The Entrepreneurship and Poverty Reduction Nexus:

The Role of Finance

By

KHAN, Md. Abu Nashir

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

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ABSTRACT

THE ENTREPRENEURSHIP AND POVERTY REDUCTION NEXUS: THE ROLE OF FINANCE

By
Md. Abu Nashir Khan

This paper argues that poverty in a country is endogenously determined by the country's lon g-term economic development strategy. It empirically examines the effects of entrepreneuria l activities on its level of poverty. This paper also examines how this effect of entrepreneuria l activities differs with the level of financial development in an economy, which is the most i mportant channel for the effects of entrepreneurial activities on poverty to manifest themselv es. Data for the period of 2000 to 2013 from 37 countries are used in the analysis. We find th at the more entrepreneurial activities, the higher the level of poverty incidence. But a high le vel of financial development reduces the poverty-increasing impact of adopting entrepreneur ial activities. The policy recommendation of this paper is government should create an envir onment that facilitates the growth and poverty reduction based on their entrepreneurial activi ties or entrepreneurship, which facilitates the actors' entry into an industry according to the e conomy in order to reduce poverty incidence.

DEDICATED TO

My beloved Wife and Lovely Daughter

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I. INTRODUCTION

The enduring and most prominent problem for the whole world is poverty. In spite of taking frequent measure, it is still most burning issues for not only the least developed and developing countries but in the developed world. Poverty has both direct and indirect effects on the productive capacity and thereby hindrance economic growth of the economy. For the last decade, the most challenging issues for the world leader, development practitioners, and policy makers alike, is the presence of poverty around the world especially in the underdeveloped and developing countries. Consequently poverty reduction issue has become the first priority for the international community since early 1990s; as a result in your 2000 the Millennium Summit in New York comes out with the eight Millennium Development Goals (MDGs) and the eradication of the extreme poverty (day earning $1.25 or less) and hunger declared as the first goal MDG. There is an invisible relationship between poor, unemployment and poverty. The poor does not create poverty, because poverty is expensive and it hinders the growth and ignite instability in the society; but poor prove themselves as ultimate innovative entrepreneurs to survive. Thus, entrepreneurships are considered as a route of poverty reduction. However, the better financial system enhances the opportunities for creating the successful entrepreneurs. It is conceptualized that the entrepreneurship act as the strongest player in poverty reduction and healthy financial system is one if the dominant factor for flourishing the entrepreneurship.

World Bank projection in 2003 indicates that the global poverty will be reduced fifty percent by 2015 from the benchmarking level of 1990, but doubt is reaming for some regional and some countries (World Bank, 2003). It is now evident that the only countries in East and South East Asia are real success to achieve the World Bank target in spite of fragile economic due to the financial crises of late 2009s (Islam, 2004). Outside this region the poverty reduction status is rather disappointing and the situation is worse, especially in lower income

countries of South Asia and Sub Saharan countries, while two third of the world's poor live in this region. During the period of 1990-1999 the people living less than US$1 per day increased around 2% and the World Bank projection was to reduce the poverty 46% by 2015. If China excluded from all estimations and calculation, the poverty level will be reduced from 28.50 percent to 15.70 percent by 2015 thus remaining over half of the estimated level of benchmarked year 1990 (World Bank, 2003).

The countries which are able to achieve to reduce poverty significantly, show the evidence of sustained high level growth during this period which helps to achieving the result. But the studies on poverty show that high level of growth is not the only factor which help to achieve the result, the mode, the pattern and a source of growth as well as the way in which is the benefit is distributed among the population is furthermore important for achieving the goal of poverty reduction and in that respect, entrepreneurs are considered as the one of the most important linker between the growth and poverty alleviation, although this proposition has strong intuitive appeal, there is very little empirical evidence on the issue (Islam 2001).

The impact of financial deepening proved the poverty reduction through entrepreneurship channel (Ayyaari, Beck and Hoseini, 2013). Literatures show that the financial limitation effect severely of the poor individuals opening their business mainly due to the poor have low collateral and the cost of finance is relatively higher for the poor. The micro economic removes this barrier and enabling poor to become entrepreneurs, who will allow them to get rid of poverty themselves (Banerjee and Newman, 1993; De Mel, McKenzie and Woodruff, 2008).

Despite the hype about the entrepreneurship is the best way to poverty reduction, as entrepreneur creates more jobs, increase the total productivity, and able to prove their effect on the GDP, particularly in the lower developing countries, there is still plenty of debate

about whether it has a significant impact on the lives of poor people to reduce their poverty. However, there is a common debate among the economist on the role of finance in economic development and vice-versa. Economist often divided in their opinion on finance-growth nexus and growth-poverty nexus, as well as whether and to what extent economic growth leads to poverty reduction. Furthermore, there was always provocative question over the year, is financial sector development really help the poor? The situation has improved in the last two decades, it has seen the appearance by the supporting with large empirical research finding that financial sector development facilitating the economic growth and supporting poverty reduction. But the answer about the role entrepreneurship as a major employment provider, poverty reduction and the role of finance for creating entrepreneur remain uncertain and these uncertainties lead the present study.

Wong, Ho, and Autio (2005) tried to test for such differences between high and low income nations by introducing a dummy variable to control for income level and repeating the regression analysis on separate subsets of the data. Since they were not able to distinguish between the roles of entrepreneurs in countries with varying growth rates, they suggested this warranted further empirical investigation. Today, the generalizability of the influence of different types of entrepreneurship on national economic growth, and in particularly between developed and emerging countries, remains poorly understood. This paper attempts to address this gap in the research literature by examining economic growth in a range of developed and emerging countries, using a model in which disembodied factor productivity encompasses elements suggested both by economic growth theory and by entrepreneurship

To testify whether higher entrepreneurship among the poor can account for the significant relationship between financial depth and poverty identified is require very good quality data set along a sufficiently long period. Most of the studies so far have been either tried to find the relation of poverty and economic growth or poverty and financial development, but

almost no study on the issue of entrepreneurship, poverty and finance together. As a result the debate has gone on for several years now and opponents of the entrepreneurship could claim that no study has decisively proved that entrepreneurship has a positive effect on poverty reduction and financial deepening accelerate the entrepreneurship in the country. The purpose of the study is the nexus of poverty reduction and entrepreneurship, in other word identify and quantify the positive and negative role of channels through which financial development affects poverty through entrepreneurship using cross panel data of thirty-seven countries spanning for fourteen years from 2000 to 2013.

Statement of the Problems and Justification

Poverty is multidimensional and requires multidimensional efforts to reduce it. More than billions of people live under the line of extreme poverty. Entrepreneurship improvised the income level of the lower income region of the world, thus an effective means for reduction of poverty. Muhammed Yunus established the Grameen Bank in Bangladesh. The idea of Yunus was very straightforward; that poor people lacked access to financial services from formal institutions was a barrier for them to enter the business market (Yunus 1999). After some years of experiment thankfully he discovered the main cause of poverty in rural Bangladesh; lack of financial services and entrepreneurship spirit (World Bank 2009:54).

Entrepreneurship has been considered as another way to the old-fashioned economic advance strategies and polices. Proponent of entrepreneurship polices argues that entrepreneurial development generates graters return to the public than other alternative strategies such as industrial recruitment or retention and expansion. Developing entrepreneurial skill is the key strategy to reduce poverty, create more income and employment opportunities with an objective to develop a good business environment, enhance institutional and human capacities that will accelerate the economic growth. The proponents strongly acknowledge that the entrepreneurship has enormous potential for sustainable economic development and

growth. It is out of a debate that creation of sufficient amount of jobs and poverty reduction is extremely important for the least developed countries and there will be no fruitful outcome for poverty reduction if there are no opportunities for entrepreneurial activities to bring new income opportunities for the majority poor to ending the vicious cycle of poverty. It is also emphasized that the meaningful interventions for entrepreneurial activities enhance the accumulation of wealth and economic development which ultimately reduce the poverty (Olayemi and Iwaloye, 2008).

It is important to note, however, that despite of widespread calls for entrepreneurship to reduce poverty and economic development, a more differential outlook on the impact of entrepreneurial activities for poverty reduction are pointed out by the opponents. Acs *et al* (2008) describes that the relationship between economic development and entrepreneurship is U shape that means the higher income countries has the highest level of entrepreneurship. In another way, higher economic growth makes them entrepreneur rather entrepreneurship makes the country's economy better off. Furthermore, the researcher described that there is negative relationship between entrepreneurship and economic growth in the developing countries (growth in GDP) this means, that the entrepreneurship in developing countries do not have the same effect that it has on the developed countries. Most of the entrepreneurs in the developing and least developed countries are the necessity based rather than expectation base like developed countries. Researchers have suggested that the necessity based entrepreneurial activities is not as much as effective as the expectation based for economic growth and poverty reduction (Valliere and Peterson, 2009).

Financial sector development contributes to the poverty reduction. Asian Development Bank 2009 study supports the argument. The said study concentrate all the finding about the poverty reduction and financial development around the world and finds "financial sector development contributes to poverty reduction, and a major channel is through economic

growth". The study also reveals that the poor are benefiting for the financial development by getting a job, this situation help government to allocate more resources for social safety net, and funds are more available to invest form where the poor can easily take the opportunity to create the new enterprise. A cross country empirical study conducted in 2002 showed that impact of growth on poverty depend on a country level inequality, around 3.3 percentage of poverty reduced by one percentage of economic growth for the country which Gini index in 0.25 which suggest imperative of growth for combating poverty should be interpreted as growth is mature. Growth has to be inclusive and the ways of inclusive growth are involving more human resources in productive activities by creation new employment opportunities for them. Entrepreneurships are the key player for creating new employments for the huge human resources in developing countries and the role of finance for development of entrepreneurships as unavoidable.

To sum up, poverty is the multilayer impact on the economy and thus multifaceted interferences is required to break the vicious cycle of it. To come out from the vicious cycle its demand the both supply side (finance) and demand side (entrepreneur) integration is a better way, which will ensure the combination of necessity based and expectation based entrepreneur with healthy financial intervention *ie* access to finance and financial deepening. In so doing, special care has to be given to assess the impact of entrepreneur on the poverty reduction and the channel at which the finance is helping to foster the entrepreneurial activities in the economy. But this holistic approach to assess of the paradoxical effect of entrepreneurial activities and effect of finance to be an entrepreneur is not may be possible, due to the complex and multidimensional nature financing system and as well as the entrepreneurial activities itself. Furthermore, it will be impossible to distinguish the effect of proliferation entrepreneurial activity on poverty reduction, as different other economic activity also has an impact on economic growth and hereby poverty reduction. In addition, we

presume, an entrepreneurial activity is a strong instrument for the reduction of poverty but not only the single player, and financial activities is the catalyst for the entrepreneur development but not the last resort. Thus, it is furthermost important to determine the role of entrepreneurship and finance for poverty reduction to formulate the future policy for the poverty reduction from the world, and this underline greatest requirement leads the present study to find out the entrepreneurships and poverty reduction nexus and the role of a catalytic player, finance.

Objective and Research Questions

The main objective of this study is to identify the long-run causal relationship of between poverty and entrepreneurships and how the financial instruments affect the relationship among the developing and least developed countries, based on the panel date from the period 2000 to 2013 of 37 countries. On the one hand, our argument is that the financial development has an indirect effect on poverty reduction by intensifying growth and on the other hand, direct by facilitating to be entrepreneurs through allowing the marginal peoples to get financial benefit from the developments that upsurge and improve the marginal capabilities to undertake entrepreneurial initiatives. Hence, the written speculation is to reconnoiter the benefit gained from the entrepreneurial activities from financial developments to reduce the poverty level. Another way, we will try to find the relationship between entrepreneurship and poverty level and the relative importance of financial depth, efficiency and inclusion is this relationship. Therefore, it is assumed that the study will answer the following questions: (1) Does entrepreneurship has an effect on poverty reduction and (2) Dose financial sector development induces more entrepreneurial activities?

II. LITERATURE REVIEW

A. Entrepreneurship and Poverty

Conceptually, it is established “entrepreneur is innovators” as the key element in the pouring economic development (Wong, Ho, and Autio, 2005). Schumpeter (1942) described entrepreneurship as feeds “creative destruction process” by causing constant disturbance in the equilibrium of economic system, creating opportunities for economic rent, where other innovation are spun off and more entrepreneur enters into the economic system thus the increase of the number of entrepreneurs also increase the growth of the economy.

Entrepreneurship considered as the active element of the economic demand in the economy and ensue the factors of production to satisfy the demand, typically making profit. High level of poverty with slow economic growth have forced the large part of the developing world population to become entrepreneurs for reducing their poverty and entrepreneurship contribute significantly to reduce poverty, social stability and income inequality (World Bank 2000). World Bank (2000) states entrepreneurship as a noteworthy mechanism through which people living below the poverty level can escape from the poverty with their limited skill and education without competing for formal jobs.

To reduce poverty and accelerate the economic growth, small and medium size enterprises become the target vehicle for the developing countries. Recent findings of the World Bank Group study are promising. The report shows entrepreneurship enhances competition, efficiency, innovation and aggregate productivity growth. In 2013 International Finance Corporation (IFC) conducts the study around the world to find the effect of entrepreneurship on the employment creation and found the result is impressive as well as inspiring the future entrepreneurship potentialities (IFC, 2013).

Entrepreneurship’s contributes in employment creations and it is true for both developed and

underdeveloped countries as well as formal and informal sector. Most of the developing country has the large number of population and for them labor intensive industry is the main source of employment. Country likes Argentina and Bolivia 80% of the registered enterprise have fewer than 10 works thus it belong the small industry category and it create the major employment source for those countries. Around the developing countries entrepreneurship accounts for more than 45% of formal employment and informal sector accounts have even more of the total labor force of the developing countries, thus there is no doubt that entrepreneurship in the vital player for employment creators.

Research indicates that the first growing small and medium size entrepreneurs have accounted for most of the new job creation in the developed countries (Valliere, 2009) and the finding has been supported by Wong, Ho, and Autio (2005), who used the Cobb-Douglas production function and argue that entrepreneurship play a critical role for the factor productivity of nations.

Entrepreneurship has a distinct effect on the macro level economic growth and the creation of new business and innovation are the distinct determinants for the national economic growth in developed countries, where the entrepreneurship is in the form of high expectation entrepreneurship, but the lower-expectation opportunity-based entrepreneurship in lower income nation is not strong enough to contribute in economic growth entrepreneurship (Wong, 2005). This indicates that the contribution of entrepreneurship in economic growth differs from countries in the different state of economic development (van Stel, Carree, and Thurik 2004).

In the last two decades, the knowledge and information revolution has revitalized the theoretical linking between entrepreneurship and economic growth, from the new viewpoint, entrepreneurs serve as agent of change, bring new ideas to market and stimulate the growth (Wong, 2005).

Wennekers and Thurik (1999) made a significant contribution to the study of entrepreneurship by constructing an operational framework linking entrepreneurship and economic growth. They highlight the multiple roles of the entrepreneur beyond that of the innovator. They also show the general innovative role of entrepreneurs that includes not only newness (implementing inventions), but also the new entry (startups and entry into new markets). In their final framework for linking entrepreneurship to economic growth, Wennekers and Thurik clearly show the myriad effects and conditions taking place at different levels for entrepreneurial activities to have an ultimate impact on economic growth. The direction of the impact is not a foregone conclusion in this framework. However, a working assumption is that ceteris paribus, a rise in the number of entrepreneurs should lead to increased economic growth at the national level.

There are only a limited number of empirical studies on econometric link between economic growth and entrepreneurship. This has been partly due to the difficulty in obtaining a measure of the national level of entrepreneurship that can be appropriately correlated to national economic growth as measured in terms of output, productivity or wealth, the macro measurement of entrepreneurship needs to operationalize entrepreneurship as a multi-dimensional concept from typologies that are developed at the micro level (Wennekers and Thurik (1999).

Empirical studies find support for differing relationships in both directions of causality and the ambiguous empirical evidence on the unidirectional impact of unemployment on firm startup. "Schumpeter" effect where new firms enhance employment levels by stimulating economic activity and creating new jobs on the other hand, a "refugee" or "shopkeeper" effect leads to individuals seeking self-employment, thus stimulating entrepreneurial activities. This "refugee" pushes effect coupled with low entry barriers may lead to stereotypes that guarantee employment for the business owners, but generate no growth (Wong, 2005).

Carree et al. (2002) developed an error correction model by include economic growth as measured by per capita output (GDP) for the 23 OECD countries to determine the equilibrium rate of entrepreneurship as a function of the stage of development of an economy, and found both positive and negative roles of entrepreneurship on economic growth of countries. The research finding indicates that the relationship between the total nascent entrepreneurship rate of countries and their respective national per-capita income appears to be u-shaped. Countries with low per capita income have high nascent entrepreneurship rates, as do countries with high per-capita income.

The u shaped relationship between nascent entrepreneurship and national income per capita implies that emerging countries, total entrepreneurial activity does not benefit GDP growth rates very much. But this does not mean that entrepreneurship should be discouraged, because it is evidence that entrepreneurship lowering unemployment, which ultimately help to reduce poverty (van Stel, Carree and Thurik 2005).

The literatures on the effect of entrepreneurship on poverty reduction and income inequality are scared. Kimhi in 2010 described conventional risk taking behaviors associate the entrepreneurship and income inequality. He also suggested that entrepreneurial income reduces per capita income inequality, but the number of the number of entrepreneurs has no affect income inequality. Moreover, appropriate policy support may encourage the entrepreneurship, which contributes to reduce inequality, low income, low wealth and relatively uneducated society.

B. Financial development and Poverty

Study of Asian Development Bank (2009) on financial sector development revealed the contribution of the financial sector to the poverty reduction. The said study concentrate all the finding about the poverty reduction and financial development around the world and finds “financial sector development contributes to poverty reduction, and a major channel is

through economic growth". The study also reveals that the poor are benefiting for the financial development by getting a job, this situation help government to allocate more resources for social safety net, and funds are more available to invest form where the poor can easily take the opportunity to create the new enterprise. A cross country empirical study conducted in 2002 showed that impact of growth on poverty depend on a country level inequality, around 3.3 percentage of poverty reduced by one percentage of economic growth for the country which Gini index in 0.25 which suggest imperative of growth for combating poverty should be interpreted as growth is matter. Growth has to be inclusive and the ways of inclusive growth are involving more human resources in productive activities by creation new employment opportunities for them. Entrepreneurship is the key player for creating new employments for the huge human resources in developing countries.

Financial development could help the poor in numerous ways, first it has been claimed without doubt that lack of access to finance is one of the major factors behind the doggedness of the poverty (Levine, 2008). Due to the small scale lending and high cost of funding the poor cannot borrow in the future invest and earning.

Any drop of the fixed cost of managing risk excessively beneficial for the poor. Improve the delivery of financial service could also make the entrepreneurs and household risk management easier, thus expand their economic activities (Bardhan et al 2000).

Beck *et al* (2009) described the indirect effect of financial development on the economic opportunities and outcome of households without directly using the financial service. For example, financial development by improving the economic activities may boost the demand of labor, and largely this requirement belongs to the low skill workers, this secondary effect of financial development contributes to reduce the income inequality and poverty reduction.

Financial developments also increase the competition among the firm and break their monopoly, allow more firms to come to market, which create more employment. This

increase competition reduces the discrimination of hiring workers and expands the opportunities to participate in the economic activities the disadvantage group, i.e. the poor, which help them to reduce poverty (Becker, 1957).

Financial development promotes growth and growth is the powerful mechanism for reduction of poverty, but the rich get more incentive in each increment growth than poor and development can't be anticipated for the relative poverty from the growth process, but it also means that complete poverty will be declined (Dollar and Kraay, 2002).

Li, Squire and Zou (1997) find that financial depth go in powerfully and pointedly as a contributor for dropping the income inequality and raise the average income 80% of the lower income population. Because the better financial service development reduces the credit constraints for the poorest households and giving them opportunities for investment in productive sectors.

Empirically, many studies prove the positive relationship within access to finance and poverty reduction. In Peru Jacoby (1994) finds that poor household cannot afford appropriate education for their children due to lack of credit which perpetuates poverty. Jacoby and Skoufias (1997) find the Indian village households reduce their children's education as their income reduced due to transitory shock and for recovering the shock they have no access to credit. Similarly, Beegle et al. (2003) show that poorly functioning financial system, increase the child labor.

Lack of risk diversification due inappropriate access to finance is evident by Rosenzweig and Wolpin (1993) and Rosenzweig and Binswanger (1993). Their study outcome revels that low-wealth take lower return business due to lack of financial service which may help them to choose the higher return business comparing the household has access to finance.

Burgess and Pande (2005) suggest the bank branch opening in the rural area lead to faster growth of wage to the agricultural labor but have no effect on the urban workers. Beck et al

(2009) finds the demand for the lower skilled workers increase disproportionately due to deregulation, which raises their yearly income relative to higher-income individuals which minimize the income inequalities. In the case of racial discrimination in the US, Levine et al (2009) exposed that the financial development seems to have the widened the economic openings for the group who had discriminated against.

However, analysis using macro data is less decisive in relation between poverty, access to finance and job opportunities. The study reveals that depth of financial intermediaries has a strong relationship with the growth of income of poor (Beck et al. 2007 and Singh and Huang, 2011).

In contrast, Dollar and Kraay (2002) shows that the poor are not affected by the financial development. To come out the statement they conduct experiments in a sample of advanced and developing economies. They examine the relationship between financial depth (using the ratio of commercial bank assets to total bank assets) and average income (of the poorest quintile). Similar results also observe by Kraay (2004) in a sample of developing countries, where he examines the relationship between the intensity poverty and the ratio of M2 to GDP. Finally, looking at a sample of developing countries Guillaumont-Jeanneney and Kpodar (2011) find the poor benefited from the banking system by saving and facilitated of the transaction rather than gaining benefit of greater access to finance through credit. Measuring the financial development as ration of M3 to GDP they find a positive relationship between financial development and poverty and the relationship become statistically significant if they use private credit instead.

Granted, several policy makers, scholars and economist have argued that necessity based entr epreneurship are neither more labor intensive, nor better at job creation than large firms (Littl e, et al., 1987). Indeed, entrepreneurship is the majority job creators in the developing econo my. As noted in the Asian countries 60-70% and African Countries 50% job is provided by th

e necessity based small entrepreneurial sector. Furthermore, in high income countries, entrepren eurship contributes nearly 64 percent of the GDP and 62 percent to employment. Jobs in mos t rising economics in the Asia entrepreneurship constitute around 70%. In Japan 98.9% belon g to the SME which provide 69% of total employment, this scenario is more evident in the ca se of the Philippines, where SME constitute 99.6% of the total industries and provide 70% of total employment to the country. In other words, the small proportion of large industries contr ibutes most to the economy by using modern automated technology, which requires less hum an involvement. But for the country where human resource is the main resource and the probl ems as well, the economy will get more advantage by involving the mass population in produ ctive sector rather exclusive them for the production by using advanced technology productio n system. As mentioned before, poverty is expensive and hinder the national growth create so cial instability. The economy can get more advantage by using the more human resources in p roductive way rather using a machine instead of using human and subsidies the society from t he earning profits of their business. Though, there is controversy about the employment creat es by entrepreneurship, but it is more evident that entrepreneurship creates more employment in the developing and under developing economy rather developed economy. It is also eviden t, the people of underdeveloped and developing countries lying under poverty, not in the deve loped country. Therefore, entrepreneurship accounts a good balance of employment creation i n the underdeveloped and developing countries, which require more. In the other words, the nexus between economic growth, entrepreneurship and poverty alleviation needs to be fully a rticulated and emphatically substantiated.

III. EMPIRICAL STRATEGY AND DATA

A. Model Specification and Data Description

To check the relationship between the entrepreneurship development strategy and the poverty level, we can write the following simple equation ignoring the issues of nonlinearities:

$$poverty_i = \alpha_1 + \beta_1 ENT_i + Z_i Y_o + \varepsilon_i \quad \text{----------(1)}$$

Where *poverty* is the level of poverty incidence in country *i*, is measured as the headcount ratio of poverty. ENT is a measure of entrepreneurship development strategy in country *i*. Zi is a vector of other controls. The coefficients β and α are the parameters of interest, and Y_0 is a vector capturing effects of the control variables in Zi. If we add our second interested variable level of financial development into the equation (1) as independent variable as well as interacting with our first interested variable ENT, following extended economic relationship can be obtained:

$$Poverty_i = \alpha_1 + \beta_1 ENT_i + \beta_2 FD_i + \gamma_1 ENT_i \times FD_i + Z_i Y_0 + \varepsilon_i \quad \text{---------- (2)}$$

In equation (2), in addition to the equation (1), FD is representing the level of financial development and *ENT*× *FD* is representing the interaction term of the entrepreneurship and the level of financial development. The outcome variable we focus is the level of poverty incidence, measured as the poverty headcount ratio at $1.25 a day (PPP) (% of population). The poverty level averages over the period 2000-2013. Y_0 is a vector capturing effects of the control variables in Zi, we include several control variables in the control vector which have the probability to affect the level of poverty incidence.

Evidenced shows financial development, reduce the cost of business by lowering the cost of acquiring information about the firm and managers (see Gertler, 1988; Levine, 1997). More accurate information about the production technologies and nature of corporate control, better

resource allocation and growth can be enhanced better financial developments. (Boyd and Prescott, 1986; Greenwood and Jovanovic, 1990; King and Levine, 1993b). Financial development can encourage investment in higher return activities by facilitating and managing the risk, improving the liquidity of assets available to savers and reducing the cost of business (Obstfeld, 1994; Bencivenga and Smith, 1991; Greenwood and Smith, 1997). To capture the impact of financial development on poverty and entrepreneurship, we seek an indicator of the ability of financial development to research and identify profitable ventures, monitor and control managers, ease risk management, and facilitate resource mobilization.

Private credit is our primary financial development variable. The value of credits by financial intermediaries to the private sector divided by GDP is equal to the private credit and it is not excluded the credits issued by development banks and central banks (King and Levine, 1993a, b). Private Credit is also a broader measure of financial intermediary development than that used by Levine and Zervos (1998) and Levine (1998), since it includes all financial institutions, not only deposits money banks.

While we measure Private Credit improves significantly on other measures of financial development, it would be valuable to construct a measure of financial intermediary development that identified credits issued by privately owned financial intermediaries. We could only obtain data, however, on 37 countries in scattered years over the 2000-2013 period, yielding a data set that is insufficient for the econometric procedures.

We used another measure of financial development for check the robustness of financial developments. The traditional measure of financial development used in Liquid Liabilities. Liquid liabilities are an indicator of size, which equal to the liquid liabilities of the financial system, calculated as currency plus demand and interest-bearing liabilities of financial intermediaries and nonbank financial intermediaries, divided by GDP. The correlation

between Private credit and Liquid Liabilities is 0.85 and significant at the 1 % level. The objectives underlying using these measures are that profitable financial instruments are more likely to find out more profitable investment ie more entrepreneurship will flourish.

We used Growth rate of per capita income as a control variable which should reduce poverty level. Many cross-country studies have explained that the pace of economic growth is the main determinant of poverty reduction. Roemer and Gugerty (1997) provide strong support to the proposition that the growth rate of per capita GDP can be and typically is a powerful force in poverty reduction. We used the variable Growth equals the rate of real per capita GDP growth, where the underlying data are from the national accounts. For the pure cross-sectional data, for which there is one observation per country for the period 2000-2013, we compute Growth for each country by running a least squares regression of the logarithm of real per capita GDP on a constant and a time trend. We use the estimated coefficient on the time trend as the growth rate. This procedure is more robust to differences in the serial correlation properties of the data than simply using the geometric rate of growth (Watson, 1992). Using geometric growth rates, however, yields virtually identical results. We do not use least squares growth rates for the panel data because the data.

We also used inflation rate and the government consumption to identify government intervention for poverty reduction through entrepreneurship. It assumed through economic instinct that higher inflation and government consumption would help to boost the entrepreneurial activities to reduce levels of poverty incidence.

This paper uses two proxy variables as a representative of financial development. These variables Bank Z score and Bank overhead cost by deposit money banks and other financial institutions to GDP. Data for both the liquid liability, private credit ratio to the GDP, Bank Z score and Bank overhead cost are collected from International Financial Statistics, World

Bank and International Monetary Fund (2014) averaged from 2000 to 2013. The dataset consists of 37 developed and developing countries. Table 1 shows the summary statistics and correlation matrix of the variables. Entrepreneurship and poverty level are more volatile than other variables.

B. Empirical Strategy

The correlation between poverty and different dependent variables and descriptive statistics presented in the table1. The Private credit varies considerably across the countries; ranging as low as 4% in Zaire to high as 141% in Switzerland. Similarly, GDG per capita growth shows a significant variation where South Korea (11%) has the highest rate and Zaire (3%) the lowest. Remarkably, Private Credit is significantly correlated with poverty the dependent variable.

According to RZ (1998) heavily external finance user benefit disproportionately from financial development rather than the industries does not use the external finance. The financial intermediaries and market help to overcome market resistance that minimizes the wedge of external and internal finance. The better functioning of financial intermediaries and reduce the cost of business foster the growth entrepreneurial activities and reduce the poverty. RZ (1998) used panel data for 42 countries and 36 industries show that the better financial system helps to grow faster industries. Moreover, RZ show that the enterprise growth runs mostly through the number of growth of the enterprise rather the size of the enterprise.

To examine the causal relation of entrepreneurship and poverty and the role of financial services to it, we use and extend the methodology developed by RZ (1998). We first examine whether entrepreneurial activities faster the reduction of poverty. As noted, we focus on three measures of financial structure: (a) Private Credits, (b) Liquid Liabilities, and (c) Bank Overhead cost. We construct these measures so that higher values imply larger and more

active markets, more regulatory restrictions on banks, and larger government ownership of banks, respectively. Second, we use the financial instrument together with entrepreneurial activities to catch the effect of finance. Finally, we extend the RZ (1998) model to focus on the entrepreneurial activities and financial development rather than on poverty. This extension in important because it is suggested that the better financial instrument will influence the innovative entrepreneurial activities different from the other allocate capital disproportionately to labor-intensive industries. Thus, we assess whether entrepreneurial activities grow faster in financial systems using our three measures of financial structure and help to reduce poverty. Finally, we assess the financial services and entrepreneurial activities views by examining the impact of (1) overall financial development and (2) contract efficiency of entrepreneurial activities and financial development for poverty reduction.

Econometrically, we use the following regression to assess the impact of financial development and entrepreneurial activities for poverty reduction shown in the equation (2). We interact with the external dependence with both (a) a measure of overall financial development (FD) and (b) entrepreneurial activities. The dummy variables for industries and countries correct for country and industry specific characteristics that might determine industry growth patterns. We thus isolate the effect that the interaction of external dependence and financial development/structure has on industry growth rates relative to country and industry means. By including the initial share of an industry we control for a convergence effect: industries with a large share might grow more slowly, suggesting a negative sign on g. This effect does not correspond exactly to the convergence concept known from cross-country growth regressions. We include the share of manufacturing rather than the level, since we focus on within-country, within-industry growth rates. As in RZ, g enters significantly negative in most regressions.

The sing and significance of γ is different with the prediction of different hypothesis. The entrepreneurial activities view predicts that if poverty depend on the financial development that grow faster in economies with higher levels of financial development, thus implying $\gamma > 0$, when using the financial development measure of the comparative size of entrepreneurial activities. As noted above, proponents financial development with poverty relation view also believe that entrepreneurial activities will exert a negative influence on resource allocation and growth. As per prediction of financial service view, that the finance grow faster in the economies with higher level of overall financial development but the structure of finance does not matter for the poverty. Thus, as per financial service view point prediction is $\gamma = 0$.

To address the issue of indigeneity of financial development and financial structure we run the ordinary least squares (OLS) regressions. By using appropriate instruments, we control for simultaneity bias and reverse causality. We will use the rate of inflation, government consumption and dependency rate of the countries as instrumental variable for the structure and level of financial development.

The first technique employs a pure cross-sectional instrumental variable estimator with fixed effect, where data for 37 countries over 2000-2013 period. The dependent variable is poverty, in turn, GDP growth real per capita, private credits, liquid labilities, bank overhead cost and bank Z score. A wide array of conditioning instruments to control the other factors associated with poverty used along with the financial development measures.

The cross-country regression have at least three limitations. First, lack of exploitation of time series of the data. Second, biasness due to omission of country specific effects, and third, endogeneity of all regression is not controlled. The use of appropriate panel techniques can alleviate many of these problems. However, the cross-country estimations help us determine whether the cross-country variance in economic growth and the sources of growth will

explain by variance in the exogenous component of financial intermediary development.

IV. EMPIRICAL RESULTS

A. Entrepreneurship and cross country poverty incidence

Based on the theoretical background and measuring scale explained before we expect that entrepreneurship and level of poverty will be positively correlated. Figure 1 reports a scatter plot of the level of poverty incidence against the entrepreneurship. The correlation is positive, steady and statistically significant; 61 percent of the poverty incidence is associated with the development strategies subject to the measurement error.

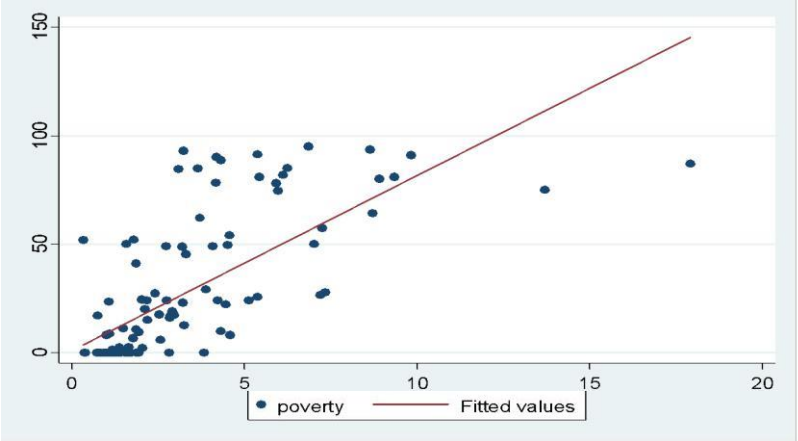

Figure 1: Scatter plot of poverty and Entrepreneurship

A.1 Ordinary Least Square method

The OLS regression results with the dependent variables poverty shown in the table 2 and each cell of the table correspondents to a separate regression. The simple regression model with the dependent variable Poverty controlling for other variables presented in the model 1, 2 and 3. The entrepreneurial activities moderately correlated with poverty. Model 2 controls for the growth rate of GDP per capita and model 3 adds control for the private credits. The coefficient associated with poverty is lower, but still significant at the 1 percent level. Model

4 has the same explanatory variables with additional control variable whether the size measure of the financial sector has an effect on entrepreneurial activities and poverty. Similarly, each of the models 5, 6 and 7 add one more control variable of financial efficiency such as financial efficiency measured by bank overhead cost, financial accessibility measured by ATM and financial concentration measured by bank z score. However, in the model 7 we exclude private credits because of high multi-collinearity with expropriation risk. The reported coefficients are the effect of a marginal change in the corresponding regressor on the level of poverty.

The table 2, equation 1-3 shows that the entrepreneurial activities have a negative and insignificant impact on the poverty. The impact of financial development: Private credit, *i.e.*, the measure of the activity of the financial sector, tends to reduce poverty and the effect is moderated by entrepreneurial activities. However the size measure of the financial sector, liquid liabilities has limited impact on poverty reduction (equation 4). Equation 5-7 financial efficiency measured by bank overhead cost, financial accessibility measured by ATM and financial concentration measured by bank z score has limited impact on poverty reduction through entrepreneurial activities. Table 2 shows that the entrepreneurial activities decrease, increases the level of poverty, but this effect is statistically insignificant at the 1 percent level for each specification even with controlling for many variables' impact on the level of poverty. We gradually increase the number of control variables to check whether the result is really persistent or no. The results displayed in table 2 imply that the poverty has the expected positive impact and this impact of implementing entrepreneurial activities on the level of poverty incidence is economically sizeable. This finding supports our hypothesis that the more aggressive the entrepreneurial activity pursued by a country the worse the poverty situation is in that country during the period 2000-2013. The estimated coefficients of entrepreneurial activities have values ranging from -0.3 to -8.1 From the estimates, we can

infer that a 1 standard deviation increase from the mean value of the entrepreneurial activities can result in approximately 0.3 to 8 percent increase in the country's average poverty level for the whole period 2000-13, whose per capita income is below $1.25 a day based on purchasing power parity index.

The regression results also report that the entrepreneurial activities along with private credit have the expected signs and highly significant effects on the poverty level in the regression equation 1, 2 and 3. The private credits are important to their business performance and entrepreneurial activities in the economy and thereby creating job opportunities. Thus, higher index reduces the level of poverty incidence. Similarly, liquid liabilities have a significant effect at the 1 % level of poverty and are positively correlated with poverty. This result demonstrates the evidence that entrepreneurial activities without association of better financial instrument does not help to reduce poverty. These two indexes of financial development are representing the institutional quality. Thus, cross-country poverty incidence can be explained by the quality of the institutions.

Our data set confirms that higher level of poverty exists in a developing country, which is supposed to be. The regression result also shows that if a country is developing it will have higher levels of poverty. This explanatory variable capture a lot of effects like level dependency, inflation, government consumption, education, etc, because we believe that developing countries have relatively lower education, higher inflation and health and so on which may affect the level of poverty. For example, if a person is well-educated, he or she can get jobs and can get rid of poverty. Other explanatory variables like growth rate of GDP per capita, whether the country is developing or not significant even at the 10 % level. However, the impacts of these variables are jointly significant. To test whether we should include the rate of GDP per capita, private credit and liquid liabilities in the regression model,

our null hypothesis has their joint coefficient equal to zero. However, we reject the null hypothesis at the 5 % level that these variables have no impact on poverty jointly. It permits that these variables should be included in our regression model.

A.2 Instrumental Variable Regression (fixed and random effect)

While entrepreneurial activities may lead to higher poverty level, higher poverty level might also encourage a government to adopt entrepreneurial activities. One possibility is that the government in a country with higher poverty level wants to reduce poverty and improve living standards of the people that encourage them to emphasize entrepreneurial activities. That is why governments give privileges to that entrepreneur through subsidies or tax waivers. This may create a problem of reverse causality. We are also suspecting the problem of measurement error as our main interested variable which may not be a true representative variable for entrepreneurial activities. There is also a chance of omitted variable bias in our OLS model. To control these endogeneity biases, we instrument our dependent variable with the private credits, liquid liabilities and GDP for the year of the sample period as mentioned earlier. The instrumental variable (IV) fixed effect regression estimation results are reported in Table 3.

Model specification in table 3 is a replication of table 2 except the estimation methodology which here is fixed effect. As with the first OLS result in table 2, the estimates for the entrepreneurial activities have the expected negative sign and are insignificant in all regression results at the 1 % level except in equation 5 where it has positive sign and significant at the 5 % level. Entrepreneurial activities have a negative and significant impact on poverty reduction. In the equation 1-3 we find, entrepreneurship development enlarges poverty, and the effect is weakened with the development of the financial sector. The impact of private credit tends to reduce poverty and the effect is moderated by entrepreneurial

activities. Liquid liabilities also tend to reduce poverty and the effect is moderated by entrepreneurship development (equation 4). On the other hands, financial efficiency measured by bank overhead cost, financial accessibility measured by ATM and financial concentration measured by bank z score have minor impacts. Similar results found when using the random effect estimation (table4). One of the possible reasons for reducing significance levels in the last two models is the increasing number of control variables that increase the standard error noticeably. This is a penalty for incorporating additional insignificant control variables. The finding is once again consistent with the prediction of our hypothesis that development strategy is one of the prime determinants of the poverty level of a country. However, here the magnitude of the coefficient is higher that the OLS, meaning that OLS regression has downward bias. But the standard error is higher in fixed effects regression than that of the OLS results. The standard error is also robust for fixed effects regression. We have lost significance of other explanatory variables even which is not consistently significant. Although these explanatory variables are not significant individually, they are jointly significant to determine the level of poverty in a country (not reported). However, fixed effect regression gives more reliable estimated results by controlling endogeneity problems.

B. Role of Finance is interacting with entrepreneurship developments on the cross country poverty incidence

Liquid liability and private credit ratio against poverty and shows that they are negatively correlated. About 46 percent of the poverty incidence is associated with the liquid liability and 50 percent with the private credit ration (see table 1). It is consistent with the past literature on financial development and poverty level (Green, et al. 2006, Kirkpatrick, C., 2000, Akhter & Daly, 2009, Beck, T., A. Demirgüç-Kunt, and R. Levine 2004). Countries

with bigger amounts of private credit and higher liquid liability are supposed to be supportive to eradicate poverty through higher money supply and access to the financial services through entrepreneurial activities.

Some of the regression models in table 5 are used to investigate the direct effects of financial development of changes in poverty level. Other regression models are with interaction term of financial development and entrepreneurship. We would like to see how the effects of entrepreneurship differ with the differences in financial development. It's important to mention that, from the correlation matrix in table 1 all of the financial development variance are highly correlated with each other. Therefore, we include one financial development variable at a time in each regression to avoid multicollinearity issue. This approach enables us to obtain more precise estimates of the impact of each of the financial development variables. Here we use ordinary least-squared regressions similar to Beck, Demirguc-Kunt, and Levine (2004). The dependent variables are the average poverty level over the long available time period from 2000 to 2013. The independent variables are the average values of financial development over that same time period. Making average of the variables for longer time is in order to abstract out business cycles and smooth out volatility in the variables. This approach enables this work to examine the long run relationships between the variables. Because financial development may indirectly reduce poverty by promoting economic growth, we include some control variables like the growth of GDP per capita, liquid liabilities in the regressions.

We also use fixed effects and random effect regressions to eliminate the endogenous biases in the OLS regressions. Even though countries with higher levels of financial development may have higher poverty alleviation, financial development may not be causing the changes in poverty. Both financial development and poverty alleviation may be derived from an omitted

variety. It is also possible that lower level of poverty leads to the higher financial development as more entrepreneurship because of simultaneous relationship.

Considering the OLS regressions without interaction terms, these are the first round analyses of the direct effect of entrepreneurship and financial development on the poverty level. The coefficients of log of poverty in all the OLS regression have negative sign and insignificant. Here we have found the same results suggesting that entrepreneurship increases the poverty level. However, the variables for the financial development like liquid liability and private credit ratio are significant even at 1% with negative sing meaning that these two indicators have any direct impact on the poverty alleviation. These results show that financial development will not reduce poverty directly.

Considering the fixed effects and random effect regression without interaction terms in table 3 and 4, these are also the first round analyses of the direct effect of entrepreneurship and financial development on the poverty level but control of the endogenous problems in the OLS regressions. Once again the effect of entrepreneurship has been proved with higher economic impact and higher statistical significance and it has also been proved that financial development does not have any significant direct impact on reducing poverty. However, the endings are once again consistent with the prediction of the paper's hypothesis that entrepreneurship development strategy is one of the prime determinants of the long-run poverty level of a country. These results also indicate that only the rich and the powerful people in the society have access to subsidized loans from banks or simply financial services, and thus, only these people will have the financial resources to invest in prioritized capital-intensive industries. This type of financial development leads to higher inequality in the country and will not improve the poverty situation.

Finally, considering both OLS, fixed and random effect regressions with interaction terms reports very interesting results. Once the financial development interacts with the entrepreneurship strategy, then it is significant and is positively correlated with the country's poverty level. This means that if a country is following an entrepreneurship development strategy, it is supposed to have higher poverty level, but higher financial development may mitigate the detrimental effects of entrepreneurship on the level of poverty. In other words, financial development may reduce poverty incidence for a country even though it is following entrepreneurship development strategies. Thus, entrepreneurship development along with financial development is crucial to eradicate poverty, although it does not have any direct impact on poverty.

V. CONCLUSION

Once again, a reminder - the objective of this paper was to empirically examine the effects financial development on the incidence of poverty. We also intended to check how this effect of entrepreneurial activities differs according to different levels of financial development. We have found that the estimated coefficients of poverty and the financial development are economically negative and statistically insignificant for all the regression models. These results strongly support our hypothesis that the more aggressively pursues entrepreneurial activities, the more severe the poverty level will but the inaction of financial development will moderate the effect. The empirical evidence presented in this paper strongly suggests that the development strategy is one of the most important determinants for poverty incidence. Therefore, if developing country intends to adopt more entrepreneurial activities, it will suppress factor prices and prompt various institutional distortions to protect and subsidize the non-viable firms in the prioritized industries, which will in turn repress incentives and worsen

resource allocation, resulting in higher levels of poverty incidence. We also conclude that financial development does not necessarily reduce poverty directly, but it helps minimize the negative effect of entrepreneurial activities on increasing poverty once it interacts with development strategy. In fact, our analysis of the interaction between entrepreneurial activities and financial development suggests that entrepreneurial activities matters the most when level of financial development is low and entrepreneurial activities is weak when the financial development is strong. However, the obvious question is how generalizable these results are. We cannot fully rule out the possibility that this is precisely the situation in most of the developing countries. Moreover, our sample size is quite enough.

If we can generalize our result, then the question of how to address the deficiencies in develo pment, entrepreneurial activities takes on great policy relevance. Our analysis suggests that b etter financial management can possibly eliminate the negative effects of entrepreneurial acti vities. However, better financial management is a treatment for the disease of entrepreneurial activities, not a preventive measure. We did not prove that which development strategy will s erve the best. Only future research will be able to prove it and tell how to remove the deficien cies of entrepreneurial activities. Thus, our policy suggestion from this empirical study is that the government in developing countries should create an environment that facilitates the grow th and poverty reduction based on their entrepreneurial activities or entrepreneurship (which have been suppressed in the past due to the government's pursuit of entrepreneurial activities).

APPENDICES

Appendix A: Variable Description and sources of data

Variables	Descriptions	Sources
Poverty	Level of poverty incidence is measured as poverty headcount ratio at $1.25 a day (PPP) (% of Population). It is averaged over the period 2000-2013.	World Bank (2014)
Entrepreneurship	Self-employed, total (% of total employment)	World Bank (2014)
GDP Per-capita	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2005 U.S. dollars.	World Bank (2014)
Private Credit	The financial resources provided to the private sector by domestic money banks as a share of GDP. Domestic money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.	World Bank (2014)
Liquid Liabilities	Liquid liabilities as share of GDP. Ratio of liquid liabilities to GDP. Liquid liabilities are also known as broad money, or M3. They are the sum of currency and deposits in the central bank (M0), plus transferable deposits and electronic currency (M1), plus time and savings deposits, foreign currency transferable deposits, certificates of deposit, and securities repurchase agreements (M2), plus travelers checks, foreign currency time deposits, commercial paper, and shares of mutual funds or market funds held by residents	World Bank (2014)
Bank Overhead Cost	Operating expenses of a bank as a share of the value of all assets held. Total assets include total earning assets, cash and due from banks, foreclosed real estate, fixed assets, goodwill, other intangibles, current tax assets, deferred tax assets, discontinued operations and other assets	World Bank (2014)
Bank Z Score	It captures the probability of default of a country's commercial banking system. Z-score compares the buffer	World Bank

Variables	Descriptions	Sources
	of a country's commercial banking system (capitalization and returns) with the volatility of those returns.	(2014)
ATM/1000 People	Number of ATMs per 100,000 adults. For each country calculated as: 100,000*Number of ATMs/adult population in the reporting country.	IMF (2014)
Literacy Rate	Literacy rate, adult total (% of people ages 15 and above)	UNESCO Institute for Statistics (2014)
Inflation	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	IMF (2014)
Government Consumption	Goods and services include all government payments in exchange for goods and services used for the production of market and nonmarket goods and services. Own-account capital formation is excluded.	IMF (2014)

Table 1: Descriptive Statistics

	Poverty	Entrepreneurship	GDP Per-capita	Private Credit	Liquid Liabilities	Bank Overhead Cost	Bank Z Score	ATM/1000 People		Inflation	Government Consumption
Panel A: Summary Statistics											
Observations	518	518	518	408	483	415	409	296		518	511
Mean	4.829382	45.95174	259.5	33.97495	233.2754	4.597948	16.1072	30.2503		8.547973	12.658
Std. Dev.	6.484297	19.25751	149.678	25.57799	133.8481	3.093579	12.17602	26.08003		11.181	4.164337
Min	0.01	10.1	133.16	3.95	4.26	0.57	-6.68	0.01		0.05	3.46
Max	37.12	93.21	14760.2	127.66	466	27.28	52.9	129.29		96.09	23.76
Panel B: Correlation Matrix											
Poverty	1										
Entrepreneurship	0.6061	1									
GDP Per-capita	-0.4676	-0.6126	1								
Private Credit	-0.3333	-0.2335	0.0966	1							
Liquid Liabilities	-0.2652	-0.1188	-0.0588	0.8581	1						
Bank Overhead Cost	0.1821	-0.0154	0.0879	-0.3573	-0.4624	1					
Bank Z Score	0.0081	-0.1569	0.0542	0.0376	0.079	-0.0817	1				
ATM/1000 People	-0.218	-0.4001	0.4547	0.2893	0.1538	-0.0707	-0.1268	1			
Literacy Rate	-0.5147	-0.5841	0.694	0.0671	-0.0525	0.2979	-0.0421	0.3221			
Inflation	0.1958	0.1116	-0.2291	-0.0397	-0.0655	0.1247	-0.1728	-0.0258		1	
Government Consumption	-0.3149	-0.5698	0.2392	0.3818	0.3034	0.0707	0.1836	0.3146		-0.0523	1

Table 2: OLS Estimation Results

Dependent Variable: Poverty Headcount 1.25$@day	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Entrepreneurship	-0.317	-0.422	-1.768	0.382	1.830	-8.413	-0.503
	(0.39)	(0.51)	(2.26)*	(0.34)	(5.76)**	(1.56)	(0.09)
Private Credit	-2.868	-2.855	-3.989				
	(3.41)**	(3.44)**	(5.17)**				
Entrepreneurship* Private Credit	1.569	1.484	2.323				
	(2.99)**	(2.86)**	(4.80)**				
GDP Per Capita	-0.422	4.586	1.028	0.336	-1.897	1.409	0.682
	(0.40)	(3.48)**	(0.82)	(0.29)	(0.93)	(1.16)	(0.53)
Entrepreneurship * GDP Per Capita	0.003	-0.697	-0.208	-0.110	0.175	-0.265	-0.162
	(0.02)	(3.57)**	(1.13)	(0.66)	(0.61)	(1.49)	(0.86)
Literacy Rate		-3.575	-1.080	-1.101	-1.121	-1.785	-0.712
		(5.99)**	(1.73)	(1.81)	(1.33)	(2.87)**	(1.13)
Inflation		-0.076	0.005	0.118	0.239	-0.011	0.132
		(1.00)	(0.08)	(1.87)	(2.20)*	(0.16)	(1.97)*
Govern Consumption		0.277	-0.017	0.117	-0.282	-0.217	-0.003
		(1.07)	(0.07)	(0.51)	(1.01)	(0.95)	(0.01)
Liquid Liabilities				-1.774			
				(1.79)			
Entrepreneurship* Liquid Liabilities				0.889			
				(1.42)			
ATM/1000People					0.003		
					(1.11)		
Entrepreneurship* ATM/1000People					0.220		
					(1.56)		
Bank overhead cost						-9.388	
						(1.74)	
Entrepreneurship* Bank overhead cost						10.102	
						(1.87)	
Bank z score							-2.361
							(0.41)
Entrepreneurship* Bank z score							2.260
							(0.39)
_cons	2.560	0.735	-3.132	-5.160	-4.874	-7.469	-9.635
	(1.07)	(0.30)	(1.37)	(2.14)*	(1.38)	(3.90)**	(4.84)**
R^2	0.42	0.47	0.57	0.54	0.55	0.57	0.52
N	400	400	400	472	291	414	400

* $p<0.05$; ** $p<0.01$

Table3: Fixed-effect Estimation Results

Dependent Variable: Poverty Headcount 1.25$@day	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Entrepreneurship	-1.213	-1.475	-1.627	-2.891	0.432	-1.089	-2.832
	(2.20)*	(2.86)**	(3.01)**	(2.01)	(0.77)	(0.42)	(0.84)
Private Credit	-3.053	-3.291	-3.226				
	(2.95)**	(3.36)**	(3.61)**				
Entrepreneurship* Private Credit	1.835	2.031	2.003				
	(2.89)**	(3.35)**	(3.54)**				
GDP Per Capita	-9.073	-9.410	-7.869	1.094	0.861	-5.210	-5.035
	(2.77)**	(2.90)**	(1.91)	(0.43)	(0.39)	(1.17)	(1.06)
Entrepreneurship* GDP Per Capita	1.060	1.107	0.923	-0.231	-0.114	0.575	0.573
	(2.25)*	(2.35)*	(1.59)	(0.65)	(0.37)	(0.94)	(0.83)
Literacy Rate		-0.137	0.224	0.411	0.491	0.180	0.475
		(0.13)	(0.20)	(0.37)	(0.31)	(0.16)	(0.41)
Inflation		0.020	0.007	-0.011	0.141	0.010	0.006
		(0.26)	(0.09)	(0.17)	(2.13)*	(0.12)	(0.08)
Govern Consumption		-0.904	-0.844	-0.774	-0.459	-0.416	-0.329
		(1.80)	(1.81)	(1.38)	(0.55)	(0.75)	(0.57)
Liquid Liabilities				-3.338			
				(1.97)			
Entrepreneurship* Liquid Liabilities				2.132			
				(2.03)			
ATM/1000People					-0.004		
					(2.02)		
Entrepreneurship* ATM/1000People					-0.016		
					(0.17)		
Bank overhead cost						-1.753	
						(0.70)	
Entrepreneurship* Bank overhead cost						1.803	
						(0.70)	
Bank z score							-3.570
							(1.03)
Entrepreneurship* Bank z score							3.476
							(1.00)
_cons	20.604	22.740	11.436	-15.377	-26.940	-0.120	-1.755
	(3.54)**	(3.92)**	(1.04)	(1.77)	(1.74)	(0.01)	(0.17)
R^2	0.35	0.37	0.38	0.30	0.25	0.30	0.26
N	400	400	400	472	291	414	400

* $p<0.05$; ** $p<0.01$

Table4: Random-effect Estimation Results

Dependent Variable: Poverty Headcount 1.25$@day	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Entrepreneurship(ENT)	-1.111	-1.361	-1.636	-2.508	1.352	-1.174	-2.431
	(2.08)*	(2.68)**	(3.11)**	(1.76)	(2.52)*	(0.48)	(0.74)
Private Credit	-2.898	-3.046	-3.252				
	(3.23)**	(3.59)**	(3.98)**				
Entrepreneurship* Private Credit	1.615	1.735	1.971				
	(3.00)**	(3.42)**	(3.93)**				
GDP Per Capita	-4.604	-4.456	-4.921	0.945	0.901	-3.625	-3.966
	(1.71)	(1.58)	(1.45)	(0.40)	(0.48)	(1.01)	(0.97)
Entrepreneurship * GDP Per Capita	0.492	0.472	0.556	-0.211	-0.126	0.383	0.452
	(1.23)	(1.12)	(1.14)	(0.63)	(0.48)	(0.75)	(0.75)
Literacy Rate		-0.071	0.443	-0.115	-1.079	0.215	0.507
		(0.08)	(0.48)	(0.13)	(0.79)	(0.23)	(0.49)
Inflation		-0.010	-0.009	0.003	0.161	-0.001	0.004
		(0.13)	(0.13)	(0.04)	(2.39)*	(0.02)	(0.05)
Govern Consumption		-0.702	-0.728	-0.770	-0.625	-0.431	-0.340
		(1.31)	(1.74)	(1.68)	(1.33)	(0.92)	(0.70)
Liquid Liabilities				-3.436			
				(2.07)*			
Entrepreneurship* Liquid Liabilities				2.120			
				(2.13)*			
ATM/1000People					-0.003		
					(1.45)		
Entrepreneurship* ATM/1000People					-0.011		
					(0.12)		
Bank overhead cost						-2.045	
						(0.85)	
Entrepreneurship* Bank overhead cost						2.175	
						(0.88)	
Bank z score							-3.472
							(1.03)
Entrepreneurship* Bank z score							3.357
							(1.00)
_cons	12.237	13.207	2.841	-6.589	-9.652	-3.222	-3.553
	(2.58)**	(2.79)**	(0.41)	(1.12)	(1.56)	(0.48)	(0.53)
N	400	400	400	472	291	414	400

* $p<0.05$; ** $p<0.01$

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