CHAPTER 3: RESEARCH OBJECTIVES AND HYPOTHESES

3.1 Research Objectives

Based upon the literature review and the research gaps, we formulate the following objectives for our study

1. To study the joint impact of group affiliation and listing status on firm performance. This addresses research gap 1.

2. To examine the effect of independent variables on firm performance for different categories of firms arising out of group affiliation and listing status. This is linked to research gap 2.

3. To examine whether quadratic relationship between firm performance (both accounting as well as market based measures of firm performance) and firm size (net sales) exists in India across various categories of firms. This is linked to research gap 3.

3.2 Formulation of Hypotheses

We develop hypotheses for each variable discussed in literature review impacting the firm performance. First we formulate relevant null hypotheses to examine the differences of performance among four categories of firms. These four categories of firms are standalone unlisted firms, business group unlisted firms, standalone listed firms and business group listed firms. The impact of business group affiliation may be different on the performance of business group unlisted firms and on the performance of business group listed firms.
Business Group Affiliation:

H1: There is no difference between the performances of business group unlisted firms and business group listed firms.

Business groups are expected to fill up institutional voids existing in the economy (capital market, labor market and product market voids) for their member firms (Khanna and Palepu, 1997). Many business costs are shared and opportunities are well captured by the member firms of the business groups. Khanna and Palepu (1999, 2000a and 2000b), Khanna and Rivkin (2001) and Mishra and Akbar (2007) find that group affiliated firms perform better than stand-alone firms. Gopalan et al. (2007) study the working of internal capital markets among Indian business groups and find the evidence of propping among Indian business groups. Further, Kali and Sarkar (2012) show that group affiliated firms perform better due to propping through profit transfers and better monitoring due to group level directorial interlocks.

However, the impact of group affiliation may be different for listed and unlisted firms. Bertrand et al. (2002) show evidence of tunneling in India. Johnson et al (2000) have defined tunneling as transfer of resources from any other company to a company where its controlling shareholders have comparatively higher cash flow rights. Unlisted firms are closely held having concentrated ownership. However, the ownership of listed firms is dispersed, with limited ownership of controlling shareholders. Business group firms which are listed may have higher agency cost as compared to business group unlisted firms. Thus, resources may get tunneled from group affiliated listed firms to group affiliated unlisted firms. Therefore we predict that group affiliation is beneficial for unlisted firms but not for listed firms. Based on the above discussion, we expect that performance of group affiliated unlisted firms is higher than the performance of group affiliated listed firms.

This hypothesis addresses research objective 1, which in turn is linked to research gap 1.
Listing of Firms:

H₂: There is no difference between the performances of standalone listed firms and business group listed firms.

Listed firms are regulated more than unlisted firms. They have more procedural formalities and incur fixed costs like registration fees, auditing fees, stock exchange fees, legal fees etc. Also firms lose confidentiality of their policies and operations. Thus, firms may lose their competitive advantage (Campbell (1979)). Further, as a result of listing, ownership is more dispersed. According to Jensen and Meckling (1976) management has less incentive if owners are dispersed and this result in a lower performance of a firm. Boot et al. (2008) argue that though stock liquidity through listing reduces the cost of capital, there is volatility in the firm’s ownership base. Therefore there is uncertainty on the degree of alignment between the manager and shareholders which impacts firm performance negatively.

One of the important motives of listing is to raise the capital (Kim and Weisbach, (2005)). Listing may overcome the borrowing constraints. Pagano et al (1998) find that listing is followed by lower cost of credit. Thus listed firms do not have financing constraint to invest in profitable projects. Also, listed firms are able to attract better personnel. Further, listed firms are more visible in capital, labor and product markets. Hence it is easier for listed firms to raise capital, get labor and sell products at a lesser cost and more easily than unlisted firms.

However, listing has different impact on business group affiliated and standalone firms. Khanna and Palepu (1997) argue that business groups can fill up the institutional voids, for example by acting as a venture capital firm, a private equity provider or a bank to fund the projects of its affiliates. Thus the benefit of listing is lesser available to a group affiliate than a standalone firm. Further, there is high possibility of tunneling from listed group affiliated firms (due to dispersed
ownership) to unlisted group affiliated firms (due to concentrated ownership). Thus we expect that performance of standalone listed firms is higher than the performance of business group listed firms.

This hypothesis addresses research objective 1, which in turn is linked to research gap 1.

Joint Impact of Group Affiliation and Listing:

H_{3A}: There is no difference between the performances of business group unlisted firms and standalone listed firms.

H_{3B}: There is no difference between the performances of standalone unlisted firms and business group unlisted firms.

Bertrand et al. (2002) find the evidence of tunneling among business group firms in India. Considering the definition of tunneling given by Johnson et al. (2000), resources is transferred from listed group affiliated firms to unlisted group affiliated firms. However, for standalone listed firms there is no case of tunneling. All the advantages of listing are available to business group unlisted firms as group affiliation fill up institutional voids. Moreover unlike standalone listed firms, there is no loss of confidentiality, procedural formalities and volatile base of ownership for business group unlisted firms. Therefore we expect that performance of business group unlisted firms is higher than the performance of standalone listed firms.

Standalone unlisted firms have neither advantages nor disadvantages arising out of listing and group affiliation. Standalone unlisted firms have least agency cost due to close monitoring and there is absence of tunneling or propping. Internal capital market does not exist for standalone unlisted firms. Thus it can be difficult for standalone unlisted firms to achieve higher scale of
business operations due to limited resources, as explained in motivation section 1.2. However, the profitability per unit of asset for standalone unlisted firms can be higher than that of the business group unlisted firms. Based on the above discussion we expect that performance of standalone unlisted firms is the higher than the performance of business group unlisted firms.

Hypotheses $H_{3A}$ and $H_{3B}$ address research objective 1, which in turn is linked to research gap 1.

Based on the above discussion we predict as follows.

**Performance of standalone unlisted firms is higher than the performance of business group unlisted firms which in turn is higher than the performance of standalone listed firms whereas performance of business group listed firms is the lowest.**

**Promoters’ Holding:**

$H_4$: Promoters’ holding of the firm and the firm performance are not related.

Anderson and Reeb (2003) study firms forming S&P 500 index. Authors find that family firms perform better than non-family firms. Phani et al. (2004) find that higher insider ownership is related with higher employee productivity and lower human resource expenses. Thus higher promoter’s holding can lead to higher efficiency in business operations. However Jameson et al. (2014) find that board membership of controlling shareholders has negative relationship with Tobin’s q.

Higher promoters’ ownership confers higher cash flow rights to the promoters and vice versa. Thus even in case of tunneling as contended by Johnson et al. (2000) and evidenced in India by Bertrand et al., (2002), the firms having higher prompters holding can be benefited at the expense of the firms having lower promoter’s holding. This leads us to expect that promoters’ holding of the firm and firm performance are positively related.
This hypothesis addresses research objective 2, which in turn is linked to research gap 2.

**Leverage:**

H₅: Leverage of the firm and the firm performance are not related.

Modigliani and Miller (1958) argue that in a perfectly competitive world, the financial structure is not relevant for firm performance. However, leverage imposes covenants on the use of the funds such that firms are not allowed to invest in risky and profitable projects. The capital structure of a firm positively affects its governance (Jensen and Meckling (1976)). Much of the positive effects of leverage on the corporate governance depend on the capacity of debt-holders to perform a better monitoring role (Kakani et al., (1996 and 2001)). However, it is argued by Phani et al. (2004) that most public banks and financial institutions who are debt holders are ineffective monitors in India. Beard and Dess (1981) and Kakani et al., (2001) find negative impact of leverage on firm performance. Thus we expect that leverage of the firm and firm performance are negatively related.

This hypothesis addresses research objective 2, which in turn is linked to research gap 2.

**Firm Efficiency:**

H₆: Firm efficiency and the firm performance are not related.

A firm having higher asset turnover ratio has better utilization of assets. This generates higher sales which will lead to higher profitability. DuPont analysis shows that return on assets (ROA) is driven by profit margin and asset turnover ratio. Thus, firm efficiency, measured in terms of asset turnover ratio has positive relationship with firm performance. Thus we expect that the firm efficiency and firm performance are positively related.
Export Intensity:

H7: Export intensity of the firm and the firm performance are not related.

In India exporting firms have access to EXIM (Export and Import) credit facilities with EXIM Bank of India. Kakani et al., (2001) and Mazumdar (1997) find positive impact of export intensity with the firm performance. Exporting firms can benefit if the price for their products in the international market is higher than the domestic market price. However, India being a developing country, domestic market price is expected to be greater than the price in the international markets due to inefficiency prevalent in Indian industries. In spite of getting higher profit margin due to higher prices in domestic market, firm may still export to get goodwill in domestic market. Other reason to export at prices lower than domestic market prices can be to hedge against the domestic business cycles. Hence we expect negative relationship between export intensity and firm performance. Thus we predict that export intensity of the firm and firm performance are negatively related.

This hypothesis addresses research objective 2, which is linked to research gap 2.

Age:

H8: Age of the firm and the firm performance are not related.

Older firms are not flexible and do not appreciate changes in the economic environment. Khanna and Palepu (2000a), Kakani et al. (2001) and Lensink and Molen (2010) find negative relationship of age with firm performance. However, older firms can leverage their reputation and contacts in labor, product and capital markets for their benefit. Thus we expect that age of the firm and firm performance are positively related.

This hypothesis addresses research objective 2, which is linked to research gap 2.
**Selling and Distribution Expenses:**

$H_0$: Selling and distribution expenses of the firm and the firm performance are not related.

Comanor and Wilson (1967) and Kakani et al., (2001) find positive impact of advertising expenses and marketing expenses on the profitability. However, Sherman and Tollison (1971) find that advertising expenses is not a significant variable. We have considered selling and distribution expenses instead of advertising expenses as it is more comprehensive measure of marketing efforts. It includes advertising expenses, marketing expenses and distribution expenses. Entry barriers can be created for firms’ competitors by building assets such as brands through advertising expenses (Comanor and Wilson (1967)). This results into higher profitability for the firm. These expenses in building brands also help the firms to get over difficult years by protecting their market share and sales volume, and defy industry trends. However, selling and distribution expenses may not be required to incur for firms to generate profits in a developing country like India where demand exceeds supply. Higher selling and distribution expenses may lead to unnecessary costs to firms and profitability may eventually decline. From the above discussion, we predict that selling and distribution expenses of the firm and firm performance are negatively related.

This hypothesis addresses research objective 2, which is linked to research gap 2.

**Industry Concentration:**

$H_{10}$: Industry concentration and the firm performance are not related.

Industries with high concentration have less number of sellers. One will find on an average more effective collusion among the sellers in such industries. On the other hand there is higher profit destructive competition among sellers operating in industries having less concentration (Bain (1951)). Thus we expect positive impact of industry concentration on the profitability of firms.
operating in that industry. Bain (1951) and Lee (2009) find positive relationship of industry concentration with the firm performance. Based on the above discussion, we expect that industry concentration and firm performance are positively related.

This hypothesis addresses research objective 2, which is linked to research gap 2.

Size:

H$_{11}$: Firm size and the firm performance are not related.

Larger firms leverage their size to obtain better deals in factor and product markets. Hall and Weiss (1967), Majumdar (1997), Khanna and Palepu (2000a), Kakani et al. (2001); and Lensink and Molen (2010) find positive relationship of size with the firm performance. However, it can be difficult for any business to increase profits indefinitely with the increase in its size. The total profits decreases after a certain level of size. Lee (2009) finds inverted U shape relationship between size and return on assets for US firms. Thus we predict that the relationship between firm size and firm performance is of inverted U shape. We can account for this quadratic relationship between size and firms’ financial performance by including the squared term of size as an independent variable. Thus we predict that the relationship between firm size and firm performance is of inverted U shape. Based on the above discussion, we formulate the following alternate hypothesis.

H$_{12a}$: Firm performance and firm size has inverted U shape relationship.

This hypothesis addresses research objective 3, which in turn is linked to research gap 3.

Hypotheses 1 to 3B address research objective 1.1 which in turn is linked to research gap 1.1. Hypotheses 4 to 10 are formulated to address research objectives 2 which is linked to research gap 2. Hypothesis 11 pertains to research objective 3 which is linked to research gap 3. As
discussed in chapter 3.1 (research objectives), it is quite possible that impact of independent variables on firm performance is determined by group affiliation and / or listing status. To explore how the effect of other firm specific variables on firm performance is impacted by listing and group affiliation, we analyze the impact of independent variables across different categories of firms. We classify firms based on listing and group affiliation. As a result we find nine categories of firms. They are as follows.

1. Standalone listed (SAL) firms,
2. Business group listed (BGL) firms,
3. Listed firms (listed firms include SAL and BGL firms),
4. Standalone unlisted (SAUL) firms,
5. Business group unlisted (BGUL) firms,
6. Unlisted firms (unlisted firms include SAUL and BGUL firms),
7. Standalone (SA) firms (standalone firms include SAL and SAUL firms),
8. Business group (BG) firms (business group firms include BGL and BGUL firms),
9. All Firms (we get all firms by combining listed and unlisted firms or by combining SA firms and BG firms).

Hypotheses 4 to 11 are tested at classified levels for eight categories of firms and also at aggregate level for all firms.