

Risk Planning and Stabilizing Performance in Applied Marketing Strategic

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This paper is focused on the effect of strengthening's multi-criteria analysis on performance stabilizing with different types of capital such as technology, capital and competitiveness defined on the basis of capital policy tools designed by policy makers. The analysis reveals negative effect of the multi-criteria analysis on excess value created by firm using competitiveness capital. This empirical evidence support that tunneling effect of multi-criteria analysis of investment is highly significant in a firm with competitiveness capital. Once, profitability, asset utilization and growth opportunity are controlled, the tunneling effect of the multi-criteria analysis becomes highly significant in firms irrespective of the shades of capital. This is in support of study reported claiming that tunneling effect is part of non-operating profit.

INTRODUCTION

External direct investment in transition market has been considered as the most effective way of the exploitation of host economy (according to the dependency school). However, nowadays, this is perceived as changing agent for the growth of host economy due to being a bundle of capital, technology and managerial efficiency. The policy makers of host economy are designing policy tools to fulfill the need of domestic economy by using capital. This process is facilitated by developing mechanism to channelize technology in technology deficient industries, capital in capital deficient industries and managerial efficiency in efficiency deficient industries. The industrial performance gets improved by infusing specific scarce resources in the deficient industry of the same. The scarce resources required for growth of a specific industry has been considered as basis for the classification of capital and accordingly, three categories of capital have been identified based on the priority of scarce factor to be infused in an industry. This classification is further supported by policy documents of the host economy government, which is used for designing policy tools. These policy tools are helpful in infusing desired component of capital in a specific industry. The process of infusing these factors is interplay of demand (as per need of industry) and supply (competitive advantage of investors). In this research work, the shades of capital has been defined from perspective of home economy with competitive advantages in terms of technology, capital and efficiency (competitiveness) in a specified industry. Accordingly, three shades of capital are considered as technology, capital and competitiveness.

Two different sets of firms' i.e. foreign and non-foreign, are operating with different shades of capital. MFC firms are benefited in terms of access to internal capital market, using pool of talents, expertise and fund of external leading to reduction in cost of capital and improvement in performance. These features of multi-criteria analysis is expected to have propping effect however tunneling effect is also reported in Applied marketing strategic (Bertrand et al, 2002; Silva et al, 2005). External investment is another important aspect of Applied marketing strategic (Khanna and Rivkin, 2001) since they possess majority of the productive asset. Against this background, the research question is defined as whether

multi-criteria analysis of investment has propping effect or tunneling effect on firm with different shades of capital in Applied marketing strategic?

In this paper, the effect of multi-criteria analysis of investment on different shades of capital has been analyzed in Applied marketing strategic. This analysis has used dataset from emerging market and it is observed that multi-criteria analysis has tunneling effect in competitiveness shaded FDI capital is highly significant. In technology shaded and capital shaded capital, multi-criteria analysis tunneling effect is significant after controlling value enhancing factors like profitability, growth opportunity and asset utilization. The paper consists of seven sections. Topics include: different shades of capital, which is linked to the policy framework adopted by Transition government; the effect of these shades of capital on excess value created by firm; analysis of the effect of multi-criteria analysis on excess value created by firm with different shades of capital; and concludes with a presentation of hypotheses; a dataset with methodologies used for analysis; discussion and conclusions.

FDI POLICY FRAMEWORK: DEFINING OF FDI CAPITAL

More often Transition Government intends to open specific industry in regulated environment. Allowing external direct investment for specific industry is critical decision of Transition government and there is a separate list known as negative list, which covers all the industries where is prohibited. The purpose of Transition government to make domestic industry competitive in international market gets served through spillover effects. Transition's investment policy focuses on a combination of restrictions in three dimensions for any given industry i.e. capital flow restriction, ownership restriction and repatriation restriction. The rationale behind these three forms of restrictions is provided in the policy documents of the government. These restrictions are meant to channel the flow of FDI with capital, technology and managerial implications to industries, which require them. For instance in industries wherein huge capital investments are required and where there is limited or no domestic players exist, restrictions are not imposed in the first two dimensions i.e. capital and ownership with a limited restriction on the third dimension. In such identified industries or sectors a foreign investor can directly invest without prior government permission and also have full ownership, but repatriation or exit is not allowed in the first three years of operation. In the following topic, an attempt is being made to elaborate on the rationality of these policy instruments in light of need of industries and characteristics of investors as mentioned in the policy document. These policy documents explicitly mention the objective of opening a specific industry for FDI and policy instrument used. Accordingly, this study presents the discussion on rationality of policy instruments, based on restrictions imposed. The industries can be categorized based on the restrictions imposed into four categories: 1. Industries with Capital restriction (no ownership restriction) - Industries with Capital and Repatriation restriction 2. Industries with Ownership restriction (no capital restriction) 3. Industries without any restriction (neither ownership nor capital) 4. Industries with both Capital and Ownership restriction.

In addition, the discussion is primarily focused on the first three categories, since the industries, which fall under the last category, are primarily related to national security and defense. These do not form part of this study, since most of the firms in these industries are not listed and the financial data is not available in the public domain.

FDI Investment Industries with Capital Flow Restriction

Restriction on capital flow has been imposed in the form industry specific route for FDI approval i.e. automatic route and government route. FDI approval through automatic route is provided by default, as the investor needs to just inform the relevant authorities and in transition market's case primarily. This route virtually does not offer any restriction to capital flow. On the other hand FDI approval through government route vests the competent authority with substantial discretion with respect to restriction of capital flows in these industries and sectors. The restriction or the discretionary powers vested with the regulator also has two inter related dimensions of control, it not only controls the magnitude of investment which can be brought in by an investor in a particular firm but also the number of such investors to be allowed in each sector. In many cases the investments allowed in these sectors/industries

are non-competitive in nature due to its uniqueness. For example if an investor is allowed to invest in a road project then there is no possibility of investment in another road project in same geographical region.

Transition FDI policy framework is designed to control capital flow in industries having potential of offering large size investment opportunity. In these industries capital restriction is imposed to avoid speculative investment. There is possibility of acquisition of land for construction of residential complex; township etc., both Brownfield and Greenfield projects, in anticipation of rise in price upon completion of projects due to limited supply. Most of these projects are unique and investor can behavior may be monopolistic in nature. Lack of capital with domestic investors ceases such possibility of speculative investment and there is no need to restrict domestic investors in making investment. However, there is a fair chance that external investors with large capital raised at low cost will use such speculative investment opportunity, which needs to be avoided to control asset price bubble. This problem may be further accentuated in terms of price and affordability of local residents in case of large scale acquisition of real estate by foreign investors. This restriction is also by virtue of partial capital account convertibility in Applied marketing strategic. In addition to controlling meso-level effect, this restriction also helps in controlling negative effect of large capital inflow at macro level i.e. volatility of real exchange rate (Simone and Sorsa, 1999) and crisis of balance of payment (BoP) as experienced by South North American countries in 1997 (North American Development Bank, 2002). Given the above substantial discretionary powers have been vested in the regulator to control capital flow in infrastructure sectors like roads (highway), bridges, dams, development construction project & township, residential housing and other capital intensive infrastructure projects.

Industry with Capital and Repatriation Restriction

The condition of minimum period for repatriation of the original external investment is imposed in some of capital seeking industry like real estate sector (Development of townships, Housing, Built up infrastructure and Construction Development Projects). This restriction is a precautionary measure considered by competent authority to prevent speculative capital inflow and ensure availability of the capital as per original commitment of investors. Although, this restriction may discourage investors but the uniqueness of project precludes any competition in market and ensure higher return. In this research work, firms operating in this industry have been pooled with industries with capital restriction.

FDI Investment Industries with Ownership Restriction

Ownership restriction has been considered a policy instrument to encourage strategic collaborations in industries where technology is a more critical resource than capital. It has been mentioned in the policy documents that encouraging foreign investment in these industries along with technology collaboration would allow domestic firms access to superior technologies, increased exports and expansion of the production base. Imposing restriction on external ownership of a firm ensures that the domestic partner would gain expertise rapidly thus accelerating the spillover effect. These partnerships also help in establishing dynamic relationship between domestic and external industry in terms of both technology & investment which in turn would benefit the Applied marketing strategic in terms of technology transfer, marketing expertise, modern managerial techniques and promoting exports. As a measure to encourage FDI and technology transfer, FDI ownership has been increased to 51% in these industries (also known as FERA Industries or Annexure III Industries) on discretionary basis. This increase in ownership was done with an objective to avoid bottleneck in bringing new technology due to the lack of controlling ownership.

This is more important for closely held technology by manufacturing firms. In high priority industries, automatic approval helps in facilitating technology transfer agreements and limiting bureaucratic delays in the process. Hiring of external technicians and conducting testing of indigenously developed technologies were also set free from the prior approval process. Domestic trading companies (primarily engaged in export activities) were also allowed for 51% equity investment to encourage export. This was done in addition to government initiatives of extending assistance to trading companies in systematic exploration of world markets through intensive and highly professional marketing activities.

In many industries advanced technologies are not available and which are essential for domestic firms to compete globally. Transition government's objective to develop these industries through technology transfer and produce high tech products/services was clearly enunciated in the policy document of FDI opening for Commodity exchange where FDI will bring the latest technology, modern management skills and best practices. Similarly the telecommunications sector and IT sector were also opened for limited ownership FDI with the intent to enable these sectors to access state of the art technology in these domains. Policy documents also mention the new technology infusion is the prime objective for allowing FDI in Global Mobile Personal Communications by Satellite, readymade garments sector¹ and software industry.

FDI Investment Industries Without Restriction (Neither Ownership Restriction nor Capital Flow Restriction)

Investment in these industries provides opportunity for foreign investors to full ownership and unlimited capital flow without prior permission (automatic route). The rationale as per the policy documents is to make Transition industry globally competitive. The policy envisages that FDI in these sectors would leading to the introduction of superior quality of products and services given their expertise in international market spurring Transition firms to improve the quality of their products and services to remain solvent. For example Terrestrial Broadcasting FM industry has been opened for FDI to provide superior programs (local content and relevance), quality improvement in service and generating local employment. On the other hand FDI has also been permitted through Export hardware schemes, Electronics Hardware Technology Park Scheme, Software Technology Park, Export oriented units and Export promotion zones, trading companies with thrust on export and industries like textile, Aquaculture & fish/prawn units etc.

FDI Investment Industries with Capital and Ownership Restriction

The firm operating in this type of industry fall under defense sector in Transition Market and for security reasons, restrictions on both, capital flow and ownership have been imposed. The ownership limit has been kept at minimum level of 26%, which does not offer controlling ownership to foreign investors as per the Company Act. The negative effect of imposing ownership restriction has been highlighted in discussion paper issued by Transition government. Transition defense industry has been deprived of access to high-end technologies as original equipment manufacturers are not interested in bringing their proprietary technology due to lack in controlling ownership. These firms are not listed with Transition stock exchanges and hence, not considered in analysis.

Implications of FDI Policy Framework

Given the above, ownership restriction and capital restriction are important policy instruments in context of Applied marketing strategic. This study considers these two as major dimensions to be considered for classification of FDI investment industries in terms of their resource requirements and accordingly four different FDI types of industries. These industries are capital seeking, technology seeking, competitiveness seeking and security seeking. Accordingly, FDI capital is classified as technology shaded, capital shaded, security shaded and competitiveness shaded. This research work is focused on three shades i.e. technology shade, capital shade and competitiveness shade of FDI capital.

HYPOTHESES

The hypotheses being proposed in this research paper are centered on relationship between shades of FDI capital, stabilizing Performance and multi-criteria analysis. The various aspects of their relationships have been discussed in two stages. At stage one, effect of different shades of capital on excess value created by the firm is discussed. This discussion is presented below, i.e. technology shaded FDI capital (3.1), capital shaded (3.2) and competitiveness shaded (3.3). In stage two, this discussion is extended to cover the effect as presented and gets concluded with proposed hypotheses against the background of the above mentioned discussion.

Technology Shaded FDI Capital and Stabilizing Performance

Restriction on ownership is unique feature of technology shaded FDI capital and for any investor ownership restriction reduces the attractiveness of investment since in most cases this restriction imposes a control constraint. This ownership reduction forces the investor to work with the domestic partner in exploring synergies, which will enable them to generate superior, returns. The possibility of superior returns would depend on the inherent cost efficiencies or technology deficiencies of the domestic partner. In case of cost efficiencies unless they are specific to the host economy or domestic partner, the investor would opt to invest wherever such cost efficiencies are available without the ownership constraint unless the investor is more interested in exploiting the domestic market which otherwise will not be accessible. Given the above, in case of ownership constraints investment decision by a foreign investor would depend on other factors other than cost efficiencies. Literature clearly identifies that technology superiority of the investor as compared to the domestic partner is a critical factor for investment in any economy in spite of ownership restrictions. The magnitude of this technology gap also plays a critical role in nature and timing of the spillover effects as elaborated in literature review earlier. There is further elaboration on the incentives available to investors due to their possession of superior technologies in spite of ownership constraints imposed by the economy on investment in specific sectors.

Investors have firm specific advantages by virtue of possession of superior technology as strategic asset, which helps in creating higher surplus than non-FDI firms. The surplus generated by these investors consists of two components a) output based observable surplus and b) intangible asset (goodwill, experience etc.) based unobservable surplus (Karabay, 2010). Although, output is independent of ownership control (Dasgupta and Sengupta, 1995) but firm-specific advantage depends upon the unobservable costly effort of foreign investors in developing technologies through R&D, which is directly proportional to its ownership control. Technology is already available with these investors and the product or service utilizing this technology can be made available in the market with minimal investment since only the incremental cost of its implementation with domestic partner would be needed, this reduces cost of investor's effort. Investment would flow into the economy as long as this reduction in level of effort more than compensates the decrease in surplus due to domestic partnership as imposed by regulator. Therefore, in spite of ownership restriction, technology investors get motivated to make investment in Applied marketing strategic from a resource exploitation perspective as long as the magnitude of technology gap is not large enough to delay the time line of superior returns. These investors get benefited through better utilization of raw material, technical skill available in host economy, cost efficient human resource (unskilled worker). These investors also get benefited by virtue of being first mover (Li et al, 2003) especially with market-seeking motive in high growth industry. These investors prefer partial ownership with domestic partner (Frynas, Mellahi & Pigman, 2006) and reduce the time of offering product/service by using facilities of incumbent partner (Kogut & Singh, 1988). Creation of wholly owned subsidiary along with development of adequate production and supply chain capacities delay the entry of investor thus losing opportunities to capture the market (Bell, 1996). Since this delay would catalyze the domestic industry to source the technology from a different partner to protect their markets.

In addition to the above, there is also a fair chance of obsolescence of new technology in long term (Vernon, 1966), which will reduce the time available to the investor in monetizing the same. Two other dimensions i.e. technology transfer and internal R&D capability also explain foreign investors' expectation about performance in different time horizons. Investors in possession of new technology can implement in FDI firm through technology transfer at lesser cost compared to developing in-house or acquiring from open market. The return of FDI firm increases due to adoption of new technology, which is further fueled by reduction in technology implementation cost. Investor exploits technological advantages in host economy in collaboration with domestic partner, which facilitates internal R&D capability of FDI firms in short term. Non-FDI firm either develops their R&D capability or acquires the technology in the medium to long term (spillover effect), which will gradually erode competitive advantage of FDI firm unless they maintain their technological superiority.

The performance of a firm can also be measured on another dimension which would be the value created by FDI firms. This differs from the superior returns as measured and tested in the previous

hypotheses. Stabilizing Performance is considered as an indicator of relative performance. This measure of performance considers capital gain, which is normally excluded while calculating return expressed in terms of accounting measures (ROA, ROE etc) and equity market (logarithmic return). In industry with ownership restriction, value creation is viewed from two aspects i.e. information processing and commercialization (development of new products/services). Uncertainty and equivocality are two important dimensions which explaining role of management of the receiving firm for effectiveness of technology in value creation (Teasley et al, 1996). The familiarity about technological situation (Uncertainty) and the degree of ambiguity about technology (equivocality) of FDI firm is dependent of managerial ability. FDI firm is proposed to be superior to non-FDI firms on these two criterion. Technology transfer is focused on a three step process i.e. acquisition of new knowledge or information, converting to commercial products or service and positioning products/service in marketplace (Camp and Sexton, 1992). Given the availability of technology with investor of FDI firms, they are in a better position to create more value (internal spillover effect) as compared to domestic firm having no access to these technologies and lacking in innovation. This is an intangible asset for the FDI firm which is difficult to imitate and easy to protect. During initial period, creation of excess value is possible by increasing managerial ability (in terms of familiarity with technology, development of products/services and positioning). With time, technological spillovers effect will increase and non-FDI firms will have also access to these technologies and decrease the excess value created by FDI firms.

Capital Shaded FDI Capital and Stabilizing Performance

For industries wherein capital restriction strategy has been implemented, the investor is faced with the limitation in the magnitude of investment, which can be bought into a specific sector/ industry. This limitation is incentivized by also limiting competition in these sectors by imposing a cap on the number of firms who can invest in these sectors. This incentive would limit the volatility of returns to a large extent. Other than this there is also a repatriation limitation, which is imposed wherein, exit is not permitted for a minimum specified period. From the investor point of view only those investors who have access to large capital resources and having longer return horizon would be interested given the incentive of limited competition. Given the policy constraint on overseas borrowings and the nature and scale of the projects, domestic investors are constrained by the unavailability of low cost funds, along with lack of relevant experience due to limited operation in international domain. The excess demand of capital in a particular industry increases cost of capital and accentuates the scarcity of capital to other critical sectors/industries thus adversely affecting a balanced economic growth. This increased cost of capital combined with inability of generating revenue stream in short term due to nature of the projects in these sectors/industries accentuates the riskiness of investment.

As opposed to the domestic investors, external investors have access to low cost capital in large amounts due to low interest rates and lack of investment opportunities for savers in their economies. The infusion of foreign capital from these investors in this particular set of industries will relax the financial constraints on the host economy thus reducing gap between demand and supply of capital. This reduction in gap of demand and supply will reduce the interest rates due to the demand supply mismatch and thus the cost of capital for investments in these large long gestation projects. This will also reduce the volatility of returns associated with these projects. This reduction in uncertainty of cash flow and decreased risk associated with financing firms in industries with capital constraints reduces the cost of capital and increases the return associated with these sectors/industries. This combined with limited competition would allow for higher returns to these firms in both short term and long term. Other than the above in these industries, technology is accessible to both FDI and domestic firms however these two different types of firms can be distinguished on the basis of scale & scope of economies. These sectors/industries require heavy investment during initial periods to create the infrastructure for offering long-term products/facilities. In other words, these investments have long gestation periods due to which revenue streams are delayed with the initial cash flow streams being negative for a longer duration. Another factor is the scale and scope economies in long run inherent in these projects with very limited opportunity of imitation or competition. Given the expertise required and scale and scope of these projects it would be very difficult for these projects to be executed properly in the absence of assistance in terms

of technology, capital and expertise. Firms, which have global exposure with access to significant funds, will have a definite advantage and add value to the economy. Most of these projects are in the form of creating non-transferable tangible assets within the host economy. The objective of FDI firm is to create excess value in long term due to nature of projects as discussed earlier. It is proposed that they will also create excess value in short term due to their long experience in handling international projects.

Competitiveness Shaded FDI Capital and Stabilizing Performance

Industries in which a foreign investor can hold 100% ownership and the investment can be made through the automatic route are primarily industries in which there are experienced domestic players. These players have access to technology and capital in line with any foreign firm interested in investing in these sectors/ industries. These industries are characterized by few well-established players and exhibit monopolistic/oligopolistic characteristics. An investment by a investor in these industries would be able to generate superior returns only if the investor along with capital, technology also has superior managerial and operation efficiency and expertise. Once such an investor enters these industries then by default the efficiency of the domestic players would have to increase rapidly to maintain their competitiveness. In other words FDI in these industries other than capital and technology is primarily characterized by managerial and operational efficiencies and would increase the competitiveness and efficiency of the firms operating in these industries rapidly and the industry will be characterized by high competitiveness.

In this industry, access to all advantage generating factors of production i.e. new technology, capital and superior managerial skills is not a limiting factor for any firm to perform. Given this an argument that it is not possible to differentiate between FDI and non-FDI firms in terms of their performance in the long term, though there could be marginal differences in the short term within a specific economy. Though the window for these differences in the short term would be very small and negligible. Since there would be a time lag for operationalizing any FDI in these sectors, in the short term and FDI firm would underperform a non-FDI firm but the window for this opportunity would be very small or negligible as mentioned earlier. For an FDI firm investment in these sectors will be tenable not because of the possibility of superior returns but because of marginal contribution to their overall returns at the global level.

In industries without capital or ownership restriction, protection of firm's asset specificity is crucial for strengthening its competitive position (Bell, 1996) and hence external investors prefer higher ownership control. The exploitation of competitive advantage helps in strengthening its position in the market especially in case of price competition. In these industries, FDI firm outperforms on account of total factor productivity (efficiency) due to technology, capital and better managerial practices. Technology and capital are also available for domestic firms however complacency due to limited number of players reduces their managerial and operational efficiencies. In other words, FDI investment in these sectors/ industries would compel domestic firms to adopt latest technology and managerial practices of FDI firms in very short period to stay competitive. In this way, any advantage from FDI investors total factor productivity gets eroded very quickly as non-FDI firm also uses these factors.

Stabilizing Performance is another dimension of discussion regarding the impact of FDI. In industries with no constraint, access of new technology and capital is available to both FDI and domestic firms. These firms can only create value by using human resources, technology and innovation, unit costs economics and the infra-structure and strategy of the firm (Pitelis and Vasilaros, 2010). Imitation of all these value-creating elements is possible for the non-FDI firms in these industries. Given this any stabilizing Performance by FDI firm would be of a short-term nature.

Effect of the Investment Multi-Criteria Analysis

Foreign is inferred in the literature as collection of firms with common administrative & financial controls and crossholdings. They have common brand identity, pool of labor and rely on intra-group financing (Khanna and Fisman, 1998). Their interlocking facilitates communications about developments in technology, business opportunity and strategy among member firms. Granovetter (2005) observes that elimination of contract renegeing through social mechanism of member firms further strengthen the ties resulting into increased cooperation. In context of Applied marketing strategic, large business houses are

family dominated with a greater possibility of extracting wealth from other shareholders (Silva et al, 2006). These are also suffering from the problem of misallocation of resources resulting into cross subsidization.

Strategically multi-criteria analysis' benefit in building and accessing a network for its own interest wherein resource can be easily accessible. It is true to domestic as well as international relationship. The larger external facilitates the operations and entry in the international market via joint ventures (Khanna & Palepu, 2000). The foreign firms are capable of enforcing property rights through their reputation or close relationship with bureaucrats. External is also in a better position to protect the technology as a core competency of their business. The external have been proven superior to stand alone firms in terms of accessing the foreign capital and technology.

External affiliated firms can access the internal capital market that brings down the cost of capital. Primarily the foreign investment can have access to broad sources namely internal capital market and external capital market. The internal capital market means the capital requirement is satisfied by raising it from the internal source from its member firms, which can be availed in various forms such as actual money, raw material or managerial competency. This is widely reported in literature that accessing funds through internal market is very easy and cheaper for external' member firm and it is also a desired form of source. The availability of internal capital is of greater advantage in comparison to raising the capital from external market. The advantage is two-fold one being availing the capital at lower cost and other is keeping the ownership concentration undiluted. Therefore the controlling stake remains the same across the firms owned by the foreign.

External' member firm can invest surplus cash available with foreign in high NPV project. These firms also get supported by other member firms due to higher insider ownership, to avoid dilution in private benefits after firm bankruptcy and hiding negative information about the group (Gopalan et. al. 2007). Such financial assistance extended by group members reduces probability of default on the investment and improves return by reducing cost of capital. The intra-group flow of funds also follows tunneling that can have high insider holding for the new firm. Foreign firms in Transition market has more internal capital market (Khanna and Palepu, 2000) and financial assistance is extended by intra-group firm (Gopalan et al, 2007). Multi-criteria analysis has advantage of increasing the firm's debt capacity by reducing the risk of the firm's debt, when business segments with imperfectly correlated earnings are combined (Lewellen, 1971). This effect is also known as co-insurance effect (Ferris et al, 2003) which is visible in diversified firms and is also valid for diversified investment. This increase in debt capacity will lead to increase in tax shields and therefore multi-criteria analysis reduces the amount of taxes to be paid. This reduction in tax will further increase performance of the firm. The above discussed features of foreign and its member firms, leads to dominant role of external even in case of joint venture with its member firm. Such dominance of multi-criteria analysis deter outside investors and Dahlquist & Ran (2001) reports that investors tend to underweight firms with a dominant owner.

The foreign firm also gets benefited through diversification because the firm has certain resources that can be profitably deployed outside the industry in which it operates i.e. entrepreneurial skills, technology, requirement of fund for other business venture etc. The foreign corporation's reap the benefits from the diversification and definitely reduce the overall unsystematic risk. The member firm stands as an individual entity in the legal system, it gives option for multi-criteria analysis to decide whether it would like to bail out the underperforming firm or let it stop its operations to reduce further losses. The predominance of multi-criteria analyses insulates from the pressure of institutional investors and takeover threats although the undisputed controlling rights lies with the institutional investors (Nicodano & Chiesa, 2003).

The improvement in firm performance due to its investment multi-criteria analysis is widely cited in literature and a number of reasons been cited for the same. Institutional void or response to market failure (Khanna and Palepu, 1999, 2001; Gopalan et al., 2007) is one of the prominent reason on the basis their ability to mobile capital and labor to the concern firm from other. The frequent interaction between these affiliated firms helps in improving resource allocation and its bargaining power for favorable terms while acquiring financial resources (Guillen, 2000). Such interaction improves co-ordination in investment decision and reduces uncertainty in supplying intermediate goods (Gerlach, 1992; Keister, 1998). The

efficiency of these affiliated firms also gets improved on the basis of reduced transaction cost since resources like scarce skilled and managerial talent (Chang & Choi, 1988; Chang & Hong, 2000; Khanna & Rivkin, 2000). The availability of tacit information, due to existence of networks of these multi-criteria analysis, reduce the level of uncertainty and makes situation better for these firms in contract enforcement and opportunity identification (Weidenbaum and Hughes, 1996; Granovetter, 2005). The opportunity search process is also facilitated by disseminating information regarding technology and product developments (Luo and Chung, 2005).

The literature cites that multi-criteria analysis' performance is correlated with the internal capital market and is highly significant when external capital market is imperfect. These firms are less sensitive to their own cash flow than cash flow of the rest of the members while making investment decisions (Fazzari et. al. 1988, Hoshi et. al. 1991, Shin and Stulz 1998). Internal market of foreign investment provides managerial competency and expertise in various areas that gives advantage to MFC affiliated firm in labor market. Internal market of multi-criteria analysis provides reputation, brand equity and MFC affiliated firm gets benefited in product market (Maurer and Sharma, 2001). The positive value is generated to a particular firm through mimicking the market mechanism by their multi-criteria analysis in incomplete and inefficient market.

The multi-criteria analysis helps in increasing value by reducing transaction cost since resources like scarce skilled and managerial talent (Chang & Choi, 1988; Chang & Hong, 2000; Khanna & Rivkin, 2001) are shared among group member firms. These firms use tacit information available in their network of group member firms for value creation (Weidenbaum and Hughes, 1996; Granovetter, 2005). The dissemination of information regarding technology and product developments (Luo and Chung, 2005) further helps in creation of additional value. Therefore, a positive effect on excess value created by the firm is expected and the following hypotheses are proposed.

H_{0a}: multi-criteria analysis has Propping Effect in firm with technology shaded FDI capital.

H_{1a}: multi-criteria analysis has Tunneling Effect in firm with technology shaded FDI capital.

H_{0b}: multi-criteria analysis has Propping Effect in firm with capital shaded FDI capital.

H_{1b}: multi-criteria analysis has Tunneling Effect in firm with capital shaded FDI capital.

H_{0c}: multi-criteria analysis has Propping Effect in firm with competitiveness shaded FDI capital.

H_{1c}: multi-criteria analysis has Tunneling Effect in firm with competitiveness shaded FDI capital.

DATASET

This dataset is extracted from Prowess database maintained by the Centre for Monitoring Applied marketing strategic. The dataset of 4635 firms with FDI investment, consist of 61% of firms with competitiveness shaded FDI capital, followed by 31% of firms with technology shaded capital. Number of firms with capital shaded FDI capital (255) is sufficient enough for analysis. The descriptive statistics of FDI ownership in multi-criteria analysis' affiliated and non-affiliated firms across different FDI investment categories are presented in Table 1. The FDI investment is made more in non-foreign affiliated firms across and within FDI investment categories. It is observed that FDI ownership in NMFC firms is higher than MFC firms for all FDI investment categories.

Variables for Stabilizing Performance

Three different excess value multiples i.e. asset multiple, sales multiple and EBIT multiple, have been used to measure excess value in very similar fashion to Berger and Ofek (1995). Asset multiple is defined as the natural logarithm of ratio of actual value to imputed value. Actual value of the firm is defined as the sum of total book value of debt and market value of equity. The imputed value is calculated as firm's asset multiplied by its industry median capital-to-asset ratio. Sales multiple is defined as natural logarithm

of the ratio of actual value to its imputed value. The imputed value for this multiple is calculated as the sales of the firm multiplied by its industry median capital-to-sales ratio. Similarly, EBIT multiples is calculated as natural logarithm of ratio of actual value to its imputed value. The imputed value for this ratio is defined as firm's EBIT multiplied by its industry median capital-to-EBIT ratio. The firm size is measured by taking natural log of total assets. This analysis considers EBIT to sales as surrogate measure for profitability of the firm and growth opportunities of the firm has been captured as the ratio of capital expenditure to sales. Capital expenditure is calculated by taking change in net fixed asset of the firm. Net fixed asset value has been calculated after deducting depreciation from the block fixed asset. Therefore, this study has not considered depreciation separately to calculate excess capital expenditure. Berger & Ofek (1995) have considered depreciation as one of the variable. This value have been considered only if change is more than 5% otherwise no change. Then calculation of median industry capital expenditure year-wise is done for each industry. The excess capital expenditure is then calculated by subtracting median industry capital expenditure from the capital expenditure value of the firm.

TABLE 1
DESCRIPTIVE STATISTICS OF FDI OWNERSHIP IN FOREIGN AFFILIATES (MFC)/
NON-AFFILIATES (NMFC) WITH DIFFERENT SHADES OF FDI CAPITAL

Shades of FDI Capital and /NMFC Firm			2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Technology Shaded	MFC	N	50	49	48	47	46	92	74	72	70	70	70
		M	13.94	15.70	14.18	13.94	14.55	14.52	13.57	15.24	13.08	13.08	13.08
		SD	13.28	15.26	13.20	13.15	13.09	17.44	13.31	15.59	13.86	13.86	13.86
	NMFC	N	59	59	64	61	62	120	92	87	85	85	85
		M	29.31	27.30	26.61	27.09	25.20	25.35	20.37	21.60	22.87	22.87	22.87
		SD	19.44	20.49	20.61	20.88	20.64	21.13	20.48	20.95	21.91	21.91	21.91
Capital Shaded	MFC	N	8	9	8	7	9	7	9	11	12	12	12
		M	9.14	11.01	12.23	13.07	17.47	20.04	13.13	14.68	23.08	23.08	23.08
		SD	8.06	10.34	14.64	15.57	16.47	14.26	14.30	16.00	22.46	22.46	22.46
	NMFC	N	12	12	10	11	10	9	17	16	18	18	18
		M	17.89	16.83	19.49	21.57	23.18	29.74	29.60	30.27	30.36	30.36	30.36
		SD	15.14	15.90	18.93	18.06	22.38	29.17	30.88	29.93	28.21	28.21	28.21
Competitiveness Shaded	MFC	N	93	100	118	105	107	92	142	138	133	133	133
		M	15.20	13.71	12.34	13.89	13.86	14.52	13.74	14.36	14.33	14.33	14.33
		SD	14.36	13.26	12.32	13.96	15.96	17.44	16.84	16.56	16.19	16.19	16.19
	NMFC	N	116	120	123	126	125	120	164	162	161	161	161
		M	25.86	26.38	25.39	25.11	24.37	25.35	22.30	21.00	21.51	21.51	21.51
		SD	19.96	20.15	20.35	21.12	20.87	21.13	21.19	19.67	20.18	20.18	20.18

N= Number of Firms, M = Mean Value , SD = Standard Deviation

The mean excess value expressed as Asset multiple, Sales multiple and EBIT multiple have large variation as reflected from standard deviation. The number of observations for these multiples also differs since values are missing for many firms in the database and these have been removed from the sample. This research work is focused on comparing excess value created by MFC and NMFC firms with different shades of FDI capital. The descriptive statistics of excess value created by MFC and NMFC firms with different shades of FDI capital are presented in Table 2. The mean excess value for MFC firms is observed to be less than NMFC firms with all shades of FDI capital.

METHODOLOGY

Initially univariate analysis of the measures of excess value created by MFC and NMFC firms has been carried out to establish the differences between the means of different categories using ANOVA test. One way analysis of variance (ANOVA) is modeled for quantitative data (Anderson and Bancroft, 1952; Scheffe, 1959; Searle, 1971). This method decomposes total variance due to a single source into two components i.e. systematic (difference in means of groups) and random effect (variability around group means). Out of these two components of variance, only systematic effect of variance has statistical influence on the given dataset.

TABLE 2
DESCRIPTIVE STATISTICS OF EXCESS VALUE CREATED BY FIRMS WITH
DIFFERENT SHADES OF FDI CAPITAL

Excess Value Measure		Competitiveness Shaded		Technology Shaded		Capital Shaded	
		NMFC	MFC	NMFC	MFC	NMFC	MFC
	N	1703	1217	842	630	179	115
Asset Multiple	Mean	1.21	1.03	1.19	1.09	1.44	1.19
	SD	1.38	1.43	1.36	1.34	1.77	1.59
Sales Multiple	Mean	1.23	1.10	1.25	1.03	1.85	1.41
	SD	1.57	1.70	1.63	1.64	2.26	2.18
EBIT Multiple	Mean	1.73	1.45	1.59	1.04	1.98	1.81
	SD	2.13	1.55	1.69	1.76	1.54	1.72

The ANOVA test reveals that firm's excess value differs across and within different shades of FDI capital. Two way ANOVA and MANOVA (Wilk's Lambda) tests have been performed to assess the effect of FDI capital. After establishing this fact, the significance of other control variables is tested by performing regression estimation. The factors observed to be significant in regression estimate have been used for confirmatory factor analysis (CFA).

RESULTS AND DISCUSSION

The ANOVA test performed on pooled data reveals that the difference in excess value created by foreign affiliated firm (MFC firm) and stand-alone firm (NMFC firm) is statistically significant (5% significant level) if it is measured in terms of asset multiples. The mean value of excess value created by foreign firm is observed to be lower than that of stand-alone firm. For excess value measured in terms of sales multiple and EBIT multiple, no statistically significant difference have been observed between MFC firm and NMFC firm. For competitiveness shaded FDI capital, ANOVA test results shows statically significant difference between excess value created by MFC and NMFC firms in terms of asset multiple (5% significance level) and EBIT multiple (10% significance level). For sales multiple, no significant difference is observed. The mean value of excess value created by MFC firms is observed to be lesser than NMFC firms. For technology shaded and capital shaded FDI capital, no statistically significant difference is observed between excess value created by MFC and NMFC firms. This holds true for all three measures of excess value i.e. asset multiple, sales multiple and EBIT multiple. It is observed that for competitiveness shaded FDI capital, marginal means of excess value for NMFC firm is higher than MFC firm for all three multiples. For technology shaded FDI capital, marginal means of excess value for MFC firms is higher than NMFC firm however it is not significant. For capital shaded FDI capital, marginal means of excess value for MFC firm is lower than NMFC but the difference is not statistically significant. Since, the difference between excess value created by MFC and NMFC differs significantly for competitiveness shaded FDI capital in terms of asset multiple, therefore further analysis is focused on the same. MANOVA test results for excess value (asset multiple) as reported in Table 3 reveals that shade of

FDI capital and multi-criteria analysis are significant (10% significance level) however their interaction is not observed to be significant.

TABLE 3
RESULTS OF MANOVA TEST (WILK'S LAMBDA) FOR EXCESS VALUE
(ASSET MULTIPLE)

Independent Factors	Value	F	df	Error df	Sig
Intercept	0.997	2.194	3	2194	0.087
FDI Type	0.997	1.189	6	2788	0.081
FDI Type* MFC Affiliation	0.998	0.82	6	4388	0.554
MFC Affiliation	1	0.302	3	2194	0.082

The panel dataset is available for analysis and diagnostic tests are conducted for the same. Hausman test result ($p > \chi^2 = 0.035$) tells that fixed effect model (FEM) is more appropriate for analysis. Further to this, Wald test has been performed and test result ($p > \chi^2 = 0.128$) shows that there is no heteroskedasticity. Since, the dataset set is micro-panel, therefore there is no need to perform serial correlation test and cross sectional dependence test.

TABLE 4
PANEL DATA REGRESSION ESTIMATES: FIXED EFFECT MODEL

Independent variable	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	All Years
Constant	(0.000)	(0.129)	(0.052)	(0.000)	(0.743)	(0.619)	(0.000)	(0.000)	(0.000)	(0.000)
EBIT to Net Sales	-.216 (0.001)	-.097 (0.074)	0.168 (0.035)	0.235 (0.000)	0.348 (0.000)	0.240 (0.000)	0.303 (0.000)	0.411 (0.000)	0.137 (0.000)	0.101 (0.000)
Fixed Asset to Net Sales	0.124 (0.016)	0.100 (0.056)	0.726 (0.000)	0.655 (0.000)	0.537 (0.000)	0.505 (0.000)	0.478 (0.000)	0.846 (0.000)	0.021 (0.455)	0.313 (0.000)
Capex to Net Sales	0.591 (0.000)	0.643 (0.000)	-.184 (0.283)	0.095 (0.061)	-.153 (0.000)	-.055 (0.042)	-.020 (0.333)	-.255 (0.000)	0.650 (0.000)	0.174 (0.000)

The regression estimate of FEM has been presented in Table 4. In this model, Excess value measured as asset multiple is dependent variable and firm characteristics like profitability (EBIT to net sales), asset utilization (fixed asset to net sales) and growth opportunity (capex to net sales) are controlled. These variables are observed to be highly significant for creation of excess value in all investment horizons. The external' investment multi-criteria analysis is observed to be highly significant for all investment horizons. The negative coefficient can be considered as negative effect of investment multi-criteria analysis for stabilizing Performance by a firm. The effect of multi-criteria analysis has been also estimated through confirmatory factor analysis (CFA) model. The results of CFA reveals that these factors are highly significant. The negative coefficient of external' investment multi-criteria analysis is in confirmation with the result obtained through regression estimate in FEM.

On the basis of the above findings, the following hypotheses are accepted:

- H_{1a}: multi-criteria analysis has Tunneling Effect in firm with technology shaded FDI capital.*
H_{1b}: multi-criteria analysis has Tunneling Effect in firm with capital shaded FDI capital.

H_{1c}: multi-criteria analysis has Tunneling Effect in firm with competitiveness shaded FDI capital.

While, the following hypotheses are rejected:

H_{0a}: multi-criteria analysis has Propping Effect in firm with technology shaded FDI capital.

H_{0b}: multi-criteria analysis has Propping Effect in firm with capital shaded FDI capital.

H_{0c}: multi-criteria analysis has Propping Effect in firm with competitiveness shaded FDI capital.

CONCLUSIONS

The competitiveness of FDI capital is observed highly significant for external affiliated firm. The difference in excess value created by foreign affiliated and stand-alone firm is highly significant and mean value of excess value is observed lower for foreign affiliated firm. These empirical evidences are in favor of tunneling effect of investment multi-criteria analysis for all shades of FDI capital. This results is in line with findings of Bertrand and al (2002) (non-operating profit). Controlling value creating factors like growth opportunity, asset utilization and profitability, it is observed that tunneling effect of external' investment multi-criteria analysis is highly significant for three shades of FDI capital.

ENDNOTE

1. Press Note No. 7 (1993 Series)

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