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DETERMINANTS OF CAPITAL STRUCTURE FOR THE PROJECTS FUNDED BY INTERNATIONAL FINANCIAL INSTITUTIONS: THE CASE OF IFAD PROJECTS.

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A dissertation submitted to the Faculty of Commerce, Law and Management, Wits Business School, University of the Witwatersrand
in partial fulfilment of the requirements for the degree
of
Master of Management in Finance and Investment
Johannesburg, 2013

DECLARATION

I, Jean Bosco RURANGANGABO declare that this dissertation is my own work. It is being submitted for the degree of Master of Management in Finance and Investment at the University of the Witwatersrand, Johannesburg. It has not been submitted before at other University or institution for any degree or examination purposes.

Jean Bosco Rurangangabo
March, 2013
Johannesburg

ABSTRACT

This study seeks to establish determinants of capital structure for the projects funded by international financial institutions using IFAD projects as case studies. Specifically, we seek to find out the determinants of capital structure for projects funded by IFAD; the correlation between the life span of the project and its total budget; the correlation between the total capital and the number of households directly benefiting from the project; and the correlation between the country's capacity of mobilizing loans and grants with its level of political stability, level of accountability, government effectiveness and the control of corruption. Data from 81 projects funded by IFAD between 1999 and 2011 in Sub-Saharan Africa (SSA), Middle-East and North Africa (MENA) region, Asia and South America was collected. The determinants were then examined from the distinctions of firm specific and country specific groupings and analyzed using a least-square dummy variable (LSDV) approach to reveal the regional-effects. The correlation analysis revealed that the association between total capital and the duration of the project is insignificant ($r = -0.167,\ \rho = 0.156$) whereas between the total capital and the number of beneficiary households is highly and positively correlated with $r = 0.923$ and $\rho = 0.00$. In addition, correlation between total capital and the level of Political Stability, the Voice and Accountability, and the level of Corruption is insignificant. Moreover, the results of LSDV showed that the number of benefiting household is a highly significant determinant of the NPOs capital structure ($\rho = 0.003$) together with Voice and Accountability ($\rho = 0.05$) as well as Corruption ($\rho = 0.02$). In contrast, project duration and the level of political stability were not important determinants of capital structure. The results of this analysis provide confirmatory evidence that the size of the project has a highly positive effect on the size of the capital, but significantly negative on the ability to borrow whereas only voice and accountability together with control of corruption have a significant relationship with the ability to mobilize capital for the project. Therefore, we conclude that the corporate capital structure theory, that is mostly applied in the business firms, is still applicable in

project finance but with exceptions. Therefore, we implore that more studies should be done focusing on different types of NPOs to firmly understand the determinants of debt in NPOs.

ACKNOWLEDGEMENT

I would like to thank the Almighty God for keeping me healthy and giving me the wisdom to put this study together. Special thanks to my supervisor Prof. Ojah Kalu for his guidance and constructive contribution towards my work. I learnt a lot from the recommendations he made on my work. I would also like to thank Mr. Thierry Benoit for his valuable support.

I am so grateful to my mother who raised me and gave me a privilege to education. I am greatly indebted to her. In addition, thanks to my family for their overwhelming contribution and support not only towards my studies but my life as a whole.

DEDICATION

I dedicate this work to my mother Xavérine Nyirabititaweho, my wife Marie Claire Nyiransengiyumva and to my two sons Remy and Kevin

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Abbreviations

IFAD : International Fund for Agricultural Development

GDP: Gross Domestic Product

IMF: International Monetary Fund

USD: Unitied States Dollar

EBIT: Earnings Before Interest and Tax

WB: World Bank

GNP: Gross National Product

OPEC: Organisation of Petroleum Exporting Countries

OECD: Organisation for Economic Co-operation and Development

IDA: International Development Association

NPO: Non Profit Organisation

SSA: Sub-Saharan Africa

MENA: Middle-East and North Africa

LSDV: Least Squared Dummy Variable

CHAPTER 1 INTRODUCTION

1.1 Introduction

This introductory chapter presents a discussion on the problem statement, highlights the purpose of the study, states the research questions, and anticipates the significance of the study. In addition, the chapter presents briefly the background literature. It concludes by briefly presenting the structure of the methodology to be used in the study and bulleted outline of the study.

1.2 Problem Statement

The capital structure decision has been one of the most extensively researched areas in corporate finance (Frank, 2004). However, the field of project finance is relatively an unexplored territory for both empirical and theoretical research (Esty, 2004). This scholar points out that there are very few published papers on project finance; very few articles have been published in the four leading finance journals as well as in finance text books where issues of corporate finance are discussed at length.

In this study, project finance is understood in the sense of Munns and Bjeirmi (1996) who postulate that it can be considered to be the achievement of a specific objective, which involves a series of activities and tasks that consume resources. Thus, the project is completed within a specified period. While many studies such as Modigliani and Miller (1958), Myers (2001), and Huang and Song (2006) dealt with the determinants of capital structure for corporates, few are known to have focused on the capital structure of individual projects (Benjamin, 2004).

Modiglini and Miller (1958) worked on the cost of capital, corporation finance and the theory of investment. Stewart (2001) elaborated the capital structure, Huang and Song (2006) highlighted the determinants of capital structure with evidence from China, Gwatidzo and Ojah (2009) did the first cross-country study on corporate capital structure determinants in Africa. All of these authors debated on how firms

make decisions to go for either equity or debt, but none has explore the determinants of capital structure for projects.

Therefore, a study on the determinants of capital structure for projects and especially those which are funded by international financial institutions (with reference to the projects funded by International Fund for Agriculture Development (IFAD)) is worthwhile. Many authors like Abor (2008) reported the determinants of capital structure to be: the age of the firm, asset structure, profitability, size of the firm and firm growth. Harris and Raviv (2012) investigated the determinants of capital structure to be: the probability of default, free cash flows, liquidation value, characteristic of the firm structure of assets etc.

While the capital structure for corporate has been intensively researched, Scott and Samson (2009) recognize the big gap in the literature of project finance. Consequently, this study comes to fill the gap by investigating the capital structure for government projects that are funded by international financial institutions. Contrary to corporates whose main objective is to add value to the wealth of shareholders, government projects aim at the welfare of its populations. In addition, while the components of corporate capital are well known as equity plus debt, on the projects side there are other components such as grants from different donors and the contribution of beneficiaries which come to supplement the portion of the government contribution that appears in the pool of capital as equity.

This study opens new insight into capital structure researches by investigating the capital structure for government projects funded by international financial institutions. It attempts to discover whether their capital structure depend on the duration of the project, the number of households benefiting from the project, the political stability of recipient country, level of accountability, government effectiveness and control of corruption In analyzing determinants of capital structure for IFAD funded projects, our study provides the missing gap in project finance and

push the streams of literature more broadly in-line with Frydenberg (2011) declaration that capital structure is " a too complex fabric to fit into a single model".

IFAD is a specialized agency of the United Nations that was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference. This conference was organized in response to the food crises of the early 1970s that primarily affected the Sahelian countries of Africa. The conference resolved that IFAD should be established to finance agricultural development projects primarily for food production in developing countries (IFAD, 2010). As a result, 234 projects and programmes were undertaken in 91 countries. This will serve as a primary source of data for our study.

1.3 Aim of the study

The present study aims to investigate which factors determine the capital structure of projects financed by IFAD. Firstly, the study will assess the relationship between the life of the project and its total cost. Secondly, it will examine the correlation between the government contribution and the total cost the project. Thirdly the study will trace the relationship between the total cost of the project, and the number of households benefiting from the projects. This study will investigate whether the probability of securing a loan or a grant from internationals financial institutions or different bilateral organisations is associated with the recipient country's political risk and its level of accountability. Lastly, the study will embark on a comparative analysis of how the determinants of IFAD project capital structure vary across Asia, Africa and Latin America.

1.4 Hypothesis of the study

The current study expects a greater percentage use of leverage in funding most of the project in all the three continents .This proposition is based on findings from the paper published by Klaimeier and Versteeg (2010). According to this paper, project

finance involves higher leverage ratio than conventional financing. However, we expect continents with greater GDP per capita to feature projects with less leverage than poorer continents. As a result, Asian projects should be less leveraged compared to Latin America's and Africa's respectively. In addition, this study expects a high correlation between the capacity of mobilizing loans and grants with the recipient country's political risk and its level of accountability.

1.5 Objectives of the study

This study will try to find objective answers to the following questions:

- What are the determinants of capital structure for projects funded by IFAD?
- What is the correlation between the life span of the project and its total budget?
- What is the correlation between the total capital and the number of households directly benefiting from the project?
- What is the correlation between the recipient country's capacity for mobilizing loans and grants with its level of political stability, level of accountability, government effectiveness and the control of corruption?

1.6 Significance of the Study

The significance of this study includes benefits to the international funding institutions and scholars in the field of capital structure. As highlighted by Benjamin (2004) knowledge that informs capital budgeting of projects on the international scale is very limited. Based our study, we are addressing this limitation of knowledge in the area. .Certainly; the assessment of this magnitude is of benefit to the authorities of individual countries, the scholars in the field of finance, managers of international financial institutions and various stakeholders.

The thesis proceeds as follows: chapter two gives an overview of the literature focusing on capital structure theories, international financial institutions in general and IFAD in particular. Chapter three outlines and discusses the research methodology. Chapter four details the empirical analysis and the description of the data. Chapter five includes the estimated results and the final chapter concludes the analysis

1.7 Background literature

After the publication of the Modigliani and Miller paper in 1958, studies in the capital structure for corporates were intensified and some theories like the static trade-offs model and the pecking order hypothesis were developed (Myers, 1984). Even if researchers have different views on how companies have to balance their sources of capital based on the work done by Modigliani and Miller (1958), currently many researchers believe that taxes must be important to companies' capital structure. Firms with a higher effective marginal tax rate should use more debt to obtain a tax-shield gain (Guinai, 2006).

Furthermore Cees (1997) notes that, the optimal capital structure does not exist along the lines predicted by the static trade-off model. The author posits that a firm is regarded as setting a target debt level and gradually moving towards it. The choice of the debt/equity ratio in the capital of the company strives to achieve the company's main objectives. These include earning maximum profits, giving proper dividends to the shareholders, and pursuing future growth and expansion. All these theories have been developed on the corporate side and the reality is different for projects that are usually a one-time activity with a well-defined set of objectives and results. Projects can be divided into sub-tasks that must be accomplished in order to achieve the project goals (Meredith & Manter, 2008). Like organic entities, projects have life

cycles. From the slow beginning, they progress to build up in size and activities, then they decline and finally get terminated.

Contrary to corporates that are governed by the on-going concern principle, the life span of a project is normally predetermined and their products are delivered according to schedule. Some projects are essentially worthless if they are not on time. According to Verzuh (2012), the project must meet forecasted cost estimates. Indeed, projects are investments and those that run over the budget can end up costing the organisation more than they bring in.

Big projects, especially government projects, need big investment outlay. Hence, it is difficult or expensive in developing counties to fund them via domestic financial institutions. As a matter of fact, in most cases, governments look for external financing institutions. These include the Breton Woods institutions: International Monetary Fund (IMF) and the World Bank group's banks. The initial role of the IMF was to smooth balance of payments adjustment in a system of fixed but adjustable exchange rates. However, the IMF's function is currently an expanded role as a manager of financial crises in emerging markets as well as long–term lender to developing countries and former communist countries. It intervenes as an adviser and counsel to many nations and collector of economic data in its member countries. The original mission of the World Bank was to resurrect and support post-war devastated regions and to encourage economic development by lending to developing countries (Broad, 2006).

In 1977, the International Fund for Agriculture Development (IFAD), a specialized agency of the United Nations, was created with the objective of providing funds and loans to developing countries' governments to assist small farmers and landless people in rural areas in designing and implementing agricultural projects and activities. Since its inception in 1978, IFAD has invested US$13.1 billion in 899 projects and programmes that have reached some 400 million poor rural people.

Governments and other financing sources in recipient countries, including project participants, contributed US$11.7 billion, and multilateral, bilateral as well as other donors provided approximately another US$9.3 billion in co-financing (IFAD, 2010).

The projects designed by IFAD are spread all over the world in developing countries and are of different sizes. The challenge is that the capital structure of companies remains a puzzle (Myers, 1984). Concerning the IFAD designed and funded projects, the question that arises is the need to know the determinants of capital structure. Even if the big parts in the capital structure is made up of highly concessional loans, IFAD also gives grants, mobilises co-financing in the form of grants from multilateral and bilateral donors. The participation of beneficiaries is evaluated and incorporated in project capital and the government also contributes in financing, especially by covering taxes which are not covered by IFAD proceeds.

CHAPTER 2 LITERATURE REVIEW

2.1 Theories on Capital structure

2.1.1 Modigliani and Miller Irrelevant Theory

Fama et al (1997) state that modern capital structure theory began in 1958, when Franco Modigliani and Merton Miller published what has been called the most influential finance article ever written. These authors proved that firm's value is not affected by its capital structure and according to them the capital structure is irrelevant. Modigliani and Miller (1958) illustrate that the valuation of a company will be independent from its financial structure under certain assumptions. Although Modigliani and Miller's study was based on some unrealistic assumptions that include the following: There are no brokerage cost, there are no taxes, there are no bankruptcy, investors can borrow at the same rate as corporation, all investors have the same information as management about the firm's future investment opportunities and stating that EBIT is not affected by the use of debt. By indicating the conditions under which capital structure is irrelevant, the work done by Modigliani and Miller (1958) also provided new researchers with what is required for capital structure to be relevant and hence affect the firm's value. Zingales (1995) recognises the contribution of Modigliani and Miller (1958) by stating that now people understand the most important departures from Modigliani and Miller assumptions that make capital structure relevant to a firm's value.

2.1.2 Trade-off theory

According to the trade-off theory, capital structure is determined by the trade-off between the benefits of debt and the cost of debt (Frank & Goyal, 2008). The benefits and costs can be obtained in different ways. The "The tax-bankruptcy trade-off" perspective is that firms balance the tax benefits of debt against the deadweight loss of bankruptcy. The "agency" perspective is that debt disciplines managers and

mitigates agency problems of free cash flow since debt must be repaid to avoid bankruptcy. However, Stulz (1990) points out that although debt mitigates shareholder manager conflicts, it exacerbates shareholder-debt holder conflicts.

2.1.3 Pecking order theory

According to Murray and Vidhan (2009), while the pecking order theory has long roots in the descriptive literature, it was clearly articulated by Myers (1984). Consider three sources of funds available to firms-retained earnings, debt, and equity. Equity has serious adverse selection, debt has only minor adverse selection, and retained earnings avoid the problem. Hence, from the perspective of those inside the firm, retained earnings are a better source of funds than outside financing as matter of fact retained earnings are used when possible. If retained are inadequate, debt financing will be used and equity is used only as last resort.

2.1.4 Market timing theory

The paper of Baker and Wurgler (2002) elaborates on market timing theory. These scholars argue that, equity market refers to the practice of issuing shares at high prices and repurchasing at low prices with intention of exploiting temporary fluctuations in the cost of equity relative to the cost of other forms of capital. In capital markets that are inefficient or segmented, market timing benefits on-going shareholders at the expense of entering and exiting ones. According to Gompers and Lerner (2001), managers tend to issue new shares when the company's stock is overvalued. As matter of fact, managers have incentives to time the market if they think it is possible and if they care about on-going shareholders.

Four studies proved equity market to be an important aspect of real corporate financial policy. The first analyses of actual financing decisions shows that firms tend

to issue equity instead of debt when market value is high, relative to book value and past market values, and tend to repurchase equity when market value is low. Second, analyses of long –run stock returns following corporate finance decisions suggest that equity timing is successful on average. Firms issue equity when the cost is relatively low and repurchase equity when the cost is relatively high. Third, analyses of earnings forecasts and realisations around equity issues suggest that firms tend to issue equity at times when investors are rather too enthusiastic about earnings prospects. Lastly, the most convincing analysis suggests that, managers admit to market timing in anonymous surveys.

(Baker and Wurgler (2002) conclude by ascertaining that market timing has large persistent effects on capital structure. The main findings is that low leverage firms are those that raised funds when their market valuations were high, as measured by the market-to-book ratio, while high leverage firms are those that raised funds when their market valuations were low.

2.2 Project finance

According to Merna and Njiru (2002), the concept of project finance is widely used in business and finance in developed countries. However, many developing countries are also using project finance to raise funds for their infrastructure projects. Though the concept is widely used, there is no precise legal definition of project finance yet. Nevitt (1979) describes the term project finance as: financing of a particular economic unit in which the lender is satisfied to look initially to the cash flows and earnings of that economic unit as the source of fund from which a loan will be repaid and to the assets of the economic unit as collateral for the loan. Similarly, Merna and Owen (1998) describe project finance as: financing a stand-alone project in which the lender looks primarily to the revenue stream created by the project for the repayment at least once operations have commenced, and to the assets of the project as collateral for the loan. The lender has limited recourse to the project sponsors.

Yescombe (2002) describes project finance as a method of raising long-term debt financing for major projects through "financial engineering" based on lending against cash flows generated by the project alone. It depends on a detailed evaluation of a project's construction, operating and revenue risks, and their allocation between investors, lenders and other parties through contractual and other arrangements. The author confirms that project finance is a relatively new financial discipline. Project finance is not the same as "financing projects" because projects may be financed in many different ways. The difference is that traditionally large scale public sector projects in developed countries were financed by public sector debt, private-sector projects were financed by large companies raising corporate loans. In developing countries, projects are financed by the government borrowings from the international banking market, multilateral institutions such as the World Bank or through export credit.

2.3 Difference between project finance and corporate finance.

Merna and Njiru (2002) emphasize that it is important to understand the difference between project finance and corporate finance. Corporate finance is traditional finance where payment of loans to the lenders comes from the organization and backed by the organization's entire balance sheet and not from a project alone. The lender tends to look at the overall financial assets of the corporate. Yescombe (2002) postulates that the project has finite life based on such factors as the length of the contracts or licenses or the reserves of natural resources, and therefore, the project finance debt must be fully paid by the end of this life. As a matter of fact, project finance differs from corporate loan which is primarily lent against company's balance sheet and projection extrapolating from its past cash flows and profit records. In addition, there is an assumption that the company will remain in business for an infinite period and keeps renewing (rolling over) its loans.

2.4 Capital structure for corporate versus the capital structure of non- profit projects funded by international financial institutions.

In determining the debt to equity ratio, firm management looks at all alternatives that can help the company to enhance the value of the corporate. Albor (2008) reports that in most of the times the decision to go for equity or debt is based on asymmetric information, tax benefits associated with debt use, bankruptcy and agency cost. These variables have been tested on the level of corporates but to some extent don't match with non-profit project that are jointly funded by international financial institutions and governments, as their main objective is not to make profit but to improve the welfare of the population like eradicating poverty through agriculture based project. In conventional project finance, Borgonovo and Peccati (2010) stated that lenders pay particular attention to the project on a going-concern basis because the possibility to repay principal and interest depends on the project's ability to generate sufficient cash flow but government projects which aim at the improvement of the living conditions of the population do not generate cash flows. However, projects that are considered to be the achievement of specific objectives which involves a series of tasks which consumes resources (Munns & Bjeirmi, 1996) are reported to have high leverage than conventional financing.

Corporate capital structure is divided into debt and equity. The debt may either be long term or short term and equity is acquired in the primary market. In the case of government funded projects, debt capital comes from international financial institutions in the form of concessional loans, from bilateral institutions with different terms of financing while the equity capital come also from international financial institutions and bilateral donors as grant at which is added the contribution of government and beneficiaries contribution.

As the profitability of the project don't play big role in determining whether the government will get a loan or not, there are other factors that are taken into

consideration and that influences the ratio of debt to equity such as the county's level of risk as highlighted by Boyd and Smith (2008), who state that **"**Political risk in the host country is an important factor that influences the probability that a loan will be serviced as scheduled",. Factors like accountability, level of corruption control and other regulatory risk and the rules of law are key determinants for a country to get loans and grants (Hainz and Kleimeier, 2011). Unlike corporates, projects need capital to carry out their activities which are limited in time as opposed to corporate that are governed by the going concern principle. In the case of government funded projects, the debt capital come from international financial institutions in form of concessional loan, from bilateral institutions with different terms of financing while the equity capital come also from international financial institutions and bilateral donors as grant at which is added the contribution of government and beneficiaries contribution.

2.5 Meaning of international financial institution

Barnett and Finnemore (2004) examine International Financial Institutions (IFIs) as a creation of international law which are provided by that law with an independent legal personality and operate within a realm governed by the international law. Their owners or shareholders are generally national governments, although other international institutions and other organizations occasionally figure as shareholders. According to Anghie (2004), the World Bank (WB) and International Monetary Funds (IMF) are the major international financial Institutions. These kinds of institutions are categorized into five groups: multilateral development banks, Bretton Woods's institutions, regional development banks, bilateral development banks and agencies, and other regional financial institutions.

2.6 International Fund for Agriculture Development (IFAD)

Talbot (1980) describes the creation of the International Fund for Agricultural Development (IFAD) as originating from the World Food Conference of 1974 that reached the Resolution XIII stating that (IFAD) should be established immediately to finance agricultural development projects primarily for food production in the developing countries. On 13 December 1977 in Rome, the International Fund for Agricultural Development (IFAD) became a reality, and thus officially becoming the thirteenth specialized agency of the United Nations. IFAD principal target is "the poorest of the poor". The number of the poor people was estimated by the World Bank at 959 millions of persons in 1975 living in twenty eight nation states in which the average GNP per capita income was $140. It was emphasized that the central and limited objective of IFAD is to improve significantly the production of food, both quantitatively and qualitatively in those nations. In addition, the extended objective of IFAD should be to mobilize additional resources to be made available on concessional terms for agricultural development in developing member's states.

2.7 Mandate and Structure of IFAD

King (1985) says that the mandate of IFAD is to finance projects and programs specifically designed to improve food production systems particularly in the poorest food deficit countries and to raise income productivity and nutrition of the rural poor. A provision requires the fund not to finance projects which have negative impact on income distribution, meaning projects which do not provide a proportionately greater share of benefits to the poorest among project beneficiaries.

As the structure is concerned, King (1985) considers the fund as another international financial institution like the World Bank or other Regional Development Banks, charged with the lending for development projects. The agreement establishing the

fund stipulates that the fund shall have the Governing Council populated by the representatives from each member country, an Executive Board working under the responsibilities of the Governing Council, and finally a President to carry out daily operations of the fund.

2.8 Difference between IFAD and other International Financial Institutions

King (1985) highlights the difference between IFAD and other International Financial Institutions

i) IFAD has a narrow mandate. It is limited to a single sector and within that sector, its attention is directed at increasing food production and improving the productivity, incomes and nutrition of the rural poor, its sole target group; whereas other international financial institutions have a broader responsibilities and lend for a wide variety of projects in many sectors with a broad range of beneficiaries.

ii) For most of the existing international financial institutions, the great bulk of the funds available for lending for development whether in the form of contributed capital, funds borrowed in private capital markets or from public sector institutions or in grants, come from developed countries. In the case of IFAD, OPEC countries provided slightly more than the half of the approximately USD 1000 million and OPEC countries are still developing.

iii) In other international financial institutions, voting power is determined largely by the formula which measure the strength and size of each country's economy or by the size of the country's contribution to the institution. This method tends to place control of the institution in the hand of developed countries. In the case of IFAD voting power is divided equally among three categories of members namely: OECD countries, OPEC countries and other developing countries. However, according to Nawas (1982) the decision-making based on equality irrespective of the contribution of member,

gradually may lose favor with traditional major donors, resulting in their reluctance to contribute increased resources.

2.9 Source of fund

The agreement establishing the Fund in Article 4, Section 1 describes that the resources of the Fund shall consist of:

1. Initial contributions that represent the amount of an initial contribution of an original and a non-original Member shall be the amount and in the currency of such contribution specified by the Member in its instrument of ratification, acceptance, approval or accession deposited by that Member.
2. Additional contributions which could be decided by Governing Council after reviewing the adequacy of the resources available for the Fund. If the Governing Council deems it necessary or desirable, it may invite members to make additional contribution to the sources of the fund.
3. Special contributions from non-member States and from other sources.
4. Funds derived or to be derived from operations or otherwise accruing to the Fund.

2.10 The cost of capital for IFAD funded projects

Nawas (1983) classifies IFAD loans into three categories:

i) Special loans on highly concessional terms and according to the IFAD lending policy (2011), these shall be free of interest rate but be a service charge of three fourths of one percent (0.75) per annum and have a maturity period of forty (40) years, including a grace period of ten (10) years.

ii) Loans on intermediate terms that shall have a rate of interest per annum equivalent to fifty percent (50%) of the variable reference interest rate, as determined annually by the Executive Board, and a maturity period of twenty (20) years, including a grace period of five (5) years.

iii) Loans on ordinary terms that shall have a rate of interest per annum equivalent to one hundred percent (100%) of the variable reference interest rate, as determined annually by the executive Board, and a maturity period of fifteen (15) to eighteen (18) years, including a grace period of three (3) years.

In addition to the stated categories, partial financing for a project can be provided as a grant.

The lending policies to countries are also highlighted in IFAD lending policies of 1978 which were later amended in 2006. The Fund will provide loans to developing member countries of IFAD upon highly concessional, intermediate and ordinary terms for approved projects and programs. The criteria for determining the terms to apply to a specific country are specified as follows:

(**a**) For developing member countries:

- Having a Gross National Product (GNP) per capita of USD 805 or less in 1992 prices or classified as International Development Association (IDA)-only countries, shall normally be eligible to receive loans from IFAD on highly concessional terms. The total amount of loans provided each year on highly concessional terms shall amount to approximately two thirds of the total amount lent annually by IFAD;
- Having a GNP per capita of between USD 806 and USD 1,305 inclusive in 1992 prices shall normally be eligible to receive loans from IFAD on intermediate terms;
- Having a GNP per capita of USD 1,306 or above in 1992 prices shall normally be eligible to receive loans on ordinary terms.

(**b**) For those developing member countries in which there is a significant difference between GNP per capita and Gross Domestic Product (GDP) per capita, the GDP per capita shall be used as the criterion for determining the applicable lending terms within the same monetary limits.

In general, there is no consensus that underpins factors that govern the determinants of capital structure in project finance. A consensus from empirical papers is yet to be discovered. Despite some welcome progress in recent years in project finance, the literature that analyses the capital structure for projects funded by intentional financial institutions is very limited. Our study fulfils this task and assesses the extent of differences in the determinants of capital structure of "project finance" across emerging economies of Africa, Asia and Latin America.

CHAPTER 3: METHODOLOGY

3.1 Introduction

According to Titman and Wessels (2012), theories of capital structures suggest that organizations consciously select a mix of debt and equity depending on attributes that determine the various costs and benefits connected with the two forms of financing. Contrary to the prolific literature on profit-oriented organizations, there is scantly empirical work of non-profit focused institutions (NPO), especially project-driven organizations. Therefore, we borrow three assumptions from Jegers and Verschueren (2006). Firstly, we hold that the cost of equity of NPOs is lower than that of debt such that exclusive equity financing would be optimal. Secondly, we borrow from the traditional agency theory and assume that strong project managers might be capable of diverting organizational resources towards discretionary activities hence introducing debt injects an additional monitoring tool against managerial excesses. Lastly, we assume that borrowing constraints exist and the project management may not always access the needed level of debt.

The first assumption which can be referred to as the 'equity constraint' assumption implies that project managers will strive at minimizing the overall cost of capital hence the cost of the project by simply avoiding debts as much as possible, however, a shortage of donations, gifts, subsidies, contributions, or grants, dictates that the project must inevitably have some level of debt. Moreover, the agency problem in the second hypothesis implies that debt will be incorporated into the structure to curtail managers' freedom as debt holders acts as watchdogs. Finally, the borrowing constraint limits the amount of debt a project can have which implies that each project will at least raise some level of own equity.

3.2 The Project and Country-Specific Model

In line with approaches taken by Deesomsak et al. (2004), Tang and Jang (2007) and de Jong et al. (2008), among others, where determinants of the capital structures of profit-oriented organisations are examined from the distinction of firm specific and country specific groupings. In project finance, we adopt the terms 'project-specific' in place of 'firm-specific' and then specify our basic model as:

$$LEV_{ij} = \alpha + \boldsymbol{X}'_{\boldsymbol{ij}}\boldsymbol{\beta} + \boldsymbol{W}'_{\boldsymbol{ij}}\boldsymbol{\gamma} + \varepsilon_{ij} \quad (1)$$

Where, LEV denotes the leverage ratio at the beginning of the project. That is customarily used to measure the capital structure as the ratio of debt to total assets, i is the project subscript whereas j denotes the region. In addition, α is the common intercept that measures the average impact of firm and country-specific factors, $\boldsymbol{X}$ is a 1×2 vector of project-specific variables that are informed by theory and previous studies, $\boldsymbol{W}$ is a $1 \times p$ vector of country-specific variables whereas $\boldsymbol{\beta}$ and $\boldsymbol{\gamma}$ are coefficient matrices and ε_{ij} denotes the white noise error term.

The factors in matrix $\boldsymbol{X}$ represent the duration of the project and the number of beneficiaries. According to the literature and empirical work focused on corporate capital structure, the age of the firm is often cited as significant in capital structure decisions (Abor, 2008; Hall et al., 2000; Milton and Raviv, 1991). For instance, Hall et al. (2000), hypothesized a negative relationship between age and debt ratio because the older the firm is, the more it is able to accumulate funds and the less it needs to borrow, either long-term or short-term. In project finance context, age of a corporate is tantamount to or at least closely proxied by the duration of the project. Similarly, the trade-off theory insists on the influence of size of a firm on the capital structure arguing that the larger the firm, the more likely the firm is to borrow successfully because of expanded activities and credibility (de Jong et al., 2008; Deesomsak et al., 2004; Hall et al., 2000; Wiwattanakantang, 1999). We use the number of beneficiaries as a proxy of the size of the project in a non-profit organization set-up.

The vector matrix $\boldsymbol{W}$ encompasses country specific variables that accounts for the differences in the countries' institutional, financial and legal environments. This set of factors have been exhaustively analyzed by researchers such as de Jong et al. (2008); Harvey et al. (2004); Wald (1999) and Psillaki and Daskalakis (2009). According to Psillaki and Daskalakis (2009), the financial and institutional characteristics include availability of private credit, market capitalisation, judiciary efficiency, contract enforcement, level of corruption, property rights and legal formalism.

De Jong *et al.* (2008) introduced the level of interest rates, the legal protection of creditor's rights and ownership concentration. In this study, we deviate from the traditional parameter stability tests adopted by De Jong *et al.* (2008) and Psillaki and Daskalakis (2009), instead we run a single regression model where country-specific variables are measured as the score of the country on the particular variable at the beginning of the project. Basically, this implies a continous variable (not dummy) whose significance can be tested using the conventional t-test statatistics. The country specific-factors adopted for this study are Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, and Control of Corruption.

3.3 Regional-Effect

Based on the case study which directly prescribes our sample, we introduce an innovative way of testing whether the geographical regions in which funded projects are located have an impact on the capital structure. Traditionally, IFAD funds projects in developing countries of Sub-Saharan Africa (SSA), Middle-East and North Africa (MENA) region, Asia and South America, but it's not clear whether different levels of debt is demanded for each region. We adopt a least-square dummy variable (LSDV) approach. Since there are only four regions in our sample, we use three dummy variables to avoid *dummy variable trap* (Gujarati, 2003).

$$LEV_{ij} = \alpha_1 + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \alpha \quad D_{4i} + \boldsymbol{X'_{ij}\beta} + \boldsymbol{W'_{ij}\gamma} + \varepsilon_{ij} \qquad (2)$$

Where,$D_{2i} = 1$, if the project belongs to MENA region, 0 otherwise; $D_{3i} = 1$ for observations in Asia region, 0 otherwise; $D_{4i} = 1$ for projects in South American region, 0 otherwise. Here, α_1 represents the intercept for Sub-Saharan Africa (SSA) that explains the reason for not including a dummy for SSA. In the language of LSDV, the intercepts α_2, α_3, and α are called the differential intercept coefficients which represents how much the intercept for MENA, Asia and South America differ from the intercept for SSA, therefore, SSA is the comparison region.

3.4 Data and Descriptive Statistics

As previously mentioned, IFAD was chosen as the case study of this research, and therefore only projects involving IFAD were considered for inclusion into the sample. Traditionally, IFAD finances agricultural development projects in developing countries only which excluded all projects in developed nations in North America, Europe and Asia. The majority of projects from 1997 were located in Africa, Asia and Latin America hence the sample distribution was centered in these regions.

For the purpose of representativeness, all projects funded in these regions from 1997 to 2011 were chosen as long as information on the project funding, reported in segregated form, was available and it was the period during which IFAD participation in developing countries started to grow and took root. These data was found from IFAD databank, from which a total of 81 projects were identified and found to possess all necessary information needed for the study. Such sampling technique is often referred to as purposive sampling, and often recommended for its effectiveness in providing information-rich sample (Guarte and Barrios, 2006; Richardson, 2009).

The other set of data was obtained from the findings of a long standing research commissioned by World Bank on worldwide governance indicators. This data was readily available from the World Bank and it is maintained as a series of six governance indicators from 1996 to 2011, and from which we obtained scores of four country-specific variables, namely: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, and Control of Corruption.

CHAPTER 4: DATA ANALYSIS, RESULTS AND PRESENTETION

4.1 Introduction

This chapter presents results of the data analysis process and interpretation of the statistical findings. Basically, we present details regarding the sample size and its distribution, the descriptive and dispersion statistics to show the central tendency, distribution and dispersion of key variables of the study. Finally, we present findings on the project specific model and the composite model that includes country-specific variables.

4.2 Sample Distribution

This project distributed according to Table 3.1 below: 37.04% (or 30 projects) are from Sub-Saharan Africa, followed by 28.4% from Asia, then 22.22% from South America and only 12.35% (or 10 projects) were situated in the MENA region. From this single source, duration of each project and number of benefiting households were derived in addition to the data on total capital, equity portion, debt portion and leverage which were computed.

Table 4.1: Distribution of the sample

	Frequency	Percent	Cumulative Percent
Asia	23	28.40	28.40
MENA	10	12.35	40.74
South America	18	22.22	62.96
Sub-Saharan Africa	30	37.04	100.00
Total	81	100	

4.3 Descriptive Analysis

Further, the descriptive statistics on the project funding provides a wholesome picture of the amount of borrowing needed to sustain a project. In summary, IFAD grants only USD 3.19 million on average whereas other financiers provide USD 11.26 million, leaving the government to provide USD 12.77 million and beneficiaries to raise about USD 3.78 million.

As discussed above, the grants, government contribution and beneficiaries' contributions constitute that part of capital that is not refundable; therefore, we conveniently refer to this portion of capital as equity. Table 4.2 tells us that IFAD provide the lowest part of equity, below the beneficiaries' contribution while the government has to provide the majority of equity on average. Similarly, IFAD loan on average is only USD 16.71 million while other financiers provides USD 21.62 million out of the total debt of USD 25.23 million on average. Once again IFAD loan is the lowest of the debt constituents.

However, the total contribution on average by IFAD for all projects under study amounts to USD 19.9 million which is a substantial amount for each project. Indeed, the low median, mode and high standard deviation suggest a very low value of central measures but a highly diverse equity items, which leads to a standard deviation of 66.29 in total equity almost three times the mean and more than five time the median and mode. This indicates the variability of equity from one project to the other, where some projects may have a very high equity while others may have a trivial portion. However, debt seems to be more resilient and retains an almost constant level from one project to another. All the central tendencies measure for debt are about the same level as the mean and measure of dispersion, standard deviation, is basically equal to the mean.

Project duration seems to stagnate around 8 years - the mean is 8.26 years, median is 8 years, mode is 7 years and standard deviation is as small as 1.97 years. However, the number of beneficiary household indicates an extremely varied distribution with a likely negative skewedness given that the mean is 102,291 households whereas the median and mode are far to the left of the mean at 23,000 and 15,000 households respectively while the standard deviation is surprisingly towering at a massive 244,110 household. Table 4.2 is presented below:

Table 4.2: Aggregated Statistics on Project Finance

	Mean (mn USD)	Median (mn USD)	Mode (mn USD)	Std. Dev. (mn USD)
IFAD grant	3.19	0.82	0.2	5
Bilateral financiers and donors- Grant	11.26	4.5	0.4	20.15
Government	12.77	3.7	4.4	53.29
Beneficiaries	3.78	1.49	0.3	9.37
Total Equity	22.92	8.8	4.8	66.29
IFAD Loan	16.71	15.5	20	8.17
Bilateral financiers and donors-Loan	21.62	11.92	4	28.6
Total Debt	25.23	20	20	25.45
Project Duration	8.26	8	7	1.97
Beneficiary Households	102,291	23,000	15,000	244,110
TCAP	48.15	32.57	17.4	78.8

Here, USD stands for US dollar, STD.DEV. stands for standard deviation, IFAD is the international food and agricultural development, whereas, TCAP is the total capital of each project.

4.3 Analysis of Correlation between Variables

According to the stated objectives from the onset, the study also seeks to establish the nature and magnitude of the relationship between the project key variables. In particular, we seek to establish the correlation between the life span of the project and its total budget, the total capital and the number of households directly benefiting from the project and between the country's capacity of mobilizing loans and grant with its level of political stability, level of accountability, government effectiveness and the control of corruption, respectively. The capacity to mobilize loan and grants is once again closely explained by the size of capital a project can attract (as in column 3 of Table 4.3).

The results of the correlation analysis are presented below in Table 4.3. Column three shows how other variables are correlated with the total capital, or otherwise called total budget, of the project at the 0.05 level of significance. Total capital is positively and highly associated with the number of beneficiary households at the 0.05 level with $r = 0.923$ and $\rho = 0.00$. This suggest that when the number of

households that are likely to benefit from the project is high, then the total amount of capital requirements are also likely to be high and vice versa.

However, total budget allocated to any project has no significant relationship to the length of the project ($r = -0.167,\ \rho = 0.156$) as well as with voice and accountability ($r = -0.032,\ \rho = 0.785$); Political Stability ($r = -0.098,\ \rho = 0.406$) and Corruption ($r = -0.082,\ \rho = 0.489$). In other words, the country's ability to mobilize loans and grants for a given project has no significant relationship with the country-specific institutional variables

However, it was also interesting to find out how other variables, namely project-specific and country-specific, related to each other. According to Table 4.3, the project duration had no significant association with the number of households which suggested that the length of the project do not change with changes in the number of households that benefit from the project. In the same way, no significant relationship was found between number of households to benefit from the project and any of the country-specific variables. However, the country specific variables exhibited varying degree of association amongst themselves but all correlations were positive and significant.

Table 4.3: Results for correlation analysis

Variables	Test	TCAP	Project Duration	Beneficiary Households	Voice and Account ability	Political Stability	Corruption
TCAP	P. Correlation	1					
	Sig. (2-talied)						
Project Duration	P. Correlation	-.167	1				
	Sig. (2-talied)	.156					
Beneficiary Households	P. Correlation	.923(**)	-.179	1			
	Sig. (2-talied)	.000	.127				
Voice and Accountability	P. Correlation	-.032	.031	-.091	1		
	Sig. (2-talied)	.785	.795	.442			
Political Stability	P. Correlation	-.098	-.139	-.178	.357(**)	1	
	Sig. (2-talied)	.406	.236	.128	.002		
Corruption	P. Correlation	-.082	-.151	-.132	.302(**)	.594(**)	1
	Sig. (2-talied)	.489	.200	.261	.009	.000	

Here P. Correlation denote the Pearson Correlation, Sig. (2-tailed) stands for two-tailed significance tests, TCAP denotes the total capital, ** indicates that correlation is significant at the 0.01 level (2-tailed)

4.4 The results of project and country-specific model

To determine the factors that are significant in decision making process about the capital structure of projects, a regression analysis of the model specified in the previous chapter which included both project-specific factors (of project duration and number of benefiting households as well as country specific variables – namely voice and accountability, political stability and corruption) was conducted. Standardized beta coefficients, with their respective t-statistics and the associated $\rho -$ values are presented in the Table 4.4 below. In addition, statistics that indicate how fit the regression was to the data or the robustness of the model are also presented together with the F-statistics and the corresponding $\rho -$values.

The capital structure was proxied by the leverage ratio and was the dependent variable. Unmistakably, project duration did not indicate a significant effect on

capital structure. However, the number of benefiting household was a significant explanatory variable when setting the amount of debt to be incorporated in the capital structure at the 0.05 level of significance ($\rho = 0.003$); the coefficient was negative which suggested that the higher the number of beneficiaries the lower the amount of debt that can be incorporated. Perhaps, this suggests that the more the beneficiaries the more a project becomes massively government-sponsored, hence the lesser the number of debt financiers that become interested.

Whereas the number of beneficiaries was the only significant project-specific variable, only political stability was insignificant country-specific variable at the 5% level, given that Voice and Accountability as well as Corruption were highly significant with $\rho-$values of 0.05 and 0.02 respectively. This suggested that IFAD and other debt providers do not necessarily consider how stable the country is before according a project some debt funding. This is likely to hold because most projects funded by IFAD are in rural areas and in very poor countries often riddled with political instability. However, accountability of the funds and corruption are key to debt finance injection since debt should somehow be repaid and this can only happen when the borrower is accountable and do not embezzle the funds.

The R-squared and adjusted R-squared are said to be measures of how robust or fit the model is to the given data. In other word, these values tell us whether the model is a good tool for explaining and/or predicting the dependent variable than using guesswork. The fact that R-squared is positive and significant according to F-statistics and the corresponding $\rho-$values ($\rho = 0.00$) indicate that the model is a good fit in explaining the leverage of projects ran by NPO. Specifically, the model can explain up to 31.1% of total variations in the leverage of such projects and other variables not included in the study would explain the remaining 68.9%. Despite the relative low level of explained variations compared to unexplained variations, the model is highly significant at the 0.05 level and hence stable and reliable.

Table 4.4: Results of project and country-specific model Coefficients

Model	Standardized Coefficients	t	Sig.
(Constant)		6.478	0.000
Project Duration	0.154	1.470	0.146
Beneficiary Households	-0.327	-3.126	0.003
Voice and Accountability	0.214	1.964	0.054
Political Stability	-0.016	-0.123	0.903
Corruption	-0.408	-3.214	0.002
Model Fit			
R^2	0.311	6.142(F-statistic)	0.000
$Adjusted\ R^2$	0.260		

The dependent variable is the leverage ratio, which was measured as the debt-to-total capital ratio and proxied for the capital structure. In this case debt is established as the sum of all funds to the project provided by third parties that are neither government, grants nor beneficiaries' funds. In this regard, therefore, equity of a project is the sum of government contribution, beneficiaries' contributions and grants. Grants were regarded as equity, as opposed to debt because such funds are not required to be refunded.

4.5 Results for the analysis of the regional effects

As explained in the previous chapter, the study also sought to untangle and reveal whether different geographic regions had unique relationship; in other words, whether decisions to loan to a project is made differently for projects in the four regions of the world: Sub-Saharan Africa, Middle East and North Africa (MENA), South America, and Asia? This regression model is similar to the so called least square with dummy variables (LSDV) model that are common in panel data analysis in which dummy variables are used to represent the cross sections; in this case, dummy variables are used to represent regions. In essence, this model amounts to running regression lines through four different origins or

intercepts where each intercept can be interpreted to mean the region-specific effects on leverage, or simply called differential intercept dummies.

The result of this analysis are shown in Table 4.5 below which confirmed that indeed, number of beneficiary households, voice and accountability and corruption levels are highly significant explanatory factors that affect leverage of NPO's projects. However, the major interest of this analysis was vested in understanding whether different regions have unique effects on the level of debt in the projects' capital structure. According to the normal interpretation of LSDV and the discussion in chapter three, the overall model constant represents the intercept for Africa, this value was the only significant constant with $\rho = 0.00$, which suggested that in Africa, there are other variables that are considered when providing debt finance to projects located in Sub-Saharan African countries.

Table 4.5: Results of Project and Regional Effects

Model	Standardized Coefficients	t	Sig.
(Constant)		6.111	.000
Project Duration	.140	1.305	.196
Beneficiary Households	-.347	-3.229	.002
Voice and Accountability	.310	2.335	.023
Political Stability	-.023	-.173	.863
Corruption	-.488	-3.567	.001
Dummy for MENA	.066	.536	.594
Dummy for Asia	.105	.884	.380
Dummy for Latin	-.128	-1.037	.303
Model Fit			
R^2	0.341	4.201(F-statistic)	0.000
$Adjusted\ R^2$	0.260		

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter provides the summary of findings from the statistical analysis in the previous chapter. It also provides an in depth discussion of the inferences derived from the statistical data analysis in relation to the research questions that were meant to be answered from the on-set. Later, we present the conclusion drawn from the result of the analysis and make several recommendations based on the final analysis.

5.2 Summary of the findings and discussion

The main goal of this study were focused on explaining the determinants of capital structure for projects funded by IFAD, establishment of the correlation between the duration of the project and its total budget, between the total capital and the number of households directly benefiting from the project and between the country's capacity of mobilizing loans and grants with its level of political stability, level of accountability, and the control of corruption. The analysis was done systematically with an objective of meeting the requirements of each of those goals.

The initial inferential analysis was the correlation analysis between all key variables of the study. To respond to the second objective of this study, a correlation between total capital and the duration of the project, this returned with insignificant Pearson coefficient of correlation ($r = -0.167,\ \rho = 0.156$). Clearly, this result means that the capital size has little to do with the duration of the project and the two factors do not have influence between each other. Therefore, the total capital will not be increased because the project will take long to end or rather the duration of the project will not be extended for the reasons of there being more capital.

The correlation analysis are revealed that the total capital is highly correlated positively with the number of beneficiary households at the 0.05 level with $r = 0.923$ and $\rho = 0.00$. This result effectively addressed the third research question

and can be interpreted to be inferring on the financial size of the project moving in tandem with the number of beneficiaries. Although this is not a causality test hence can mean causal effect to be flowing on either side, it is more logical to imagine that the number of beneficiaries will cause the project management to be able to solicit more capital for the project.

On the fourth objective, total capital mobilized to meet the needs of a specific project did not reveal a significant relationship with the level of Political Stability ($r = -0.098,\ \rho = 0.406$), the Voice and Accountability ($r = -0.032,\ \rho = 0.785$) and Corruption ($r = -0.082,\ \rho = 0.489$). One would argue that the size of capital a project can mobilize is not related to whether a country respects people's opinions and is accountable in its governance or not on top of being politically stable or corrupt. This is to say that, since all project of IFAD are meant to eliminate barriers to food and agriculture, the quality of country leadership will not sway away funding of IFAD project. This is true from the ground since IFAD is involved in very poor countries and some with oppressive and irresponsive governments.

Lastly, a regression analysis was carried out so that the key determinants of the capital structure of NPO-sponsored projects akin to the IFAD financed projects. The capital structure was proxied by the ratio between debt and total capital which is sometimes called debt-to-capital ratio or simply; leverage. Intuitively, when the portion of debt in the capital structure increases, leverage increases as well and vice versa. Therefore, factor that returned a positive partial coefficient of determination implied a positive relationship with ability to borrow or just debt and those that showed a negative coefficient suggested that intensification of such factor reduces the ability to attain debt for a project.

The results showed that the number of benefiting household was a highly significant determinant of the NPOs capital structure with ($\rho = 0.003$) together with Voice and Accountability as well as Corruption with ρ −values of 0.05 and 0.02 respectively. In contrast, project duration and the level of political stability were not important determinants of capital structure. In addition, this relationship and the finding were highly reliable since R-squared and adjusted R-squared were

both positive and highly significant with $\rho = 0.00$. These results, in deed confirms the correlation analysis that showed a highly significant correlation between total capital and the three explanatory variables above because leverage an exclusive rearrangement of the components of total capital.

5.3 Conclusion

The results of the data analysis have revealed the relationship between total capital of the IFAD funded project to other key variables in the sphere of non-profit oriented organizations. Here, IFAD projects are used as a case to unravel the important drivers for the key capital structure components of NPOs as opposed to profit-focused corporate organizations that have been investigated over and over in this particular field. According, this study draws from the theories of capital structure and policy whose debate was started by a seminal paper of Modigliani and Miller (1958).

The finance literature is full of studies and evidence that uphold the age of the firm as a significant determinant of capital structure of a business firm (Abor, 2008; Hall et al., 2000; Milton and Raviv, 1991). As put before, in project finance scenario, age of a corporate is synonymous to the length of time it takes to complete a project. Basically, a project is seen as a distinct unit similar to a distinct firm in business finance. Borrowing from the argument of above scholars, a positive significant association or impact was expected. However, the results of this study rejects this assertion and hence provides a concrete feedback to the second research question through the correlation and regression analysis that duration of a project has no significant effect to the total capital of the firm, in addition, it has no significant effect on the capital structure of a project.

In the similar way, the trade-off theory insists on the influence of size of a firm on the capital structure in a way that one would expect a large firm to have a larger capital base and be able to borrow more (de Jong et al., 2008; Deesomsak et al., 2004; Hall et al., 2000; Wiwattanakantang, 1999). However, the results of this analysis paint a very interesting picture in a scenario of NPOs. Firstly, it provides confirmatory evidence that the size of the project, which was proxied in nonprofit-focused firms by the number of benefiting households, have a highly positive

effect on the size of the capital, but on the ability to borrow, or simply the capital structure, we obtain a surprising significant negative effect. This is a great contribution as it shows how the theory of firm's capital structure is reversed in nonprofit situations especially where the government is a key project stakeholder. It seems the higher the number of the beneficiaries the higher the amount of non-refundable portion of capital or equity. Perhaps, the project will be able to attract more funding in form of grants and contribution and may not have to rely on debt.

Recent research work by de Jong et al. (2008); Harvey et al. (2004); Wald (1999) and Psillaki and Daskalakis (2009) have led into inclusion of several institutional and environmental quality variables into the theories of capital structure. In our last objective we sought to establish the impact of Voice and Accountability, Political Stability and Control of Corruption. The result shows that only voice and accountability together with control of corruption have a significant relationship with the size of capital or the ability to mobilize capital for the project and also a highly significant effect on the capital structure but political stability is insignificant.

Therefore, we conclude that the corporate capital structure theory that is mostly applied in the business firms is still applicable in project finance but with exceptions. For practitioners, care must be observed on type of stakeholders and the overall objective of the project. As seen here, when the project is aimed at helping the poor in marginalized societies, then variables such as duration of the project and political stability may not count, whereas, the size of the project or the number of beneficiaries will have a negative impact instead of the usual positive effect.

5.4 Recommendation

Drawing from the data analysis and the results discussed above, its rather clear that the theory of capital structure as applied in the nonprofit organization is least studied and analyzed. Much of the effort seem to be focused on understanding the application of the same theory in the business firm and assumes that such conscious selection of whether and how much to borrow in proportion of equity for each project is equally important. It may not be for the purposes of

safeguarding or growing the value of the firm but equally to be able to get sufficient capital for the project, borrowing is imperative. Therefore, the theory of capital structure cannot be discounted completely but rather be carefully understood in the context of NPOs.

Some variants of corporate world variables such number of beneficiaries, country specific factors may be significant determinants of the size and structure of capital. Therefore, we implore that more studies should be done in this specific area in context of different types of NPOs to firmly understand the determinants of debt in NPOs. Since projects used here were restricted to those funded partially by IFAD, it will be more interesting to look at other clusters of projects or to simply consider a mix of projects from different financiers.

Lastly, the contribution on the nature of relationship between leverage and number of beneficiaries should be investigated further to ground these findings more firmly in the theory. In the course of such investigations, projects with government contribution and without government's contribution should be disaggregated and analyzed separately. This will be essential in establishing whether the reversal of the nature of the effect is only in projects with a great deal of government's contribution or such change is regardless of the government presence.

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