THE RELATIONSHIP BETWEEN MULTINATIONAL CORPORATIONS, GOVERNMENTS, AND ECONOMIC GROWTH AND DEVELOPMENT

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ABSTRACT

The objective of this paper is to analyze the relationship between multinational corporations and the role the MNC, multinational corporation, play in economic growth and development and the role that governments play in promoting economic growth and development through MNC. MNC management is responsible to maximize the value of the firm for shareholders. Part of the wealth maximization process is to invest in projects that have positive NPV, net present value, including FDI, foreign direct investment. Determining the value of an FDI is complicated by the need to evaluate a project in another country. Country risk is composed of both political risk and economic risk. The Country Credit Rating Model is useful for estimating country risk premiums even in countries that do not have stock markets. We show how to estimate the risk premium for a country and how to use that risk premium to value the net cash flows from investing in that country. We discuss actions that need to be taken by host country governments to promote FDI and show how these government actions promote FDI and domestic investment to maximize economic growth and development within the country.

Keyword: Multinational Corporation, Foreign Direct Investment, Economic Growth and Development

INTRODUCTION

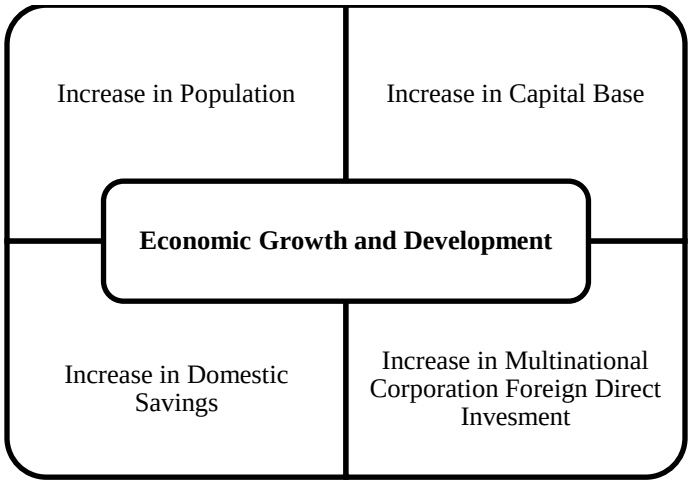
The objective of corporate financial management is to maximize the value of the firms. That is, to create the highest possible market capitalization for the firm. The value of the firm is determined by the risk and return characteristics of the firm which are determined by the decisions made by the firm's managers. Investment decisions are made to determine the assets used by the firm and long term asset decisions are made using capital budgeting techniques. The Net Present Value is the technique of finding the discounted present value of the discounted expected future cash flows for the asset discounting at the firm's weighted average cost of capital. The weighted average cost of capital is the market value weighted cost of different sources of capital for the firm – assumed to be debt and equity. Domestic firms use the Capital Asset Pricing Model to determine the cost of equity capital using beta as the market based measure of risk. Individual investments can be valued using a risk adjusted discount rate. However, FDI may be more difficult to value because not all countries have efficient stock markets. An alternative to the CAPM is the Country Credit Rating Model developed by Erb, Harvey, and Viskata (1996b) which uses the country credit rating for a sample of countries and the stock market returns and volatilities for those countries to develop an International Asset Pricing Model. Thus, a cost of equity can determined for a country with a Country Credit Rating even if that country does not have a stock market.

Country risk analysis is used to determine the possibility that a host country environment will change and have an impact on the FDI. The change can be either political or economic and at either the macro-environmental or micro-environmental level. Bhalla (1983) develops a four stage model to combine both political risk and economic risk in a Foreign Investment Risk Matrix to provide a preliminary analysis of a FDI. Country risk is the possibility that the environment will change and affect the FDI. A country risk profile is developed to estimate political stability, social stability, and economic stability to eliminate countries from further consideration that have an obvious risk that would preclude FDI. The Foreign Investment Risk Matrix has political risk on one axis and economic risk on the other axis. The resulting

box can be divided into three areas – countries that are acceptable for FDI, countries that a unacceptable for FDI and countries that are uncertain. The MNC can concentrate further analysis on countries that are acceptable for FDI. Then each potential FDI is evaluated using an Investment Risk analysis to determine if the discounted present value of the cash flows of the project are adequate to compensate for the risk level. That is, does the investment have a positive NPV. Finally, the MNC will continue to conduct a Foreign Investment Risk Audit to monitor important valuable to insure the ongoing viability of the FDI.

The role that the MNC plays in economic growth and development in a developing country is to provide capital. Todaro and Smith (2003) show the role that MNC play in achieving economic growth and development targets in developing countries. Savings in a country equals the savings rate times GNI. The amount of investment needed to achieve the growth target is the capital output ratio times GNI. The increase in capital needed to support new population and the target increase in GNI is the capital output ratio times the planned increase in GNI. If the amount of domestic savings in the country is less than the required investment, the country needs to promote FDI. Stoever (2002b) shows how economic liberalization within a country can promote FDI by increasing the decision making latitude within the country and thus demand a lower rate of return increasing the amount of FDI. The host country government is moved to liberalize by any number of crisis events.

Figure 1 A Model of Economic Growth and Development



Increases in real GNI result from increases in population or increases in capital or both. Increases real GNI per capita result when a country increases the number of laborers, the amount of capital or the productivity of labor or capital. Robert Solow, "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics*, 70, Number 1, February 1956.

A MODEL OF ECONOMIC GROWTH AND DEVELOPMENT

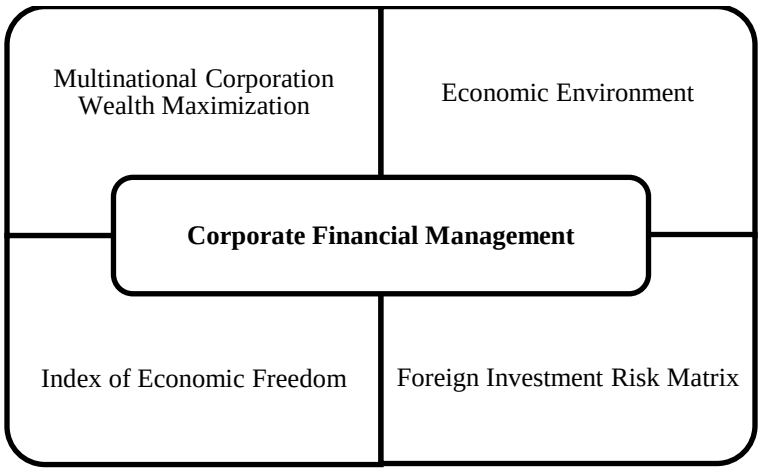
From a practical viewpoint, economic development preceded financial system development since the first bills of exchange existed in the 12th century and the first stock market did not exist until the 16th century. Although money existed before this time, money was primarily species – coins of precious metals such as gold and silver and copper. Subsequently, financial system development and economic development have leap frogged each other. Diamond (1997) argues that economic development resulted from economic surpluses generated by improved agriculture which allowed surpluses to be used to increase specialization. Maddison (2001) analyzes economic growth and development for the 2000 years before 1820 and finds that up to 1820, for the first 1000 years income per capita was stagnant and for the second 1000 years income per capita averaged less than one-half percent increase per year. Since 1820, income per capita has

increased by about four percent per year. Thus, not only has population increased but capital has increased as well and total factor production has increased more. Rostow (1971) argues that economies go through five stages – traditional society, pre-take-off, take-off, drive to maturity, and mass production. Increased capital is needed for economic growth and development to continue. Capital markets are a crucial part of economic development because capital markets provide resources to entrepreneurs and established companies to acquire the capital needed for growth. However, countries without efficient stock markets need to get capital form alternative sources which leads to FDI. It is necessary for the host country government to provide a FDI friendly environment in order to induce MNC to invest.

A MODEL FOR MULTINATIONAL CORPORATION FOREIGN DIRECT INVESTMENT

McGowan (2008) shows how a multinational company can determine the cost of equity for investing in a country other than the home country using a model proposed by Erb, Harvey, and Viskanta (1996), EHV. The EHV model regresses stock market returns for different countries against the Euromoney country credit rating. The EHV model allows the MNC to estimate a cost of equity for investing in a particular country. This cost of equity can be used to compute a weighted average cost of capital which can be used to evaluate investing and financing decisions. Long term investing decision are made using capital budgeting and the objective is to maximize net present value by finding the discounted present value of anticipated net cash flows at the cost of capital. The WACC is a market weighted average of the costs of debt and equity where the cost of equity is based on the systematic risk. WACC for multinational investments is complicated because the cost of equity may complicated by the lack of an efficient equity market and other barriers. MNC continue to invest internationally because of the gains from international diversification such as higher returns and lower overall volatility of cash flows. McGowan and Tessama (2004) use the Country Credit Rating Model (EHV – 1996) and find that the lowest required rate of return, assuming a perfect CCR, would be 10.4% and would increase at a rate of 0.35% for each percentage reduction in the CCR to a maximum of 45.4%. The EuroMoney CCR are based on political risk, economic performance, debt indicators and credit indicators. McGowan (2008) shows how to use changes in the CCR to calculate the required rate of return for investments in Japan, Malaysia and Russia.

Figure 2 A Model of Multinational Corporation Foreign Direct Investment

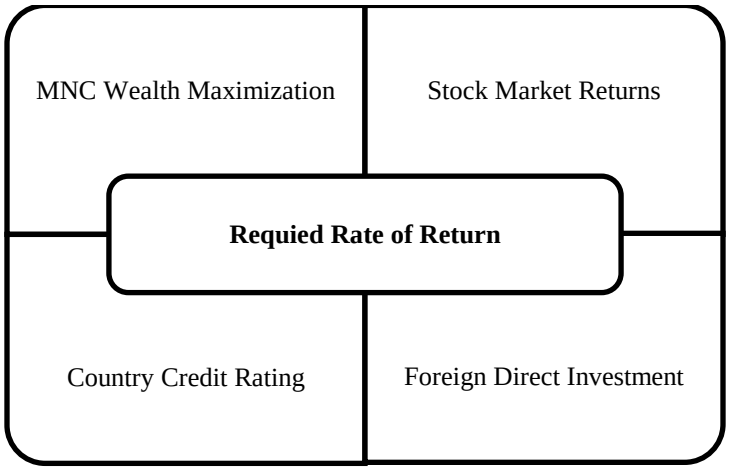


The objective of corporate financial management is to maximize the value of the firm. Part of the decisions making process for a MNC is to determine where and how to make international investments, FDI. Part of that decision is to evaluate the foreign economic and political environment of countries under consideration for FDI. The Index of Economic Freedom is useful to find countries that are acceptable for FDI by the MNC and the Country Credit Rating Model is useful for determining the risk adjusted required rate of return for investing in each country.

USING THE FOREIGN INVESTMENT RISK MATRIX

McGowan and Moeller (2009) demonstrate the use of the Foreign Investment Risk Matrix of Bhalla (1983) to categorize countries into three groups – acceptable for investment, not acceptable for investment, and uncertain. The FIRM has economic risk on one dimension and political risk on the other dimension. After the MNC has reduced the investment universe, the MNC creates a country risk profile which is a more detailed analysis of the country risk profile to eliminate any countries that have potential problems. The third step of the investment analysis is the investment risk analysis. To include political risk variables, social risk variables, and economic risk variables. Countries that appear to have too much risk for any category are eliminated from further consideration. After an investment is accepted, the MNC maintains a continuous foreign risk audit to monitor risk factors on a continuous basis. McGowan and Moeller (2009) choose three political risk variables and three economic risk variables. All six of the input variables are available online and can be downloaded for free. The political risk variables are the attitude of the government toward FDI, the degree of conflict for the country and the perceived corruption within the country. The first political risk variable is a sub-index of the IEF for Capital Flows and Foreign Investment. The second political risk variable is from the Conflict Barometer published by the Heidelberg Institute. The third political risk variable is the Corruptions Perceptions Index published by Transparency International. The three economic variables are GNI per capita, inward FDI potential and the inflation rate. The first economic risk variable is taken from the World Development Indicators 2001 published by the World Bank. The second economic risk variable is UNCTAD's Inward FDI Potential. The third economic risk indicator is the Index of Economic Freedom, IEF sub-index for monetary policy. The authors apply the FIRM to four countries – The United Kingdom, Russia, Brazil, and Poland. Based on the values and assumed weights, the UK is acceptable for investment, Russia is unacceptable and both Brazil and Poland fall into the uncertain region. M&M (2009) demonstrate the application of the Foreign Investment Risk Matrix for country risk analysis using input variables that are readily available online for free.

Figure 3 Using the Country Credit Rating Model to Determine the Required Rate of Return for FDI



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THE RELATIONSHIP BETWEEN FDI AND THE INDEX OF ECONOMIC FREEDOM

McGowan (2004) shows the relationship between FDI and the Index of Economic Freedom (IEF) published by Transparency International. The FDI data are taken from World Development Indicators. Stoever (2002b) provides a model that can be used to analyze the relationship between FDI and economic liberalization. Stoever (2002a) shows the impact of economic liberalization on economic growth and development. Economic liberalization leads to a more open and transparent economic environment which leads to reduced risk for the MNC and a lower required rate of return for FDI. However, the causality is bi-directional in that IEF leads FDI and FDI leads IEF. Financial system development and economic growth and development probably leap frog each other in the long run. For a country to experience an increase in GNI per capita, GNI has to increase to accommodate the population increase and output to meet the new higher level of GNI per capita and investment must increase accordingly. If domestic savings is not sufficient to meet the increased capital requirements, FDI is necessary. The amount of FDI needed is the total amount of new capital needed minus the amount of new capital provided by the domestic economy. The empirical results for the five years under study indicate that increased economic freedom, measured by IEF, leads to increased FDI, as measured by the natural logarithm of FDI in the sample of countries.

USING THE IEF TO IMPROVE THE HOST COUNTRY INVESTMENT ENVIRONMENT

McGowan and Dondeti (2007) use the IEF to demonstrate the [possible actions that the Indian government could take to improve the degree of openness and thus increase FDI as demonstrated in Stoever (2002b). According to Stoever (2002a), MNC prefer to invest in countries where the macro-environment is more amenable to FDI or in countries where a favorable micro-economic environment can be negotiated. In response to shocks, host country governments and improve the domestic regulatory environment increasing the degree of freedom afforded to MNC with respect to FDI. The Index of Economic Freedom is published by the Heritage Foundation. Beach and Miles (2006, page 55) define economic freedom as "the absence of government coercion or constraint on the production, distribution, or consumption of goods and services beyond the extent necessary for the citizens to protect and maintain liberty itself." The IEF is an equally weighted average of ten factors divided into four categories: Free, Mostly Free, Mostly Unfree, and Unfree. India has an IEF of 3.49 which is mostly Unfree. To move to the category of Mostly Free, the government of India The government could reduce regulation in Trade Policy, Fiscal Burden of the Government, Government interventions in the Economy, Banking and Finance, and Regulation. By reducing regulatory restrains in the five areas, the government of India would improve the IEF rating to 2.98 which is Mostly Free. The purpose is to promote FDI by MNC. The other five variables are wither already favorable or not amenable to change in the short run.

SUMMARY AND CONCLUSIONS

The goal of governments is to maximize the utility of their citizens as measured by GNI per capita. To do this, the government must accommodate increases in population and increases in capital requirements. When domestic saving is not adequate to meet investment requirements, FDI can fill the gap but only if the government creates an FDI friendly political and economic environment. MNC have as their goal maximizing the value of the firm which entails investing in FDI and the MNC needs to be able to evaluate the political and economic environment in different countries and can do this using the IEF in the FIRM. The value of an investment is the risk adjusted discounted [resent value of future cash flows and the CCR model allows the MNC to determine a required rate of return for the FDI. The host country government has an incentive to create a flexible macro-economic environment that provides maximum freedom for the MNC and thus minimize to required rate of return and maximizes the value of the investment.

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