

## INTERNATIONAL AID AND PRINCIPAL-AGENT RELATIONSHIP: EVIDENCE FROM BOSNIA AND HERZEGOVINA

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### **Abstract**

*International aid to Bosnia and Herzegovina (B&H) since the end of war in 1995 was significant by any standards. Yet, this has not resulted in a significant poverty reduction outcome. According to all relevant indicators B&H is ranked near the bottom of all European countries. Even when we take into consideration the tremendous loss of wealth during the war, given the size of aid provided, the economic development has fallen below the expect rate of recovery. This is particularly evident in the areas of SME and formal enterprise development. In this paper we argue that the major reason for a sluggish recovery was failure to implement structural reforms and that this failure is in direct relation with the international aid in B&H. We suggest that the principal – agent relationship inherent in the international aid structure can be applied to the B&H experience in order to explain this phenomenon. Particularly revealing is the microfinance sector which was supposed to act as a catalyst for the poverty reduction. We find that the model of microfinance itself does not provide proper incentives for the actors involved in order to strengthen the sustainable SME sector. Instead, enterprise development policy should be based on the lessons learned from the venture capital model.*

**Keywords:** *International aid, principal-agent relationship, microfinance, venture capital.*

### **1. Introduction**

In this paper we discuss the evidence of international aid resulting in a negative economic impact for a recipient country. The subject of international aid for economic development has been a point of contention of many scholars since the Marshal Plan. Critics of international aid like M. Friedman (1958) or P. Bauer (1972) argue that aid distorts the market in a recipient country and produces negative effects in the long run. Supporters of international aid such as J. Stiglitz (2002) argue that a recipient country requires help in either the capital or knowledge in order to bridge the gap between itself and affluent countries. The case of Bosnia and Herzegovina (BiH) represents an interesting example and an opportunity to scrutinize these theories from various angles. As a middle income country that suffered war devastation it received more in international aid in the period from 1996 until today than all countries subject to Marshal Plan assistance after world war two (EC, 2008). Yet, according to most available economic indicators, Bosnia fares worse than other transitional countries in the region notwithstanding the fact that they have not undergone the scale of devastation that Bosnia has. Particularly indicative are the indicators related to development of the entrepreneurial sector, structural reforms and direct private domestic and foreign investments in B&H. According to the competitiveness, ease of doing business, reform and corruption indices – all relevant factors for the development of a viable SME environ-

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ment - Bosnia's scores are among the worst in Europe. Is there a connection between the foreign aid, the way it was implemented and the subsequent poor performance in aforementioned indicators? This paper seeks to answer this question outside of the usual and well-worn path of simply blaming chronic political instability and superfluous corruption levels. We suggest that given the multiple level principal agent relationships between tax payers in donor countries and the donor country development agencies, as well as the recipient government and final beneficiary, the citizens in B&H, the relative failure of international aid was wholly predictable.

International aid to Bosnia came in various forms. It can be classified roughly as direct aid in infrastructure rebuilding, aid in knowledge provision and capacity building, and aid in poverty reduction via the microfinance sector. Particularly interesting is the microfinance sector in B&H. First, the microfinance sector initially was funded via nonrefundable aid through the international development organizations such as *United Nations Development Program* (UNDP), bilateral donors such as United States AID (USAID), and humanitarian agencies such as Catholic Relief Service (CRS). The level of funds made available in the form of microcredit to Bosnia is higher than anywhere in the Western Balkans region, among transitional countries of Eastern Europe and in fact, higher than almost anywhere in the world (Bateman, et. al, 2012). It is therefore safe to conclude that overall high levels of international aid pouring into Bosnia served as a catalyst for the rise of massive the microfinance sector in the country and that microcredit in B&H can be viewed as a form of aid. According to the World Bank document on microfinance in B&H from 1997 the poverty alleviation was to be quickly secured through large numbers of sustainable jobs in microenterprises, additional income generated in the community, empowered women, an accelerated accumulation of social capital and, eventually, growing numbers of conversions of informal microenterprises into more productive formal SMEs (World Bank, 1997). In this paper we study the development of the microfinance sector, with particular attention to the business model of microfinance as it is practiced in B&H. We argue that it did not result in poverty alleviation because of the principal agent problem that arises first on the macro level between international donors involved in the microfinance sector and beneficiary organizations in Bosnia and second, because the agency problems on the micro level existing in the intricate microfinance model that doesn't incentivize the actors to work towards long term poverty alleviation. To make this point we dissect the motivations between the actors at the macro level - the international donors and institutions of beneficiary country, in this case B&H - and then we compare the microfinance model in B&H with another model of financing the businesses with high information asymmetry - that of typical venture capital model in the United States. We find that while both models have in common large information asymmetries and propensities for moral hazard inherent in the ventures that seek to support projects of entrepreneurs who do not have collateral or an option of borrowing funds from a commercial bank - one is designed to motivate all actors to put their best effort into commercialization of a startup, while the other is devised to enrich only the micro creditor while self-sustainability of the borrower does not enter the picture. As such, microfinance model is highly susceptible to poverty exacerbation.

This document is organized as follows; in section two we lay out the theoretical foundations for our analysis and the research hypothesis. In section three we provide the empirical background. Section four focuses on analysis and results. In section five we discuss our findings and section six concludes with some critical recommendations for donors, policy makers and researchers in the field.

## **2. Theoretical background and research hypothesis**

One of the reasons why debate on international aid is so long lasting and controversial is because we have evidence of countries that have both received aid for decades and have not been able to alleviate the domestic poverty and countries in which aid has had some positive impact. The hardest part in aid research is the ex post correlation between the level of improvement in economic conditions and particularities of aid provision - magnitude and quality of implementation. That is, whether the poverty reduction in a given country would have been more

or less successful without aid. It is also hard to resolve who should be credited with success or failure, donor or beneficiary, and to which degree.

According to the OECD aid can be defined as financial flows, technical assistance and commodities which are intended to promote economic development and welfare as their main objective; and are provided as either grants or subsidized loans. Grants and subsidized loans are the loans that carry an interest rate substantially less than the market interest rate. Loans which are at or close to THE market rate are not considered aid. By the OECD definition, a loan is considered a form of aid if it has an element of grant. That is, if the present value of the loan is at least 25 percent under the present value of comparable loan at market interest rates. Since OECD arbitrarily assumes that market interest rate is 10 percent without the grace period – anything less than 10% and grace period carries a form of grant and falls at least partially in to the aid category. Given this definition, IMF loans to B&H can be considered part grants and thus aid regardless of the fact that they have to be paid back with the interest. Aid is further classified into three categories: official development assistance as the largest aid defined as the aid provided by the affluent countries to low and middle income countries, official assistance provided to better off countries with per capita incomes higher than \$9000 and to countries of the former USSR and Eastern Block, and private voluntary assistance from NGOs, companies, charity organizations and foundations (OECD, 2013).

The level of foreign aid is characteristically measured in one of three methods: total dollars of aid, as a share of GDP, and aid in a country per capita. To get an objective picture of the aid magnitude in a certain country, it is important to consider all three ways of aid measurement. For instance, total amount of aid to a large country can be massive compared to aggregate level of aid to a small country, but measured in terms of share of GDP or per capita significantly smaller. As we will see, aid to Bosnia can be considered significant by all three measures compared to other countries of similar size and development level. Most of the research dealing with the impact of foreign aid on developing countries indicates that aid has a mixed effect on economic growth. There are countries that have received little aid but have achieved better growth results than countries which have received more aid in GDP per capita and have even stagnated despite massive amounts of aid received. Clearly, there are variables impacting the variance of growth rates such as policy decisions, geography and location, or quality of institutions. In addition, controlling for these variables related to economic growth does not tell us the whole picture in terms of factors that impact the overall development such as amount of aid in the health sector, education or environment. (OECD, 2013)

Scholars who claim that aid has a negative impact on economic growth argue that it is wasteful and induces corruption because elites have a tendency to channel it in unproductive means. Milton Friedman argues that defining aid as strictly aid in the defense sector; infrastructure or health is simply labeling and playing with books because if a country receives aid for sector A; it simply has more money to put in sector B (Friedman, 1958). For example, if a government of a country receives aid conditional to military spending, it is just the same as if it has received unconditional aid because now the elites in power have saved the money they would have spent on military equipment and can channel it into subsidizing unproductive industries such as steel plants which produce economic loss, but employ a large labor force. By the same logic, a government might have received aid for badly needed infrastructure improvement, but the end result of this is negative because now the government has channeled the available funds in supporting large administration or social programs that would otherwise have to be reformed. Thus, a government that receives aid is given an incentive to postpone structural economic reforms which are necessary for the long term growth in order to gain short term political benefits. In addition, countries can have limited absorption capacities for aid. This is evident from the relative absorption capacities among the countries qualified to receive EU funds. If a country has a low skill level to program and implement the EU funded projects, they will not be put into the intended use regardless of the amount that is potentially available. This is certainly the case for BiH if we consider the absorption capacity related to pre accession funds so far. Finally, the amount of

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foreign aid can impact the propensity to save in both private and public sectors affecting the interest rates or it can lead to diminishing incentives for investments in productivity and the manufacturing sector known as Dutch disease. On the other side of the aid debate are scholars who claim that it works under certain conditions, mostly linking it with the quality of policies employed, but also geographical location or civil liberties. Some authors claim that different types of aid have different value in terms of growth. For example, aid in health, education, democratic change and environment impacts the development levels in a much longer term than direct aid in infrastructure and food and it is therefore difficult to measure and quantify. Some papers find a relationship between aid effectiveness and whether the aid is bilateral or multilateral and argue that bilateral donors have more selfish motivations in the sense that they aim to recycle the aid for the benefit of domestic companies or in order to support trade conditions suitable for development of the industry in a provider country while multilateral aid allows for a more balanced approach (Burnside and Dollar, 2000).

In any case, what makes the topic of aid so controversial is the fact that between the providers of aid, the tax payers in an affluent country, and beneficiaries of aid, the citizens of recipient country, there is only a very indirect relationship. This complex channel of aid provision, which goes from providers to beneficiaries, is characterized very difficult principal-agent relationship. In a principal agent relationship principals must delegate responsibility to agents to conduct the project or business in their name. The textbook example of principal-agent relationship is most commonly that of between shareholders and managers. Shareholders have to employ managers to act on their behalf; managers have to employ supervisors to act on their behalf who monitor the workers to execute the management decisions. This relationship is common to everyday situations and a principal-agent problem arises whenever agents have an incentive to put their own interest ahead of the interest of the principal and especially when there is large asymmetric information between agents and principals (Arkelof, 1970). Managers know more about the company ins and outs than the shareholders and employees know more about their effort level than supervisors, so larger the information asymmetry the larger the principal agent problem and hence a bigger chance of adverse selection and moral hazard.

In the international aid, there are numerous levels of principal-agent relationships:

- Relationship between tax payers in the affluent country and their government,
- Government and development agency,
- Development agency and implementing company or organization,
- Implementing company and beneficiary government, and
- Beneficiary government and poor people in beneficiary country

We can see here that principal on one level becomes agent on another level in the chain of aid implementation. For example, development agency such as DFID, which is an agent in relation to the UK government, becomes a principal in relation to the implementing company which is contracted to assist the beneficiary government in the aid project. Original principal, the tax payers in the donor country delegates responsibility to an agent which in turn delegates responsibility to new set of agents all the way down to the beneficiary citizens of recipient country. Looking at the relationship from the beneficiary perspective, citizens of the recipient country delegate responsibility to the government to implement development aid in their name and effectively use the donor funds on their behalf. Since the goals, incentives and available information are not always aligned among various levels of agents in the aid relationship, there is a substantial possibility for the misuse of funds.

When there is a more direct relationship between the principal and agents, there is an easier mechanism for monitoring and control of agents by the principals. In a hypothetical company with one owner and one employee there is clearer information about the effort level of the agent and result of this effort is easier to measure by the principal who in turn can sanction or reward the agent in accordance with the owner's expectations. In the international aid relations-

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hip, beneficiaries have very little information about the project implemented by the government and therefore have very weak mechanisms for monitoring and sanctioning of their effort levels and quality of implementation of the aid projects.

Since the principal-agent relationship affects the aid allocation as well as the full policy cycle from design, formulation, adoption, implementation and evaluation it clearly can never be fully resolved. However, the level of agency problem mitigation can make the difference between the positive or negative impact in the economic growth. As we will see, design of implementing institutions or organizations define the incentive system between different actors in the project model. If the model does not provide incentives for the intended result, the aid can produce negative results.

Our research hypothesis in this paper is that business model of microfinance, at least as practiced in BiH, does not provide proper incentives for the principals and agents involved in the process to support the poverty reduction via establishment of the sustainable enterprises.

### **3. Empirical background**

We can describe the foreign aid to BiH as substantial by all three measures defined in the previous section. It has been calculated that BiH has received more per capita aid than any European country under the Marshall Plan. Since 1996, the World Bank has dedicated over \$1.1 billion and additional World Bank agencies had provided \$500 million by 2010. According to IMF, just between 1996 and 1999, \$3.7 billion of aid were distributed to BiH by total of 48 countries and 14 international organizations (Pasic, 2011). Between 1996 and 2002, Bosnia's annual aid amounted to \$730 million or, \$1,400 per person and in year 2000 the GDP share of international aid in BiH was 30% (OECD, 2013).

Until 2005, the US government alone provided over \$1.345 billion in aid, while between 1991 and 2006, the European Union provided 2.6 billion euros for the reconstruction and refugee return (Pasic, 2011). These donors are still active in Bosnia, especially the EU through the CARDS program and pre-accession IPA funds. The IMF loans to entity governments are subsidized as well and therefore can be defined as international aid.

Yet, BiH has not progressed much in terms of the economic development relative to the situation in the prewar period. Latest available figures indicate that there has been little progress in terms overall development, poverty rate is at 18.9% while unemployment rate for young people is at 57.9% (EC, 2011).

More indicative of the overall progress are the indices describing the investment climate and entrepreneurial environment in BiH. For this purpose we can consider several indices: Ease of Doing Business Index by the World Bank (World Bank, 2012); Competitiveness Index by the World Economic Forum (Schwab, 2012); Corruption Perception Index by the Transparency International (Transparency International, 2011); SME Policy Index for Western Balkans Region by the OECD (OECD, 2011); and net FDI data by the EBRD (Sanafey, 2012). Information contained in these reports is relevant for our discussion in terms of foreign aid effectiveness in BiH because they are indicative of the self-sustainability of the private sector in a country and relative strength of the entrepreneurship as a driver of economic growth (OECD, 2012).

If aid and particularly large support for the microfinance sector has led to creation of a sustainable formal SME sector, as stated in the World Bank strategic document on microfinance in BiH in 1997, than it was clearly at least in part successful (Bateman, Sinkovic and Skare, 2012). On the other hand, if there is still a very low investment activity and poor entrepreneurial climate, coupled with subsidies in certain sectors that record losses such as energy production, distribution and use, we could conclude that international aid was counterproductive as it was used as leverage for the government to postpone structural reforms, perhaps for the short term political benefits.

Considering the World Bank Ease of Doing Business 2013 ranking BiH is ranked at the 126<sup>th</sup> place in the world out of 189 countries - one place down from last year rank of 125 and the last place among the countries in the region. Particularly telling is the negative report on "getting

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credit” aspect of the catalogue where World Bank notes that *BiH made access to credit information more difficult by stopping the private credit bureau’s collection of credit information on individuals* (World Bank, 2013).

According to the World Economic Forum Competitiveness Index BiH is 88<sup>th</sup> out of 144 countries, 12 places up from the 100<sup>th</sup> place last year. Compared to the other efficiency driven economies, B&H ranks better in terms of Health and Education indicators but worse in terms of other competitiveness pillars, particularly Financial Market Development, Business Sophistication and Macroeconomic Stability (Schwab, 2012).

Considering the Foreign Direct Investment data in the Region between 2004 and 2011, BiH has the lowest levels of investment in the region and also ranks at the bottom among the countries in the region in the Corruption Perception and the Investment Reform indices. According to the EBRD SME Policy Index for Western Balkans and Turkey, B&H lags behind in most policy dimensions. Particularly indicative for our discussion is the Entrepreneurial Learning and Woman’s Entrepreneurship dimension of the Index. Based on the best practice ranking in this aspect of entrepreneurship BiH is again ranked as the last country in the Region despite the fact that it has received by far the largest share of the microfinance credit of all the countries and that particular target of the microcredit in BiH have been women. If microfinance sector was contributing to the self-employment and sustainability via creation of sustainable small enterprises one would expect that country which is most active in this field would achieve a higher rank. Another interesting indicator is the level of support services for SMEs where B&H also ranks at the bottom, as well as the level of entrepreneurial skills, company registration process, SMEs and green economy, innovations and regulatory framework for policy-making. The only two indicators where BiH is not ranked at the bottom are access of finance to SMEs and time for bankruptcy clearance. While the EBRD report is critical of the continuing political instability in B&H and of the lack of cooperation between two entities in the SME sector – which is evident from the poor ranking of the regulatory framework and law harmonization, certain indicators related to learning by doing provide argument to the poor impact of the microfinance sector on vitalization of private business (Sanafey, 2012).

If scholars who claim that large international aid encourage recipient governments to postpone the difficult structural reforms in the country because they can divert the limited resources in the projects that subsidize unproductive large industries, large administration or social programs for short term political gains, than we would expect that progress in sector transition to free market would be slower in countries which were subject to more aid than in countries which have received less international aid and thus have had greater pressure to implement structural sector reforms. Country transition indicator by the EBRD provides scores from 1 to 4 based on the transition level to free market economy. Looking at the transition scores BiH ranks at the bottom among the countries in the region particularly in regards to the governance and the enterprise restructuring and competition policy.

To complement the desk research, we conducted field interviews with 28 credit officers 6 MFO managers from a sample of 9 MFOs in BiH.

#### **4. Methodology and Results**

Venture capital is the most critical source of financing in the crucial stages of the early development of innovative startups. What sets apart companies based on innovation is that usually the founder of the firm is an innovator with strong skills in science or technology but without management skills or experience in business and without collateral to offer to a commercial bank for loan financing. Commercial banks are not interested in financing business whose only collateral is an idea and startups that do not yet generate any revenues. This sort of business represents too much of a risk and too wide of an asymmetric information between the bank and the innovator. Credit officer in the commercial bank does not have the resources or expertise to make a good valuation of the venture opportunity based on a sophisticated patent and has no means of monitoring and controlling the innovator behavior and effort levels in terms

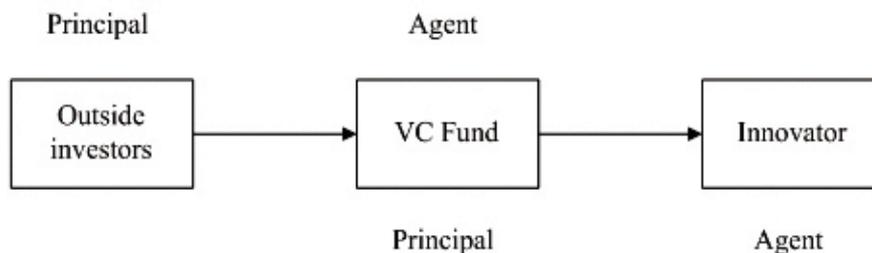
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of project implementation. Because of these two reasons – no revenues of the initial stages of a startup or capital to offer for collateral to the bank as well as the large asymmetric information – innovators turn to venture capitalists for financing.

We have seen that in international aid cycle one actor in the chain of financing is a principal and in the next stage of financing is an agent. That is, principal agent relationship is borne out of the necessity to delegate the responsibility to the chain of agents from the original provider of funds, the tax payer in the affluent country, to the end user of the funds, the poor citizens of the beneficiary country. In venture capital, similar principal-agent relationship marks the entire cycle of financing the investments – from a shareholder in a pension fund to the end user, the entrepreneur who is the founder of the innovative startup.

For venture capital to succeed, the obstacle of asymmetric information needs to be overcome. How does the venture capitalist know which innovator to finance? Effort levels and nature of the patent are better known to founder of the startup than the venture capitalist. When financing the innovative firm, venture capital is the one who bears most of the risk, while innovator may have the propensity for opportunistic behavior. Clearly, the large information asymmetry allows for the possibility of adverse selection. Adverse selection may occur in number of ways. For example, the business model whereby the funds are provided without collateral and where most of the risk is leveraged by the venture capitalist, might attract the number of spurious innovators who will overstate the patent quality, forge their experience and skills or exaggerate the effort they are willing to put in the business venture, just in order to receive the funds they otherwise could not acquire. From the venture capitalists viewpoint, this is the adverse selection. Without a mechanism to reduce the asymmetric information and make a better selection of business plans, the whole idea of venture capital would collapse because it would become too expensive for venture capitalists to finance the spurious business models. However, even when particular startup is chosen for financing, the possibility of opportunistic behavior of the founder still exists. They have received the funds they could not acquire via traditional commercial bank and now might exaggerate the effort levels or quality of the patent to venture capitalist which still bears most of the risk of the eventual failure of the business. Again, without a mechanism to mitigate this moral hazard, the whole process could prove too risky and venture capitalist would withdraw from the business.

Figure 1: Venture capital model



Source: Model constructed by author

Principal agent relationship doesn't exist only between the venture capitalist and the innovator. It exists between the outside investors and venture capitalists. Most of the funds used for financing innovative ventures come from the outside investors. Outside investors can be a mixture of institutional investors such as insurance agencies, pension funds, universities or large corporations. They are too spread out and numerous to finance the innovative startups directly and so they employ the venture capital firm to make the selection of business plans and manage their funds in order to achieve the profit from commercialization of a new patent. Since they provide most of the funds, they bear most of the risk and again, without a mechanism to mitigate adverse selection and moral hazard, outside investors would pull out of project and venture capital model would collapse.

The end result of the failure of the venture capital model would be fewer innovations and lesser degree of economic development because for an idea to become a product and make it to the market, someone needs to finance the research and development of the patent. State companies or large corporations for whom the most skilled innovators and scientists may initially work cannot always offer a prospect of large profits so they will eventually either start their own company or, in case of the labor market rigidity or lack of entrepreneurial opportunities, move to the country which offers this possibility. In this sense, venture capital model adds an economic value to the market in which it successfully functions. While all actors in the venture capital cycle have a "selfish" goal of making a profit, the end result is a technological advancement and economic development – the knowledge economy.

Since principal-agent relationship in venture capital model is marred by large asymmetric information which gives rise to possibility of adverse selection and moral hazard, it becomes a principal-agent problem. The problem is solved by provision of incentives in the entire chain of financing whose end result is the economic development. If the goal of a venture capitalist would simply be to recover the funds provided to the innovator, no profit would be made and eventually the venture capital industry would collapse. If there was a way for venture capitalist to make profits through financing the startup without them patenting a product that provides commercial success, then venture capital industry would go on. Obviously, this is not possible, because unless there is an end product that can be offered to the market for profit – that is, if the financed startup does not become self-sustainable – entire chain is broken. In this way, the success of the SME is directly related to success of the venture capitalist, and success of the venture capitalist is directly related to the profit of outside investors.

For the success of a business model of venture capital, it is necessary that there is a functional alignment of incentives in the chain of principal agent relationship. Starting from the shareholders in outside investor institutions, it is clearly the return on their investment. The failure of a pension fund to make a return on investment would eventually result in withdrawal of investments from the particular venture capital fund or entirely dropping of the sector of venture capital from the portfolio of its investments. The signal that outside investors use in selection of venture capital firms is the market. Venture capitalist, who provides the percentage of his own private equity usually between 10 to 20 percent in the venture fund, exits the investment via Initial Public Offering (IPO) or sale of the innovative firm to a larger company. Through successful exit from the investment venture capitalist recycles and distributes the profits and also builds the reputation in the industry. Successful exit and higher reputation enables the venture capitalists to seek new funds for future ventures. In order to reduce the possibility of adverse selection when choosing to finance a startup venture capitalists are highly specialized in the specific sectors in which they invest – IT, electronic, pharmaceutical industry or financial services. In order to minimize the moral hazard, the opportunistic behavior of the startup founder, venture capitalists finance the project in stages whereby each additional round of financing is conditional to certain achievement level usually related to product development, but also contains the more attractive pay out and other conditions for the founder so that founder is motivated to maximize the effort. Staged financing allows for timely cancelation of project if that is deemed necessary in order to minimize losses. In addition, venture capitalists take an active role in the company management and decision making process from the beginning of the project to the exit. In return for the venture capital financing and management expertise, innovator gives up a large portion of equity ownership in the company. Rationale behind this is that successful IPOs or mergers and acquisitions result in enormous profits for all actors involved. Additional motivation for founder to maximize the effort and work towards the exit represents the possibility of return to the full management capacity upon the exit of the venture capitalists.

While exogenous factors such as financial market liquidity, labor market rigidity, tax policy, human capital and regulatory system matter for development of the venture capital industry in a given market, the most important precondition for a successful venture capital model is the mitigation of the large-principal agent problem. Besides staged financing, venture capitalists use

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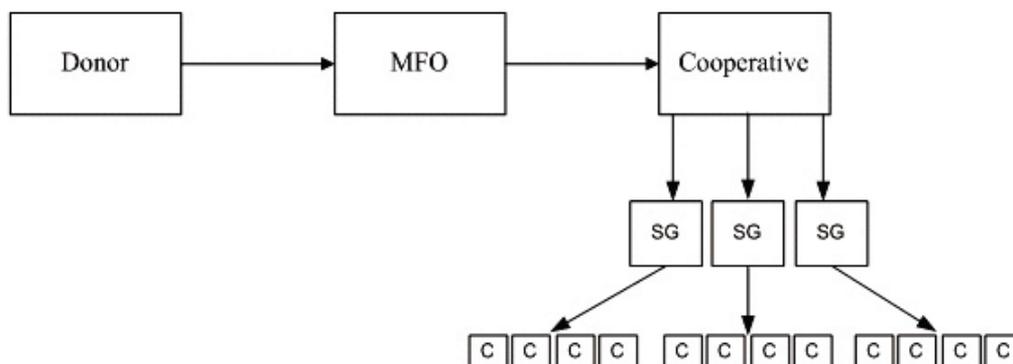
a number of positive and negative covenants specific to venture capital financing such as syndication, convertible securities, ratchet provisions and stock option plans, as well as the restrictions in the number of innovative funded that can be in the portfolio of any syndicated venture capital fund, among other mechanisms. For our discussion however, the most important point is that venture capitalist structure their investments and financial contracts that allocate ownership, risk and return so that principal-agent problem is mitigated as much as possible and – the end result on the macro level is the improved economic growth.

Microfinance model, whose sole purpose is supposed to be alleviation of poverty, is also marred by significant principal-agent problem, but the motivation and mechanisms available to the actors involved in the process are different. First, the donors in the microfinance model in B&H were initially the charity organizations and multilateral and bilateral development agencies. There is a significantly lesser control mechanism between the principals and agents at this stage of microfinance model than in the venture capital model, whose sole purpose is profits. Principals in affluent countries, the tax payers, who provide funds to the government and through the government to the development agency, have a far smaller information and stake in the project than shareholders who provide funds to the institutional investors in the venture capital model.

Second, the development agency that provides funds to the microfinance organization (MFO) in the recipient country can only use a small number of weak covenants that influence the MFO conduct, main one being the restrictions on the type of clients that can apply for the credit and the condition of achieving sustainability. Main signal that they use in order to assess the MFO success is the rate of credit return. High rate of credit return enables the MFO to seek additional funds. Here, the supposed end result of poverty reduction via establishment of self-sustainable SMEs is lost. The MFO does not differentiate between the repayment of loan installments made via income through the formal enterprise or an alternative source.

Third, the MFO management does not participate in the micro financing with their own private equity, as is the case in venture capital, but enjoys the discretion of setting their own bonus and salary rates. The incentive in the microfinance model is to increase the number of borrowers, which is reflected in the model of competing for the network of cooperatives and the bonus of credit officers linked to the size of portfolio and the number of clients. There is no provision of management assistance or scrutiny of business plan viability, only the risk mitigation via establishment of the cooperatives and the solidarity groups which serve as a mechanism of control and reduction of asymmetric information about the client ability to repay the loans. The model employed by a typical MFO in BiH is described below.

Figure 2: Microfinance model in B&H



Source: Model constructed by author

Donor provides the funds to the MFO in the form of grants under the condition that they be used in a “socially responsible manner”. MFO is a non for profit organization which places the loans to the clients that are unable to obtain the loans at a commercial bank; hence the interest

rate is substantially higher than the rate at a commercial bank. There are limits to the size of a maximum loan – up to KM 10000, but not to the number of loans, which come at a more attractive rates every next time. Loans are provided for number of purposes at different rates including agriculture, service provision, production and consumption. Since it would be very costly to monitor the sustainability of every microenterprise and since the main concern is rate of return of loans, management assistance to the microenterprise is not in the nature of microfinance model. Main concern of the MFO is providing incentives for timely loan repayments and continuation of loan dependency, regardless of the source of money. To this end a scheme of cooperatives and solidarity groups are organized. The point of the scheme is to create the system of co-dependency and peer-pressure so that any problem of possible loan repayment is resolved at the cooperative level. Initially, the “solidarity group” is created whereby three to five clients are organized into an inter-dependent relationship endorsing each other’s loans. They come from the same geographic location, usually same municipality or the village and have known each other for a long time. Condition of loan guarantee sends a message of reliability to the MFO credit officer that operates in the region – members know much more about other solidarity group members than credit officer and so are the first risk filters in the process. There is a limit to the size of the loan for a first time client set at the KM 1500. The limit increases with each new cycle of borrowing, with break-even point at KM 1700.

Solidarity groups are further organized into cooperatives which collect the money payments from every single client equaling 10% of the loan applied for. Hence, there is an internal fund in the form of a savings bank account at the cooperative level acting as a form of the collective loan guarantee. In case of a default by any member of a cooperative, the installment, or part of it, can be covered from this fund. To incentivize the timely loan repayments, a client with clear repayment record can withdraw their savings with the interest rate at any time, but to re-enter the fund has to start from the beginning at a lower savings interest rate.

### **5. Discussion**

In order to scrutinize the effectiveness of the microfinance sector in reduction of poverty we assess its business model with the model of venture capital. First, both models are characterized with large principal-agent relationship and sustainability of the model depends on the mitigation of this problem. Second, clients of the both models cannot rely on the commercial bank financing because they do not have collateral and represent a high investment risk. Third, while venture capital is prominent in the developed countries with strong financial markets and microfinance model is prominent in the developing countries; both are, at least in theory, credited with employment creation and SME sector development. While proclaimed goal of microfinance model is the reduction of poverty and jump starting of self-sustainable formal SME sector, we do not find evidence of this in B&H. Despite the fact that B&H has had by far the largest microfinance sector investments in the SEE region, the indicators relative to the enterprise sector development put the county consistently at the bottom of all relevant rankings. If the goal of microfinance was to reduce poverty and increase the formal SME sector, microfinance model in B&H has failed. We find that the reason for this is not surprising. Notwithstanding the exogenous factors, the microfinance model itself does not provide all of the actors in the model involved to work towards the enterprise development.

### **6. Conclusion**

In this paper we discuss the effects of the international aid on a recipient country in terms of poverty reduction via strengthening of the SME sector. Bosnia and Herzegovina represents an interesting case study for the principal agent relationship which is prominent in international aid on both macro levels between the donor country and recipient country governments and also at the micro level in the very models designed to aid the poor. What distinguishes B&H from most other countries in transition and particularly other countries in the region is the large microfinance sector. Significant overall aid was a catalyst for the creation of large microfinance sector in

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B&H. In order to assess the viability of the microfinance sector for poverty reduction we assess the model from the angle of incentives provision of all actors involved and compare it with another model of enterprise financing characterized with significant principal-agent problem, the venture capital model. We find that while microfinance model works well in order to ensure the high rates of loan repayments, it does not provide the proper incentives for MFOs to support enterprise sustainability. This is despite the fact that proclaimed purpose of microfinance is poverty reduction. Venture capital model, on the other hand, depends on SME development – the actors in the model can only profit from the success of the very business they finance. Conclusion can be summarized by two points. First, while we do not know what the development level of B&H would be had there not been for the large international aid compared to other countries in the region, the evidence reflected in the poor ranking of the country in terms of the structural reforms and business competitiveness indices gives credence to the theory that international aid provides negative incentives for policies that lead to the poverty reduction. Second, microfinance model, at least as implemented in B&H, is not designed to help create a sustainable formal SME sector and may even contribute to poverty exacerbation. Instead, a development strategy based on the venture capital model should be further explored in order to devise more viable SME development policies.

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