention and the data collection are under the control of researcher. The RCTs have several shortcomings though, making the implementation of these real-world experiments challenging and problematic. There is an issue of external validity: what works in India might not work in Pakistan, and what works in rural areas might not work in urban areas. The expansion of a successful smaller access to finance scheme into larger areas might result in unclear second- and third-round effects. In addition, RCTs measure mostly short-term immediate effects. There are also practical challenges, for example, policy makers may be unwilling to randomise. RCTs are also costly and they might face budgetary limitations (Buera, Kaboski and Shin 2012, Deaton and Cartwright 2016, IEG 2015, WWCLEG 2016).

As mentioned before, Honohan (2009) notes that politicians in OECD countries have long appreciated the guarantee schemes, since a political gain can be achieved at a low cost. WWCLEG (2016) observes that many government-sponsored evaluations that look at outcomes do not use credible strategies to assess the causal impact of policy interventions. Government usually have strong systems to monitor inputs and outputs, while they are less good as outcomes. The low number of impact evolutions noted by WWCLEG might be a result of lack of political interest to perform relevant evaluations.

When programmes are aiming at maximising net social welfare in the society the short-term assessment of the RCTs are not good enough. A simplified focus on enterprises in this case will probably underestimate the benefits at a wider national area. The evaluations are more difficult to perform due to the complexity of the programmes objectives that for instance can be economic growth or reduced income inequality (WWCLEG 2016). IEG (2015) points out that if financial inclusion and sustainability are objectives, longer-term assessments are desirable since spill over effects can be significant.

Olofsgård (2014) points out that RCTs have been used very sparsely by Sida. The author suggests that RCTs should be a part of the toolbox of aid agencies, since it can help decision makers better allocate resources to make a difference in the life of aid recipients. In addition to getting a better understanding of impact, the method would also give Sida more credibility as development partner.

#### 3.6 Summary – theory

The core parameters in a LGS are simple to understand and they allow for flexibility. The risk sharing should preferably be 30-40% for the FIs and 60-70% for the government/Sida. Operational costs are covered by fees and premiums. Costs occur to the government/Sida only when SMEs fails to honour the loan agreement. The default rates vary at lot among LGSs, averaging 5-10%.

The rationale for LGSs is that credit rationing exists, making it difficult for SMEs to attain loans from FIs. When the default risk is shared with the government/Sida, the FIs are expected to increase their risk taking. Thus, the LGSs will leverage new financial capital. From Sida's perspective, it is important that new capital is leveraged. Merely reallocation of capital from one sector to another might result in less effective distribution. Net welfare in society should increase when credit rationing is alleviated. Welfare improvement could come in the form of financial sector development (FSD), reduced income inequality and increased economic growth. These welfare improvements are also interlinked. For instance, a well-functioning financial sector promotes economic growth. Sustainability is vital for FSD.

Loan guarantee schemes need to be properly evaluated. If private sector development (PSD) is the main objective of the scheme, RCTs are preferable. When the LGSs have welfare improvements as objectives, quasi-experimental set-ups are preferred, since RCTs then are too focused on enterprises and might underestimate the long-run impacts.

#### 4 International experiences of guarantees

This section is divided into three parts. First, I focus on LGSs that have been properly evaluated. Thereafter, the experiences of Sida, USAID and the World Bank Group are presented. Benn, Sangaré and Hos (2017) report that OPIC and USAID are the most important bilateral donor organisations, accounting for around 86% of the private sector finance mobilisation in 2012-2015. The World Bank Group is dominating the multilateral scene in a similar way. IBRD, IFC and MIGA accounted for 73% of finance mobilisation the same years. Thirdly, experiences of microcredits are discussed. LGSs to microenterprises differ from LGSs to SMEs, but since many microcredit schemes are properly evaluated, I have decided to include the experiences here.

#### 4.1 International experiences of guarantees to SMEs

WWCLEG (2016) appraise 1,450 policy evaluations and evidence reviews from OECD countries. The Centre investigates evaluations and reviews concerning access to finance, that is a broader area than the LGS. WWCLEG defines access to finance programmes being public loans, LGS, financial education or information, and alternative forms of lending. Only 27 impact evaluations met the Centre's minimum standards and 11 of these evaluated loan guarantee schemas. Below I look closer at the results of some of these LGSs. Considering short-run financial outcomes as improved credit availability, reduced borrowing costs and an improved debt situation, positive results were reported in Japan (Ono, Uesugi and Yasuda 2013, Useugi, Sakai and Yamashiro 2006), Italy (Zecchini and Ventura 2009, D'Ignazio and Menon 2012) and France (Lelarge, Sraer and Thesmar 2008). A negative outcome when it comes to default risk were reported in Japan (Uesugi, Sakai and Yamashiro 2006) and France (Lelarge, Sraer and Thesmar 2008). Overall, guarantee programmes seem to have a

positive effect on firm's access to finance and sometimes cost of borrowing. There is some evidence that loan guarantees may increase default risk. Considering economic outcomes, the evidence on improved firm performance is weaker, making it harder to assess whether LGSs have long-run effects supporting economic growth. Oh, Lee, Heshmati and Choi (2009) suggest that the LGS in Korea had positive effects on firm survival, employment at firm level, wages and sales. Chandler (2012) notes that SMEs in Canada hire more people and increase their turnover when participating in a LGS. Useugi, Sakai and Yamashiro (2006) find evidence of improved profits in Japan. Negative outcomes on wages were found in USA (Johnson 2009) and on turnover in Japan (Ono, Uesugi and Yasuda 2013).

Arráiz, Meléndez and Stucchi (2012) have evaluated a partial credit guarantee programme for SMEs in Colombia. By using propensity score matching and difference-in-difference estimations, they found that the scheme had a positive impact on firm growth in output and employment. There was no evidence of an effect on productivity, wages or investment. Thus, the firms seemed to use the credit as working capital.

López Acevedo and Tan (2010) have looked into the effects of more than 150 programs in Mexico during the period 1994-2005. The authors perform an impact evaluation by comparing around 12,000 companies that participated in one or more SME programmes with 18,000 companies that did not. While some programmes had trivial effects, others had significantly improved effects of 5-6% on value added, gross production, total sales, employment and fixed assets. These effects occurred mainly after four years. The authors suggest that the size of assistances and support for innovation are decisive factors and that the successful programmes might have focused on the crème of SMEs, being mid-sized exporters with relatively up-to-date technology.

#### 4.2 Experiences of Sida, USAID and the World Bank Group

Since impact evaluations rarely have been used by Sida, USAID and the World Bank Group, this section is based merely on mixed methods approaches. Carnegie Consult (2016a, 2016b, 2016c) has evaluated four of Sida's guarantee programmes, by using a mixed method approach based on financial data, interviews and a document review. Carnegie Consult addressed the evaluation criteria of relevance, efficiency, impact, sustainability and additionality, and points out that the evaluations were not in a position to discuss the impacts of the interventions. In general, the company believes that these guarantees are useful instruments contributing positively to private sector development.

The evaluations further pinpoint the importance of Sida working with suitable banks as well as introducing competition between banks. Below the four interventions are presented.

The SME health sector programme in Uganda is portfolio guarantee schemes, where Sida is cooperating with USAID and the Centenary Rural Development Bank (CRDB). The guarantee covers loans to SMEs, micro-enterprises as well as healthcare workers. The total loan coverage is 60% shared by Sida and USAID. CRDB had to pay an origination fee of 1% to Sida and a utilization fee of 0.75% per annum to USAID. Technical Assistance was not included in the agreement. The main goal of the intervention is to promote access to private healthcare in rural areas. Carnegie Consult believes that the objectives as well as the set-up are relevant. They are also positive to the selection of CRDB as implementing financial institution, but they believe that more banks could be included, since competition would stimulate the guarantee use. CRDB was considered being successful in implementing the guarantee. After almost four years, around 64% of the available guarantee volume had been used and 109 loans had been extended. Two loans defaulted, but no guarantee claims were made. A majority of the loans (86%) went to existing borrowers that could benefit from larger and longer-term loans, enabling these firms to expand their businesses. Carnegie Consult considers the intervention being additional. Concerning sustainability, there is no indication of changed behaviour at CRDB or that other financial institutions ventured into the health sector. In 2013, the guarantee was extended to the EcoBank (Sida 2016).

The SME programme in Bosnia-Herzegovina is also a portfolio guarantees scheme, where Sida is cooperating with USAID and the Raiffeisen Bank. Sida and USAID share the risk of the guarantees equally with 25% each. The intervention had initially a low utilisation due to the banks conservative approach to the instrument. Lending to SMEs is not the core activity of Raiffeisen Bank. Carnegie Consult believes that additionality is doubtful. Most borrowers were already clients in the bank. Sida and USAID have decided to provide new guarantees to SMEs in Bosnia-Herzegovina through other financial institutions (Sida 2016).

The corporate bond guarantee for MTN Uganda was Sida's first independent guarantee. MTN issued a corporate bond on the local bond market to fund the rollout of the mobile telephone system into the rural areas. The guarantee covered 100% of the principal amount up to 80 million SEK. Sida charged MTN a fee of 3% annually. The project was a commercial success. MTN repaid the bond before its maturity and the guarantee was never used. Carnegie Consult suggests that the intervention served to speed up the expansion. The instruments long-term objective of financial market development was not met. The bond market remains limited in Uganda.

In the Global Commercial Microfinance Consortium II (CMC) project, Sida is sharing the first loss position with Deutsche Bank. The CMC is an innovative \$100 million global impact fund lending money to microfinance institutions (MFI) in developing countries. Sida hoped to encourage global private investors to lend money to the fund. The fund has a layered structure, where less risky lenders enjoy priority for repayment. So far, the fund has invested in 31 microfinance institutions and three social enterprises (Sida 2016). Carnegie Consult considers the additionality of the instrument being limited. For instance, CMC has faced difficulties in reaching MFIs in Africa, since these have received better conditions from different development agencies. All loans were repaid.

Since Sida often cooperates with USAID, I present below an evaluation done on USAIDs guarantee programme in Ethiopia. The evaluations follow six dimensions; appropriateness of design, utilization, credit additionality, financial sustainability, sustainability and impact on borrowers. Amha, Butterfield, Jiffar and Ahlstrom (2016) inform that they are not performing an impact evaluation, only a performance evaluation based on qualitative information. The programme is focusing on SMEs in agriculture, health, to diaspora and women entrepreneurs. The evaluators consider the design of the scheme being appropriate. The objective of getting financial institution to serve new clients are met, sine 37% were first-time borrowers. Wider objectives are fostering competitive behaviour among banks and supporting a sustainable deepening of the financial sector. The utilization rate is low, but it differs a lot between the seven banks handling the guarantee. There is no clear additionality, since the banks have performed differently. The large share of first-time borrowers suggests some additionality, though. Amha et al. cannot say much on sustainability or impact on borrowers. In addition, the evaluators recommend USAID to perform impact evaluations in the future.

IEG (2009) investigates the experiences of guarantees of the World Bank Group (WBG) between the years 1990-2007 and concludes that guarantee instruments have been largely effective in supporting WBG strategic objectives. MIGA had issued 897 guarantees, supporting small and medium-size investments. IFC had approved 196 guarantee operations, mainly focusing on trade, investments and access to finance for SMEs in low-income countries. The World Bank had issued 25 guarantees, facilitating the flow of investment into large infrastructure projects in high-risk countries. IEG found the instrument to be especially valuable in enabling projects in high-risk sectors and countries, as well as solving asymmetric information problems in financial sectors. This conclusion should be treated carefully though, since IEG (2014) notes that interventions by the WBG have rarely been

evaluated in terms of impact or efficiency. The report mentions that the WBG is making progress and newer projects typically have more rigorous monitoring and evaluation frameworks.

#### 4.3 International experiences of microcredits

IEG (2015) defines microfinance as attempts to provide financial services to households and microenterprises. Typically, these are low-income, self-employed or informally employed individuals. Banerjee, Duflo, Glennerster and Kinnan (2015) look at impact evaluations of microcredit schemes in six countries (Bosnia, Ethiopia, India, Mexico, Morocco and Mongolia) and their summary of results is that microcredits are not the miracle solution pulling millions out of poverty. There are consistent positive effects on investment, business size and profits, but these are not large enough to become transformative. For instance, there is no statistically significant increase in either household income or household consumption.

One reason for the meagre result is that modest take-up rates of credit indicate that credit might not be a constraint to microenterprises. The take-up rates vary between 17% and 31% amongst the target population. Another plausible explanation is that people borrow to relax consumption constraints and not really for the purpose of expanding their business. They might invest part of the loan to make sure that they can repay it, but most of the borrowed money will be consumed. This can be particularly true for women, putting the immediate needs of household members before the more long-term needs of their business. At the same time studies indicate that return to investment is higher than the cost of loans in both Mexico (McKenzie and Woodruff 2008) and Sri Lanka (de Mel, McKenzie and Woodruff 2008). De Mel, McKenzie and Woodruff (2008) show that in Sri Lanka returns varies with entrepreneurial ability, household wealth and gender. Female-owned enterprises reported no positive returns, while enterprises owned by males did. Finally, microcredit borrowers might not be interested in expanding their businesses. If poor are self-employed merely because no formal jobs are available, they might not be interested in developing their business (Banerjee 2013).

IEG (2015) suggests that poor results with regard to enterprise growth in the medium and longer term might be a result of microfinance institutions working with the principle of double (profit and social impact) or triple (profit, social and environmental impact) objectives. These institutions are often donor driven and the social impact objective might be more important than enterprise profit and growth.

Leatherman and Dunford (2010) report positive effects of linking microfinance loans to healthrelated services. By adding health education to the weekly or monthly meetings with borrowers, the health status of participants and their household members improved. Thus, improved knowledge resulted in positive behavioural change. The authors report fewer cases of diarrhoeas in the Dominican Republic, less physical or sexual abuse in South Africa, less malaria in Ghana and improved HIV prevention in Uganda.

#### 4.4 Summary - international experiences

Only few impact evaluations have been performed on LGSs. Most of these focus on private sector development (PSD). Thus, while theory indicates positive welfare effects in the long-run, the evaluations focus more on short-term PSD. Some evaluations try to capture a possible economic growth effect by investigating the economic outcomes of enterprises, but it is still PSD being evaluated.

Overall, the programmes seem to have positive effects on short-run financial outcomes, as firm's access to finance and cost of borrowing. The evidence becomes weaker looking at long-run economic outcome, but these outcomes are though more often positive than negative. Evidence from Mexico shows that some programmes had trivial effects, while others had a significant positive effect on economic outcomes. The size of assistance and support for innovation are important factors, indicating that the successful programmes might have focused on the crème of SMEs.

The donor community have mostly used mixed methods approaches in their evaluations. The evaluations of some Sida schemes show that the design is reasonable and choice of financial institution is important.

The microcredits are not a miracle solution. Modest take-up rates indicate that credit might not be a constraint to microenterprises. The firms might loan to relax consumption constraints and not to expand their business.

#### **5** Conclusion

Loan guarantee schemes could be an important instrument for Sida, since credit rationing for SMEs most probably exist in countries receiving development assistance from Sweden. The instrument is easy to understand and it allows for a large degree of flexibility. Although the overall cost for Sida is limited, the organisation need to be careful when designing the LGSs. Operating costs are covered by fees and premiums and the only cost accruing to Sida occur when SMEs fail to honour the loan agreement. On the one hand, a zero default rate is cost saving; on the other hand a zero default rate might indicate the scheme being unnecessary. The LGS should enhanced risk-taking by both financial institutions and SMEs, implying that some enterprises might fail to comply with loan conditions. Since Sida outsources credit appraisal and monitoring, choice of partner bank is important. Furthermore, Sida need to be confident that the LGSs are leveraging new finance instead of merely redistributing existing capital, creating less efficient capital allocation.

Evidence by means of impact evaluations indicates that private sector development is enhanced through LGSs. In short-term, SMEs access to finance is improved and their cost of borrowing is lowered. The long-run impact on SMEs is weaker, but the economic outcomes are more often positive than negative. Some SMEs report positive effects on firm survival, profits, sales, employment at firm level and wages. The Mexican experience is of particular interest. By focusing the guarantees to mid-sized exporters with relatively up-to-date technology, the schemes had significant improved effects on economic outcomes.

Since I found no evaluation covering the effect of LGSs on financial sector development, reduced inequality or economic growth, the reasoning below will be of a more speculative nature. If a LGS is suitably designed, creating leverage and attaining sustainability, then financial sector development (FSD) is achieved. Furthermore, FSD enhances economic growth. As mentioned above, LGSs most probably supports PSD both in the short-term and the long-term, and this will enhance economic growth.

When investigating long-run aspects as economic growth, reduced inequality and financial sector development, experimental methods should be exploited. Since most partner countries perform enterprise surveys on a regular basis, an additional section covering participation in LGSs could be included in the survey. This improved data collection could then be used to perform impact evaluations.

#### Literature:

Amha W., Butterfield W., Jiffar F. and Ahlstrom L. (2016). Opening Doors: A Performance Evaluation of the Development Credit Authority (DCA) in Ethiopia. USAID/Ethiopia. May. Addis Ababa.

Angelucci M., Karlan D., and Zinman J. (2015). Microcredit Impacts: Evidence from a Randomized Microcredit Program Placement Experiment by Compartamos Banco. *American Economic Journal: Applied Economics* 7(1): 151-182.

Arping S., Lóránth G. and Morrison A. (2010). Public initiatives to support entrepreneurs: Credit guarantees versus co-funding. *Journal of Financial Stability* 6;26-35.

Arráiz I., Meléndez M. and Stucchi R. (2012). Partial credit guarantees and firm performance: evidence from the Colombian national guarantee fund. Working paper 02/12. Office of Evaluation and Oversight. Inter-American Development Bank.

Banerjee A. (2013). Microcredit Under the Microscope: What Have We Learned in the Past Two Decades, and What Do We Need to Know? *Annual Review of Economics*. 5:487–519.

Banerjee A., Duflo E., Glennerster R. and Kinnan C. (2015). The Miracle of Microfinance? Evidence from a Randomized Evaluation. *American Economic Journal: Applied Economics* 7(1): 22–53

Banerjee A., Karlan D. and Zinman J. (2015). Six Randomized Evaluations of Microcredit: Introduction and Further Steps. *American Economic Journal: Applied Economics* 7(1): 1-21

Barder O. and Talbot T. (2015). Guarantees, Subsidies, or Paying for Success? Choosing the Right Instrument to Catalyze Private Investment in Developing Countries. Center for Global Development. Working Paper 402. May 2015.

Beck T. (2016). Financial Inclusion – measuring progress and progress in measuring. Cass Business School, City, University of London.

Beck T., Klapper L. and Mendoza J. (2010). The Typology of Partial Credit Guarantee Funds around the World. *Journal of Financial Stability*, volume 6, issue 1, pages 10-25.

Benn, J., Sangaré, C. and Hos, T. (2017). Amounts mobilised from the private sector buy official development finance interventions; guarantees, syndicated loans, shares in collective investment vehicles, direct investment in companies and credit lines. OECD development co-operation working paper 36, July 2017.

Brown J. and Jacobs M. (2011). Leveraging private investments: the role of public sector climate finance. Overseas development Institute. April 2011.

Buera F., Kaboski J. and Shin Y. (2012). The macroeconomics of microfinance. NBER working papers series 17905. Cambridge.

Carnegie Consult (2016a). Evaluation of Sida's use of guarantees for market development and poverty reduction. Evaluation report 2016:1. Sida. Stockholm.

Carnegie Consult (2016b). Case Studies for Evaluation of Sida's use of guarantees. Evaluation report 2016:2. Sida. Stockholm.

Carnegie Consult (2016c). Evaluation of Sida's use of guarantees for market development and poverty reduction. Centenary Rural Development Bank Health Guarantee. Intervention Paper. Sida. Stockholm. 27 May.

Chandler V. (2012). The economic impact of the Canada small business financing program. *Small Business Economics*. Volume 39, pp 253-264.

Cowling M. (2017). Loan Guarantee Schemes as a policy instrument for financing entrepreneurial business. PM 2017:04. Tillväxtanalys. Östersund. Sweden.

Deaton A. and Cartwright N. (2016). Understanding and Misunderstanding Randomized Controlled Trials. NBER Working Paper No. 22595. National Bureau of Economic Research. September 2016.

De Mel S., McKenzie D. and Woodruff C. (2008). Returns to Capital in Microenterprises: Evidence from a Field Experiment. *Quarterly Journal of Economics* 123 (4): 1329-1372.

Demirgüç-Kunt A. and Levine R. (2008). Finance, Financial Sector Policies, and Long Run Growth. M. Spence Growth Commission Background Paper, No 11, World Bank, Washington, DC.

DEVFIN Advisors (2014). Innovative Finance: Gap analysis. Report to Sida. June. Stockholm

D'Ignazio A. and Menon C. (2012). The causal effect of credit guarantees for SMEs: evidence from Italy. Spatial Economics Research Centre. Discussion Paper 123. December.

EDFI (2014). Evaluation of the effectiveness of EFDI support for SME development in Africa. European Development Finance Institutions. Brussels. May.

European Commission (2016). Ex post evaluation of the ERDF and Cohesion Fund 2007-13. Commission staff working paper. SWD (2016) 318 final. Brussels.

Goldberg Raifman J., Lam F., Madan Keller J., Radunsky A. and Savedoff W. (2017). Evaluating Evaluations: Assessing the Quality of Aid Agency Evaluations in Global Health. Center for Global Development. Working Paper 461 August.

Gozzi J and Schmukler S. (2016). Public credit guarantees and access to finance. Warwick Economics research paper series. Series number 1122. June. Warwick.

Green A. (2003). Credit Guarantee Schemes for Small Enterprises: An Effective Instrument to Promote Private Sector-Led Growth? SME technical working paper series. Working paper no 10. UNIDO.

Hansen A., Kimeria C., Ndirangu B., Oshry N. and Wendle J. (2012). Assessing Credit Guarantee Schemes for SME Finance in Africa. AFD Working Paper 123. Agence Française de Développement. Paris. April.

Honohan P. (2009). Partial credit guarantees: Principle and practice. Journal of Financial Stability 6.

IEG (2015). Microfinance: a critical literature survey. IEG working paper 2015/no.4. Independent Evaluation Group. World Bank Group.

IEG (2009). The World Bank Group Guarantee Instruments 1990–2007: An Independent Evaluation. Independent Evaluation Group. World Bank Group.

IEG (2008). Financing Micro, Small and Medium Enterprises. An Independent Evaluation of

IFC's Experience with Financial Intermediaries in Frontier Countries. Independent Evaluation Group. World Bank Group.

IGC (2015). Firm capabilities and economic growth. Evidence paper. International Growth Centre. 11 April, 2014.

Johansson de Silva S., Kokko A. and Norberg H. (2016). Now open for business: Joint development initiatives between private and public sectors in development cooperation. Expertgruppen för biståndsanalys, report 2015:06. Stockholm.

Johnson J. (2009). Rural economic development in the United States. An evaluation of the US Department of Agriculture's Business and Industry Guaranteed Loan Program. *Economic Development Quarterly*. Volume 23, pp 229-241.

Kenny, C. and O´Donnel, M. (2017). Expanding Women's Role in Developing Technology: Increasing Productivity, Improving Lives. CGD Notes, Center for Global Development. January 19 2017.

Leatherman S. and Dunford C. (2010). Linking health to microfinance to reduce poverty. *Bulletin of the World Health Organization* 2010:88:470-471.

Lelarge C., Sraer D. and Thesmar D. (2008). Entrepreneurship and credit constraints – evidence from a French loan guarantee program. Institute national de la statistique et des études économiques. Documents de travail. No G2008/07.

Levine R. (2005). Finance and Growth: Theory and Evidence. In *Handbook of Economic Growth*, ed. Aghion, P. and Durlauf, S. Amsterdam: Elsevier.

Levitzky J. (1997). Credit guarantee schemes for SMEs – an international review. *Small Enterprise Development*, volume 8, number 2.

López Acevedo G. and Tan H. (2010). Impact Evaluation of SME Programs in Latin America and Caribbean. The World Bank. Washington.

McKenzie D. and Woodruff C. (2008). Experimental Evidence on Returns to Capital and Access to Finance in Mexico. *World Bank Economic Review* 22, 457–482.

Mishkin F. (1997). The Causes and Propagation of Financial Instability: Lessons for Policy Makers. Paper presented at Federal Reserve Bank of Kansas City. Available: http://www.kansascityfed.org/publicat/sympos/1997/pdf/s97mishk.pdf

Oh I. and Lee J. (2011). Comparison of effects from different institutions: public credit guarantee in Korea. *Asian Economic Journal*. Volume 25, pp 331-353.

Oh I., Lee J., Hesmati A. and Choi, G. (2009). Evaluation of credit guarantee policy using propensity score matching. *Small Business Economics*. Volume 33, pp 335-351.

Olofsgård A. (2014). Randomized controlled trials: strengths, weaknesses and policy relevance. Rapport 2014:1 till Expertgruppen för biståndsanalys. Stockholm.

Ono A., Uesugi I. and Yasuda Y. (2013). Are lending relationships beneficial or harmful for public guarantees? Evidence from Japan's emergency credit guarantee program. *Journal of Financial Stability*. Volume 9, pp 151-167.

Pande R., Cole S., Sivasankaran A., Bastian G. and Durlacher K. (2012). Does poor people's access to formal banking services raise their incomes? EPPI-Centre. Social Science Research Unit. Institute of Education. University of London.

Pagano M. and Pica G. (2012). Finance and employment. *Economic Policy* 27 (69): 5-55. Oxford University.

Pereira J. (2015). Leveraging aid: a literature review on the additionality of using ODA to leverage private investments. UK Aid Network.

Riding A., Madill J. and Haines G. (2007). Incrementality of SME Loan Guarantees. *Small Business Economics* 29:47-61.

Riding A. and Haines G. (2001). Loan guarantees: Cost of Default and Benefits to Small Firms. *Journal of Business Venturing* 16(6): 565–612.

Roubini N. and Sala-i-Martin X. (1995). A Growth Model of Inflation, Tax Evasion and Financial Repression. *Journal of Monetary Economics*, vol 35.

Sida (2016). Sida's guarantee portfolio. Available:

https://www.sida.se/contentassets/b0a25e34cf0f4035b4b82ff6a58d942c/18708.pdf

Sinha S., Holmberg J. and Thomas M. (2013). What works for market development: a review of the evidence. UTV Working Paper 2013:1. Sida, Stockholm.

Stiglitz J. and Weiss A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review*, volume 71, 393-411.

Stiglitz J. and Weiss A. (1983). Incentive effects of terminations: applications to the credit and labour markets. *The American Economic Review*, volume 73, issue 5, 912-927.

Suri, T. and Jack W. (2016). The long-run poverty and gender impacts of mobile money. *Science* Vol. 354 (6317), 1288-1292. New York: American Association for the Advancement of Science.December 8.

Uesugi I., Sakai K. and Yamashiro G. (2006). Effectiveness of Credit Guarantees in the Japanese Loan Market. RIETI Discussion Paper Series 06-E-004. The Research Institute of Economy, Trade and Industry.

WWCLEG (2016). Evidence review: access to finance. What Works Centre for Local Economic Growth. November. London.

Zecchini S. and Ventura M. (2009). The impact of public guarantees on credits to SMEs. *Small Business Economics*. Volume 32, pp 191-206.