



# Does exchange rate risk matter to MNCs in foreign direct investment decision making: an exploratory account

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## ARTICLE INFO

### Article history:

Received: 9 May 2012;

Received in revised form:

28 June 2012;

Accepted: 17 July 2012;

### Keywords

Foreign Direct Investment (FDI),  
Exchange Rate,  
Corporate Rivalry,  
Capital Market Structure,  
Trade Theories.

## ABSTRACT

The purpose of this study is to examine the behavior of exchange rate movements towards foreign direct investment (FDI). Comparative data analysis is applied through answering developed research questions, which are: “What are different types of exchange rate risks that multi-national corporations face?”; “Is there any impact of exchange rate movement on capital market structure of recipient country?”; “Does decision of pioneer Multi-national Corporation affect rivals’ FDI decision?”; and “What is the impact of exchange rate movement on exchange theories?”. Study found that Multi-National Corporations face two main exposures of exchange rate known as cash flow exposure and accounting exposure; exchange rate movements affect market structure; firms follow the rivals in an oligopoly while making foreign direct investment with product differentiation; and exchange rate variations have longitudinal impact on trade theory and state that investment abroad is alternative to trade when free flow of goods is impeded by tariff or other barriers.

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## Introduction

Foreign direct investment (FDI), being a major component of economic development, is deemed a fundamental segment of an effective and open international economic system. But benefits of FDI are not being originated spontaneously and evenly business sectors, across countries and local communities. For availing the benefits of FDI for economic development, international investment architecture and national policies do matter for developing countries. At the same time, challenges like establishment of broad, transparent and investor friendly environment with institutional capacity to implement them are the major to be addressed by host country. Christiansen and Ogutcu (2002) reported second category of challenges as those factors which influence the investor behavior, they are: the ease with which compliance of investors’ global strategies is integrated with subsidiaries’ operations; projects profitability; and overall excellence of recipient country’s enabling environment.

Trade is another integral part of international economic system. FDI and trade are the two main mechanism linking national economies and these mechanisms reinforce each other. To know the trade effects, objective of FDI is important whether that FDI is aimed at to gain access to consumer markets, to natural resources or whether the FDI is undertaken for the purpose of exploiting strategic assets such as research and development capabilities or locational comparative advantage. Moreover, along with investment, host country fetches a lot of positive impacts like on prices, income, production, exports, technological spillovers, poverty reduction, economic growth, employment, development of general welfare of host economy and foreign exchange stability. Hence, FDI is becoming the driver of globalization as massive rise in FDI inflows over the last 20 years is evidenced (UNCTAD, 2006). The essence of economic development is the adoption and transfer of “best practice” across boarder, which is viable through FDI.

Environmental and social benefits to recipient country via dissemination of technology and good and fair practices within MNEs are blessings of FDI. Moreover, such benefits can be further endorsed through subsequent spillovers to domestic business concerns by MNEs. However, there is a risk that MNEs could use foreign direct investment to “export” production which is no longer allowed to produce in their own home countries. In such cases, sometimes, recipient country authorities are committed to invite FDI, there remains risk of lowering or freezing of regulatory standards. Indeed, empirical evidence to support this risk scenario is little (OECD, 2002).

This study purposes to examine the impact of exchange rate fluctuations in different dimensions through comparative analysis of data. Superfluous thing of this paper is that nominal exchange rate is taken as determinant and indicator of foreign direct investment (FDI) rather than real exchange rate because most of the studies have been studied FDI by taking real exchange rate as determinant and indicator of FDI. Implications are also provided for policy makers to better understand and control the phenomenon of FDI in favor of economic growth through recognizing research questions. The research questions of this study are:

*RQ 1* What are different types of exchange rate risks that multi-national corporations face?

*RQ 2* Is there any impact of exchange rate movement on capital market structure of recipient country?

*RQ 3* Does decision of pioneer Multi-national Corporation affect rivals’ FDI decision?

*RQ 4* What is the impact of exchange rate movement on exchange theories?

## Review of Related Issues

### Exchange Rate Risk Management by MNCs

Exchange rate exposure finds vital place in determinants of FDI near foreign investors as profits of MNCs are indirectly linked with it while consolidating the subsidiaries profits in the

books of parent company. MNC are attached with two broad categories of exchange rate exposures (Glaum, 1990). They are: cash flow exposure, and accounting exposure.

Cash flow exposure is the combination of two groups: economic exposure and transaction exposure. *Economic exposure* is concerned with the exchange rate impact on firm's operating cash flows. It is also known as operating exposure. These operating cash flows are in the form of foreign currency but these are converted back in the currency of home country. Therefore, operating cash flows' home currency value is depending upon revenues minus exchange rate and cost incurred in the form of foreign currency. Home currency value is affected by the exchange rate movements in two ways of these operating cash flows. According to Glaum (1990) first way is known as conversion effect and second way is known as competitive effect. *Transaction exposure* is concerned with the receipts and payments of a firm in some future date in the form of foreign currency when a transaction takes place. In this case the value of home currency will be changed with the change in exchange rate. Therefore, a forward contract may be preferred by a firm for a transaction.

Accounting exposure is also known as translation exposure. It is concerned with the financial statements consolidations at the end of accounting period when a parent firm tries to find out the difference of exchange rate from the time when the liabilities and assets of the firm is incorporating in the books of accounts and this becomes the cause of gains and losses as foreign currency depends upon translation method determined by accounting standards. According to Glaum (1990), this exchange rate risk is known as static risk which is based on historical values.

#### **Capital Market Structure of Recipient Country**

FDI is being affecting due to exchange rate level such as: across countries relative production costs; and if movements in exchange rates are anticipated than "relative wage" importance may be diminished and there may be increase in cost of financing due to movements in exchange rate. By this argument, these implications arise from exchange rate movements for FDI when these are unanticipated. Some experts argued on the implications for movements in exchange rate for FDI that there are some considerations exist related to imperfect capital market and the return rate on investments depend upon the across country capital market structure. For example, according to Froot and Stein (1991), when capital markets are imperfect then perfect information does not provide to lenders regarding results of overseas investments. Therefore, multinational companies pay the compensation to their lenders to cover high costs of monitoring and financing from internal capital is preferred by the multinationals to increase the wealth of parent company. Klein and Rosengren (1994) empirically proved that the relative wage importance increases due to the relative wealth channel's importance.

#### **Corporate Rivalry**

A concept of 'corporate rivalry' in Foreign Direct Investment (FDI) is used by Caves (1971) for the consideration of interdependence over time of FDI because many past studies have been unable to consider the interdependency over time of FDI. It is argued by the Caves (1971) that it is necessary for the foreign firms to follow the rivals in an oligopoly while making foreign direct investment with product differentiation. For example, when a foreign firm finds a U.S. industry more potential for foreign direct investment among other potential

markets then later it may decide to make investment in U.S. industry. The entry of the first foreign firm in U.S. market may induce the rivalries and they may also find the U.S. industry' environment more favorable for FDI and subsequently enter in the US market. However, if a firm finds any outside market well than the U.S. market, the foreign firm may be reverted to that market and find U.S. market' environment unfavorable for FDI. Similarly, the rivalries may also perceive the investment environment of US industry unfavorable. Hence, rival firms build their belief about a market whether it is favorable or unfavorable depends upon the previous believes of the competitors that to what extent the market is favorable or unfavorable.

In the corporate rivalry context in foreign direct investment, the firms believe that whether U.S. industry environment is favorable or unfavorable may not merely dependent upon U.S. investment environment but also on other factors such as investment environment in the home country, firm's interactions with the rivalries present in markets other than the U.S. market and government conducts that have impact on it but not on rivals. On the other hand, Akram et al. (2011) recognized the role of openness in attracting FDI in the country. These factors seem impossible to be measured by including them as regressors in FDI model and seem highly uncertain as they include foreign firms as well as foreign government interactions and dynamic status in various markets.

#### **Trade Theories and Exchange Rate Movements**

According to the studies that proposed exchange rate variations as a determinant of investment abroad, exchange rate variations have longitudinal impact on trade theory and state that investment abroad is alternative to trade when free flow of goods is impeded by tariff or other barriers (Cushman, 1985; Cushman, 1988; Goldberg & Kolstad, 1995). Mundell (1957) was the first who mathematically proved it. Exchange rate as a "de facto trade barrier" has proved by many studies, implying that it should increase foreign direct investment. Sung and Lapan (2000) reported about an approach named as production flexibility. This approach enables the MNEs to take a decision when value of acquisition of plant increases and increase in exchange rate volatility about the production of goods in its foreign facility or export from home, depending upon favorable conditions. Assuming the fluctuations in exchange rate as exogenous, the MNEs may obtain benefit by transferring the production activities to those countries where input costs seems lowest due to local currency value, *ceteris paribus*. A financial flexibility argument is developed by Itagaki (1981) in earlier studies. He assumes that if the exchange rate risk increases, it encourage the firm to make investment abroad by using the technique of hedging against its short position. The value of the assets in host country decreases relative to liabilities in abroad due to depreciation in the home currency but would increase assets' value and revenue flow for its foreign affiliates simultaneously.

However, many theoretical models predict that the uncertainty in exchange rate will instead suppress the foreign direct investment. These arguments assert that exchange rate' unpredictable fluctuations increase the uncertainty in future revenues and production costs. Campa (1993) rooted in work of Dixit (1989) and Pindyck (1991), and said that currency volatility increase the "option value" that is accompanied with waiting prior to make necessary sunk cost to produce abroad

thus deterring the MNEs entry. They consider that a firm has investing abroad at any time and suck cost serves as an exercise price and the value of return or profit earned from the production is considered as the discount value. Size of return volatility is introduced by exchange rate risk which motivates the firm to avail the opportunity by using this option of investment or to wait for some future period. In this part of literature the suck cost is taken as key factor and the results are associated with those firms which are risk neutral firms.

The MNEs are incorporated within a general approach of equilibrium with endogenous exchange rate in two studies but contradictory results are produced. In the first study conducted by Aizenman (1992), the approach of production flexibility is contrasts to the option value of conceptualization as recognized by Campa (1993). The value of diversification is increased due to increase in volatility that encourages the firms to move towards the country having cheapest production cost but at the same time, the investment is discouraged due to increase in uncertainty in the return on investment abroad by exercising the option value. According to Aizenman (1992), the country-specific shocks' effects will be conveyed across national borders due to floating exchange rate that deteriorates the firms' ability to radiate risk by transmitting the production function overseas. In this sense, the flexible exchange rate volatility can be interpreted as deterrent to foreign direct investment.

### Conclusions

#### This study concludes that:

Multi-National Corporations (MNCs) face many exposures of exchange rate such as: economic exposure; transaction exposure; and translation exposure. Glaum (1990) also found that MNCs face two types of exchange rate exposures known as cash flow exposure and accounting exposure. Cash flow exposure is a combination of economic exposure and transaction exposure, whereas, accounting exposure consists of translation exposure.

Movements in exchange rate affect the market structure as approved by Froot and Stein (1991), when capital markets are imperfect then perfect information does not provide to lenders regarding results of overseas investments. Therefore, multinational companies pay the compensation to their lenders to cover high costs of monitoring and financing from internal capital is preferred by the multinationals to increase the wealth of parent company.

Due to fluctuation in exchange rate and suitability of a market for foreign direct investment rival firms build their belief about a market whether it is favorable or unfavorable depends upon the previous believes of the competitors that to what extend the market is favorable or unfavorable. Caves (1971) also reported that it is necessary for the foreign firms to follow the rivals in an oligopoly while making foreign direct investment with product differentiation.

The value of the assets in host country decreases relative to liabilities in abroad due to depreciation in the home currency but would increase assets' value and revenue flow for its foreign affiliates simultaneously. Some studies such as Cushman (1985); Cushman (1988); Goldberg & Kolstad (1995) found that exchange rate variations have longitudinal impact on trade theory and state that investment abroad is alternative to trade when free flow of goods is impeded by tariff or other barriers.

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