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Determinants of state level mergers and acquisitions in India

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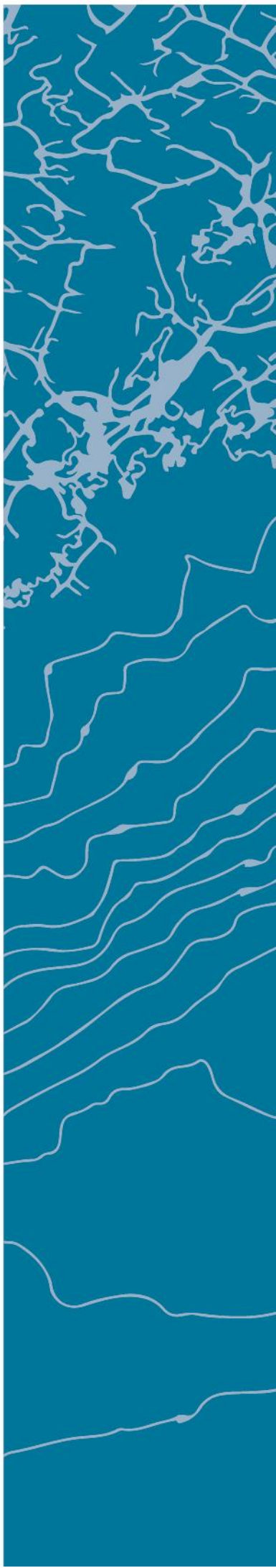

Preface

This master thesis is our final assignment in business and administration at the business and law school of University of Agder. This has been our university for the last 5 years, and we have gained a lot of knowledge and experience, which we believe will help us in our future careers.

Writing this thesis has been a very interesting and informative experience for us. Throughout this study we have gradually increased our understanding of the topic and gained insightful knowledge which we can utilize in our future professional life. We have stumbled upon hurdles and difficulties along the way, but with countless hours of work and help from our supervisor we are now happy with the result of our research.

We would like to thank our supervisor Trond Randøy for great help with writing our thesis.

Table of content

Abstract

Title: Determinants of state level mergers and acquisitions in India

Course: BE-501 – Master thesis in Business Administration

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Supervisor: Trond Randøy

Keywords: Cross-border M&As, India, OLI Eclectic paradigm, Emerging economies, Socio-economic factors, International experience

Purpose: The aim of this thesis is to investigate the possible pull-factors that can explain Mergers and acquisitions within India.

Methodology: This study applies a deductive approach using theories and previous studies to form hypothesis for the purpose of the study. We employed an observational study and multiple OLS-regression and Poisson to test our hypothesis.

Empirical Foundation: We had a data sample of 656 deals ranging between 2005-2017

Conclusion: We found that access to educational resources and infrastructure could function as possible pull-factors for M&A inflows to India. When it came to firm level determinants, we could not find any significant evidence of association with M&A inflows.

Chapter 1 - Introduction

This chapter provides the reader with background information of our topic, identified research gab and short overview of the structure of this paper

1.0 Background

Today's business world is characterized by global conglomerates expanding their business operations beyond their national and regional borders. In this context, the phenomena of mergers and acquisitions (M&As) has become an important business consolidation tool for global conglomerates in their search for growth and value creation (Xie et al., 2017). The usage of M&As as a strategic tool to expand into other markets was up to 1990s a phenomenon mostly occurring between Multination Corporations (MNCs) situated in developed countries. The international business literature and scholarly community attributed this development due to firms from developed economies exhibiting same institutional environment and a homogenous market development (Erel, Liao, & Weisbach, 2012; Hoskisson, Wright, Filatotchev, & Peng, 2013; Hymer, 1976; Weston, Chung, & Hoag, 1998).

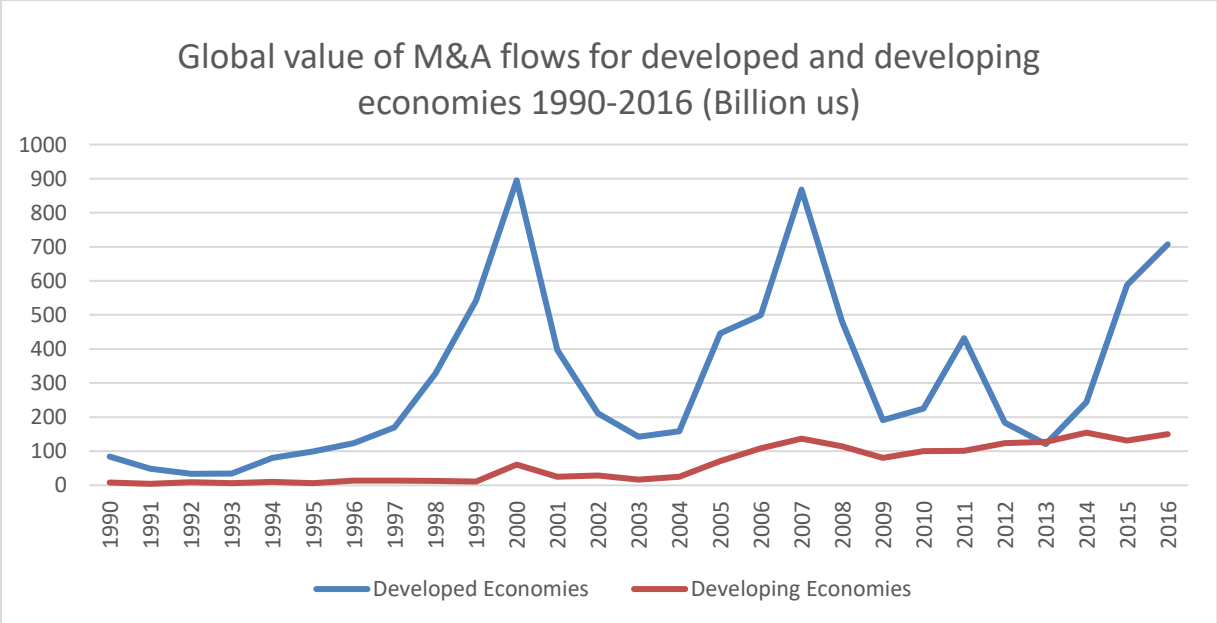

Figure 1: Global value of M&A flows. UNCTAD cross-border M&A database

Even though cross-national M&As activity as an expanding business strategy was and still largely remains a phenomenon between firms from developed countries, the past two and half decades has witnessed firms from developing and emerging economies use mergers, acquisitions or joint ventures to enter into foreign markets. This surge in capital flows is especially peculiar when seen from a West – South M&A perspective as developing economies usually saw minor investments taking place until 1990s firms. This change is said to be the result of developing economies removing restrictions to foreign direct investment and other policy barriers while simultaneously offering MNEs financial incentives, streamlining national regulations that cater towards MNEs and providing them with greater degree of legal protection, (Pandya, 2016).

Developing and emerging economies has an important role in the global economic output. For example, as of 2017 they accounted for 85 percent of growth of global production and services (IMF Blog, 2017). While developing economies are simply defined by being in a "developing phase", salient characteristics of emerging economies are that they are defined by high degree of volatility while simultaneously going through a transition phase in sphere such as their economic, political, social and demographics dimensions (Mody, 2004).

1.1 Problem discussion

Many MNEs from developed countries view emerging economies such as China, India, Russia and Brazil and their huge attractive markets as potential avenues for future growth and profit, propelling them to invest in these countries to expand their growth either through mergers or acquisitions (Fan, Morck, Xu, & Yeung, 2009). However, though emerging economies and their large markets are viewed as important determinant and attractive pull factors for global MNEs, there exists certain idiosyncrasies within these emerging economies that also has effect on the likelihood of deal completion and propensity of firms from overseas to go into these economies. When firms from developed economies are compared to firms from emerging economies, the characteristics of the emerging economies and the environment in which both domestic and overseas firms operate are vastly different. These differences manifest themselves in emerging economies macroeconomic and bureaucratic structure, regulatory environments, institutional distance and cultural settings, and the literature of M&As argue that the above-mentioned factors have differential effects on inwards capital flows from developed economies (Xie et al., 2017).

Numerous studies have examined firms originating from developed countries, their expansion pattern, and their willingness to invest in developing and emerging economies. The key findings of these studies revealed that factors such as institutional distance (differences in institutional environment), level of institutional development (contract enforcement, legal protection, government intervention), geographic distance and political stability has an impact on the acquiring firms level of capital investment and willingness to enter these markets (Owen and Yawson, 2010; Demir and Hu, 2015; Fan, Morck, Xu, & Yeung, 2009; Lahiri, Elango, & Kundu, 2014; Contractor et al., 2014).

There exists a general consensus in international business literature that well-functioning institutions play an important role in shaping both business activities and putting constraints in an economy activity, whereby the quality of these institutions will have effects of incoming FDI flows (Nielsen et al., 2015). The concept of institutional economics was postulated by Olivier North (1990) who defined institutions as "the rules of the game in a society, that more formally, are the humanly devised constraints that shape human interaction". The institutional perspective has also been advanced by various scholars when relating it to MNEs international behaviour in search for potential location for expanding their businesses beyond their national borders.

The institutional narrative is often used to explain lack of investments from rich and developed countries into less developed countries, with the study conducted by Lucas E. Roberts (1990) often cited in international literature to explain this phenomenon. The research of Lucas (1990) was centred around the reasons for why capital did not flow from rich countries to poor countries despite the latter have lower levels of capital per worker. Explanation for Lucas paradox has been cited to be dysfunctional institutional laws, lacklustre economic output and perception of foreignness (Lucas, 1990), while for Alfaro et al., (2008), the most salient factor for explaining the casual relationship for Lucas paradox appears to be the institutional quality in less developed countries, while level of government stability, lack of rule and law and high-level corruption also appears to erect barriers for capital flow from rich countries.

The institutional narrative is further supported by multiply research studies on cross national acquisition deals and general institutional development. Several studies found a strong correlation between human index development, high level of institutional development and

institutional quality, political stability, general rule of law, institutional wherewithal pertaining to provide contracts enforcement, adequate functioning judiciary and minority investor protection, and levels of high acquisitions flows where these factors were properly functioning (Owen & Yawson, 2010; Choi, Lee, & Shoham, 2016). The field of cross-border M&As is a relatively nascent field of research, and as result of this many studies examining cross-border M&As use FDI and general acquisition literature to supplement the lack of theory within the field of M&As (Xie, et al. 2017). Our paper follows a similar approach, and this includes a large section of our main theory (OLI Eclectic framework), where we integrate theories about M&As and FDI, into our main model.

1.1.1 Liability of foreignness and international experience

The role of prior experience as a guiding mechanism for MNEs to expand their operations into other geographical settings that differ from their home setting is a theme that has been subject to great study in the academia and general research community. It is generally accepted that prior experience with M&As can increase the likelihood of more acquisitions (Haleblian et al., 2006). Organizations learn from their direct experiences, apply other firms experiences to add more repertoire of knowledge and then apply what they have learnt to future experiences (Levitt & March, 1988). When MNEs enter into foreign markets that differ in terms of corporate culture, institutional differences and the inherit values in a target country, prior experience can mitigate issues such as costly screenings of the potential targets, cost due to liabilities of foreignness and difficulties they might face managing the acquired firms (Barkema and Vermeulen, 1997.)

Several studies show that there exists a possible causal link between prior experience for MNEs and their venturing into further cross border acquisitions (Dikova et al., 2010; Arsalan & Dikova, 2015; Oguji & Owusu, 2017; Elango et al., 2013). For instance, in a study investigating how past experiences that entailed completed acquisitions in an environment characterized by institutional differences between the acquirer firm's country and the targets firm's country, Dikova et al., 2010 found that organizational learning moderates the effect of institutional distance and increases the likelihood of subsequent deal completion. Lending support this view, both Arsalan & Dikova (2015) and Oguji & Owusu, (2017) found that though MNEs prefer to opt for partial ownership in EE when faced with both high

formal and informal institutional distances, the choice between partial and full ownership and institutional distance was moderated by experience for the acquiring MNE.

1.1.2 Mergers and Acquisition in context of India

This thesis seeks to examine determinants of mergers and acquisitions occurring in one these emerging economies, namely India. India is worlds second most populous country and has world's seventh largest economy measured through its GDP standing at 2,439 trillion dollars as of 2017 (IMF, World Economic Outlook Database, 2017). India has for the past two decades been an important player in the global financial system and is predicted to be an upcoming economic juggernaut in the upcoming century. India is also one of the largest recipients of global mergers and acquisitions within the context of Emerging Economies (Xie et al., 2017). India is also a unique case to study as the country is vastly diverse in terms of regional and state-level differences that exits within the country. These regional and state-level differences manifest themselves in different languages, cultural heritage, economic output and demographical anomalies (Paul & Sridhar, 2015). For example, population and GDP for some Indian States is comparable to entire countries, such as Andhra Pradesh and Maharashtra's population are equivalent that of Mexico and Italy (Figure 2) while GDP of the same states are comparable to Singapore and Angola (Figure 3), (Economist, 2011).

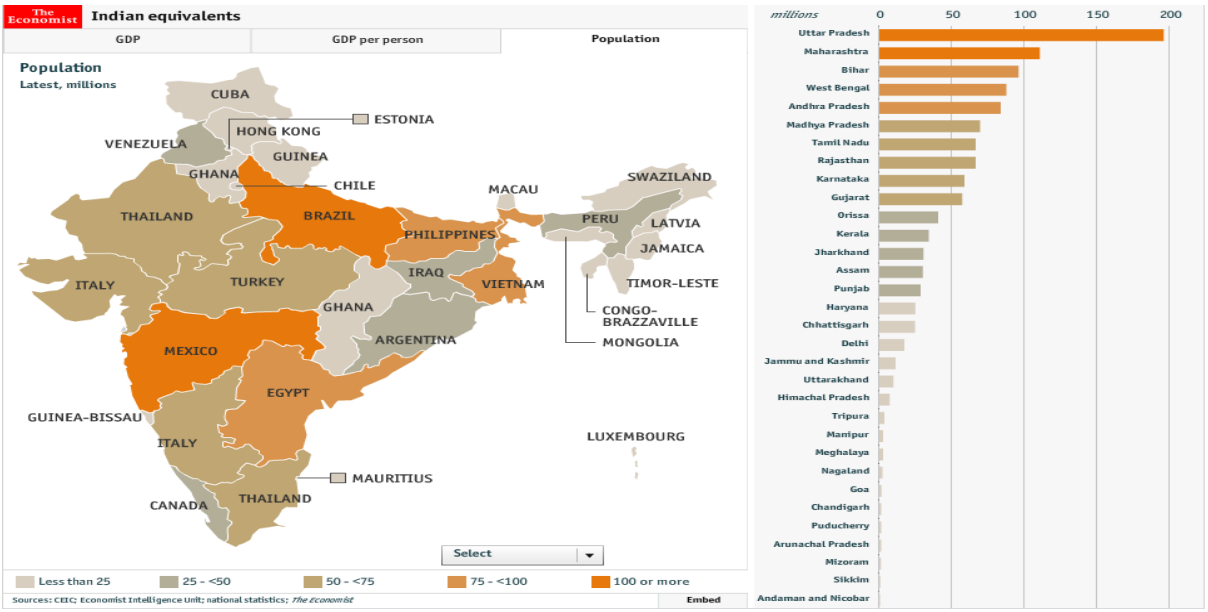

Figure 2: Population of Indian States compared to other countries. Source: The Economist, 2011 – Comparing Indian states and territories with countries

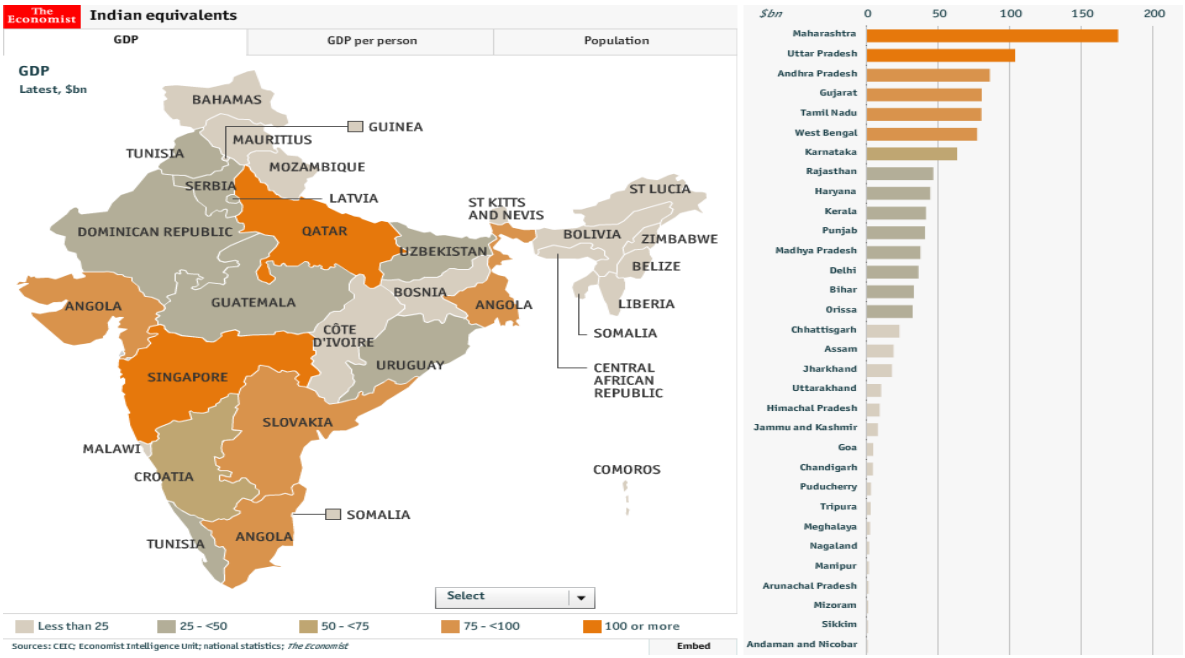

Figure 3:GDP of Indian States compared to other countries. Source: The Economist, 2011 – Comparing Indian states and territories with countries

FDI in India has a history that can be traced back to when the area that today encompasses India was colonized by the British Empire. Though India emerged as a democratic country from its independence, the four decades that followed from her independence she remained inward looking with a socialist ideal that prevented openness and thus relatively small numbers of FDI flows actualized. The post-independence era until the 1990s economic liberalization was also characterized by policy makers in India designing their FDI policy mainly towards acquire advanced technology, but this period also witnessed selective and restrictive policies towards foreign investment due to outflow of remittances of dividends, profits and royalties (Gautum & Gautum, 2014).

Changes and attitude towards FDI and M&A in India started to change during the 1980s that were coupled with low oil prices and lower balance of payment resulting in partial liberalization of the economy (Gautum & Gautum, 2014; Ray & Gosh, 2014). It was during the 1990s that India liberalized its economy which saw increase in influx of FDI and M&As flows. The key architect behind India's economic liberalization was undertaken under the leadership of India's then premier Narasimha Rao and Finance Minister, Dr Manmohan who sought to rearrange India's foreign policy framework in a bid to open up the country's financial market to foreign investments (Sanghi & Patni, 2014). This new policy was called

New Economic Policy (NEP). NEP removed all sorts of biases against exports initiating reforms in the areas of international trade, investment, financial sector, and industrial and public-sector deregulations. Since the commencement and institutionalization of NEP, India has witnessed growing increase of foreign investments that has both enhanced and enriched the efficiency of domestic Indian firms enabling healthy local competition leading to larger economic output and growth of its annual GDP.

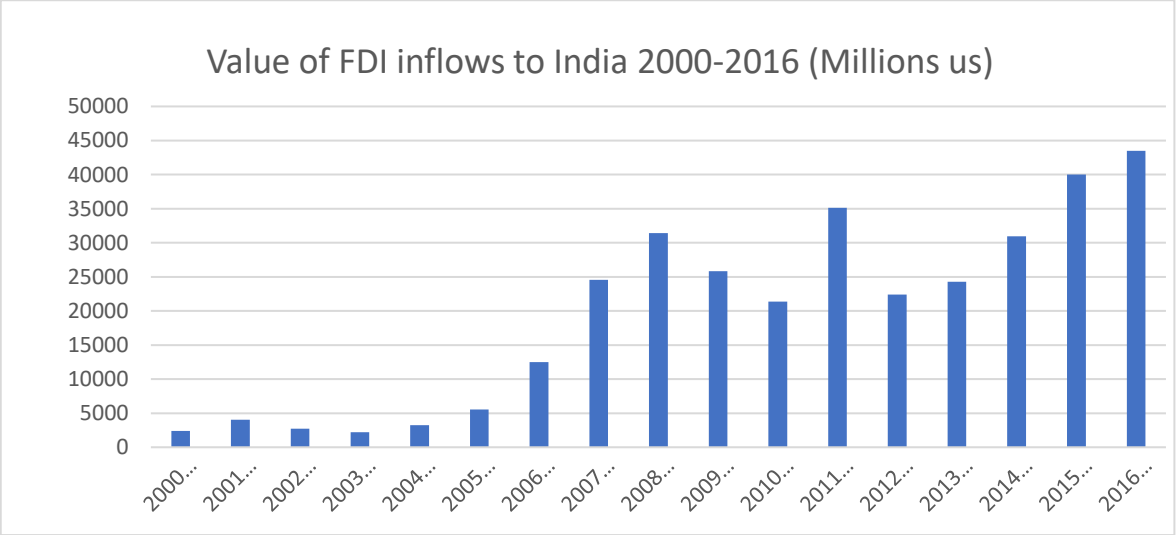

Figure 4: Value of FDI inflows to India 2000-2016. Source: UNCTAD cross-border M&A database

However, though India's has over the past decades received greater number of FDI flows since the commencement of economic liberalization policies were institutionalized, the distribution of FDI across India has been skewed and mostly concentrated among few of India's states and Union territories (Mukherjee, 2011; Nunnenkamp & Stracke, 2008). The skewed and uneven distribution of FDI flows are directed towards five Indian states, namely Maharashtra, New Delhi, Tamil Nadu, Karnataka and Gujarat who between 2000-2013 accounted for 67 percent of total FDI, while the state of Maharashtra received 31 percent of the same FDI flows for the abovementioned period (Sanghi & Patni, 2014).

When it comes the mergers and acquisition in India, the story remains the same with skewed and uneven numbers of M&A flows being concentrated among few big states. For example, as the table (Figure 5) reveals, the number of M&A deals for time period 2005-2017 revealed that states such as Maharashtra, Tamil Nadu, Karnataka, Gujarat and Union Territory of Delhi accounted for vast majority of M&A deals (Eikon Thomson Reuters).

Before we move on to further specify the aim of this thesis, we want to convey to the reader research gap that exists in the literature of cross border mergers and acquisitions and how we seek to apply the existing research gap into our thesis.

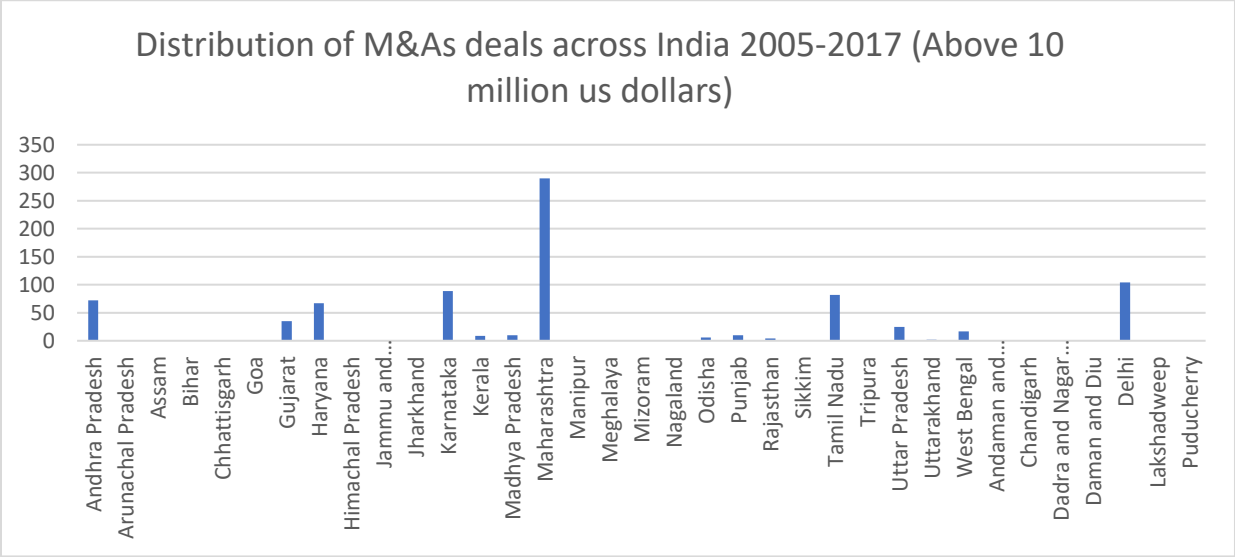

Figure 5: Distribution of M&A deals across India 2005-2017. Source: Eikon Thompson Reuters M&A database

1.1.3 Research gap

The phenomena of mergers and acquisitions between west-south is recent development which propelled during the 1990s in wake of liberal economic and institutional reforms that took place in emerging economies (Pandya, 2016). However, there is still much research that can explain determinant of M&As between firms from developed and developing economies and add significant contribution to Lucas Paradox. Firstly, it is suggested that the conventional research on west-south directional flows has largely examined host country determinants when studying M&A flows from developed- to emerging economies, and these studies have mainly focused on cultural distance existing between firms engaging in cross-border M&As, level of development in emerging economies macroeconomic and capital markets, institutional framework, the characterises of political system, degree of corruption and geographic environment (Xie et al., 2017). However, there is still much research that needs to be done and explored, such as social issues like crime rate, and educational factors, number of masters and doctoral students and general infrastructure (Xie et al., 2017).

Secondly, there also seems to a lack of research that studies within country variation of M&A flows, and that can explain choice of locations of foreign firms entering certain geographical

regions in a country. It is suggested that such studies can shed light on the idiosyncrasies of such acquisition decisions of overseas firms pertaining to specific regions in a country, and for a hugely diversified country and large economy like India, subnational location choices of foreign MNEs can reveal valuable insight on within country determinants of FDI and M&As (Nielsen et al., 2015).

Thirdly, past research that has investigated FDI flows and location of choice capital inflows in international settings reveal that distance and industry agglomeration create and has effect on FDI flows. However, there seems to be a lack of research that explain when firms search for investment opportunities and choice of location while being in possession of certain firm-specific asset such as international experience, its effect on their ability to cope with the liability of foreignness, and choice of location for such investments (Nielsen et al., 2015). Thus, further research is warranted to investigate if there could exists a causal link between international experience and propensity of MNEs to engage in outward capital investments.

1.2 Purpose and problem statement

The main aim of our thesis is to explain the determinants of state level mergers and acquisition in India, and our study measures transnational deals that have occurred between time-period 2005 – 2017. Our initial data consisted of approximately 850 deals, however, we narrowed down the scope of our research into M&A flows to consist only of deals originating from developed countries into India, and this left us with 656 observations. Where we will explore how socio-economic factors functions as a pull-factor or not. We also seek out to investigate firm specific determinants of transnational mergers and acquisitions that were completed in India between 2005 – 2017.

Based on the above-mentioned theory and research gap, we made a model (Figure 6) to explain our research strategy, where we want to measure which effects socio-economic and firm specific determinates has on number of M&A inflows within state and union territories of India. With the identified research gap, and the scope of our research, we formulate our research question as following:

1.2.1 Research question:

- *What determines the relative level of international M&A funds received by individual Indian states and union territories?*

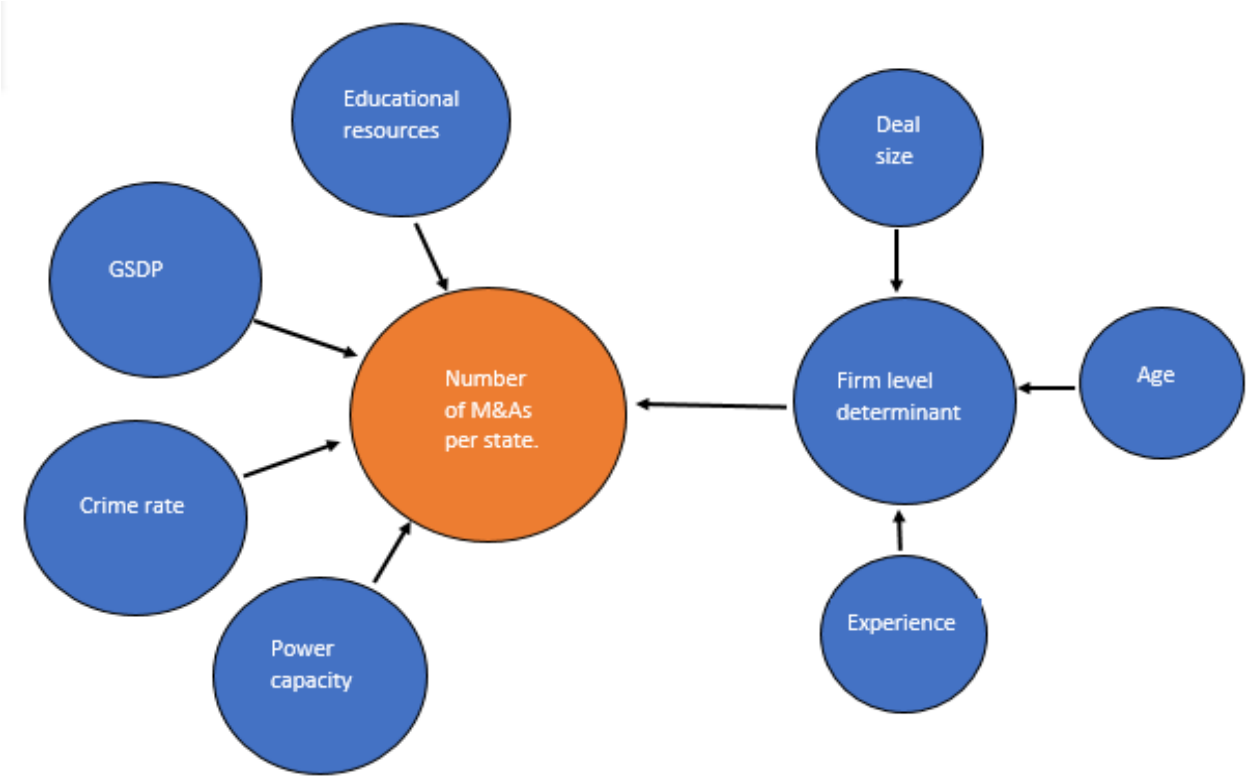

Figure 6: Research model

1.3 Thesis outline

Chapter 2 – Theoretical Framework

In this chapter, we present relevant literature on FDI and cross-border mergers and Acquisitions to help the reader understand the phenomenon, due to lack of literature on M&As, we have used FDI literature to explain this phenomenon. One of the theories we have built out paper on is the OLI Eclectic framework, and we provide the reader with an understanding of this framework. In this chapter there will also being given a quick overview over the hypothesis, and an explanation of our variables used in the analysis.

Chapter 3 – Methodology

In the methodology chapter the we present the insight to our research strategy, how we collected our data sample, and which methods used to explain the dependent variable. Further on, we provide the reader with the limitations in our research, which can be helpful in future research surrounding this phenomenon.

Chapter 4 – Empirical Findings and Analysis

In this chapter, we present our findings and analysis. The will be explanatory tables, SPSS- and Stata-analysis. We will test our hypothesis and show how our empirical findings can explain the correlation between dependent- and independent variables.

Chapter 5 – Conclusion and recommended further research

In this final chapter, we conclude in our research, and point out recommendations for future research

Chapter 2 - Theoretical framework

This chapter provides the reader with relevant literature on FDI and cross-border mergers and Acquisitions that consists of theories and relevant studies. Specifically, the OLI Eclectic framework is used as the main theoretical tool for our thesis. And we present the variables chosen for our analysis and hypothesis that will be tested.

2.0 Theory of M&As

Mergers and acquisitions (M&As) is a phenomenon which scholars have been investigating since middle of the 1900s. M&As has various explanations, but the most common is that firms use it as a strategy and an important alternative for strategic expansion into other existing markets. Since the decade of 1990s the use of cross-border M&As have expanded rapidly, and the biggest contributors to this have been the development within technology and the globalization. In 1998, the stock value of the transactions announced from M&A activity was 2 trillion USD, furthermore, the total value of deals completed between 1998 and 2000 was nearly 4 trillion USD. (Child et al., 2001). And, although the market has cooled down since the late 1990s, the growth of M&As is still increasing at a rapid rate.

Due to the globalization of business, the opportunities and pressure to engage in cross-border M&As has increased, since there is more competition in the global market, and the barriers between countries have grown smaller. Since there are an increasing number and demand for of cross-border M&As in the global market, there is a need for a better understanding of both opportunities and threats surrounding this strategy.

The rate of cross-border M&As is growing fast, and there is evidence that it will continue growing in popularity. Between 1999 and 2000 over 40 % of the M&As that were completed was in fact cross-border. Although the vast majority was domestic, due to the technological improvements and the globalization this barrier has gone from being a problematic transition, to being more of a minor speedbump. KPMG conducted a research on the success of cross-border M&As in 1999, and it showed that only 17 % or the mergers or acquisitions created shareholder value, while 53 % of did the opposite. (Economist, 1999). While the trend of M&As was increasing, and the chances of success were at best below average.

There was a need for a better understanding of the opportunities and challenges that a firm would face in other countries, and how they should adapt their strategy.

Industry consolidation, privatization and the liberalization of economies are some of the main factors that drive this phenomenon. Cross-border M&As is fairly similar to domestic M&As, when you look at it from a legal point of view, however when it's a cross-border deal, there are other challenges that can affect the deal. Due to the international nature of these type of deals, there are challenges surrounding different economic, institutional (i.e., regulatory), and cultural structures (Hofstede, 1980.)

M&As can be used to access new and lucrative markets, as well as protecting the firm from other movers in the market. Either a firm can use it to exploit an opportunity, for example buying another company in a foreign country to get an advantage in a new market, and to ease its way in to this existing market. Or cross-border deals can be used to avoid a possible threat, Martin et al. (1998) found that acquiring a foreign company often was a strategic move to ensure that another buyer would alternate a supplier, which could lead to a being a threat in the international market later. Either way, acquisitions with firm headquartered in other countries present a good opportunity for the acquiring firm to generate new knowledge and capabilities

There are some thresholds when pursuing a cross-border M&A, which "liability of foreignness" (Hymer, 1976; Zaheer, 1995) and "double-layered acculturation" (Barkema et al., 1996). Johanson and Vahlne presented the Uppsala model in 1977, which explains that in the internationalization process psychic distance was an important factor to explain why it was so difficult to understand foreign environments. This model had its origin in *liability of foreignness* (Hymer, 1976; Zaheer, 1995) which is a concept that explains that a firm needs to have a competitive advantage to offset the liability in a new and foreign market. These liabilities and acculturations is differences in culture, customer preferences, business practices, and institutional forces can hinder the strategic objective of an M&A, whether it's to exploit an opportunity or avoiding a threat. When companies are adjusting and learning from the new foreign market, uncertainty and information asymmetry is variables which needs to be considered, if they don't already have an understanding of the business culture

within the country. This could make it difficult both for the local market as well as the target- and acquiring firm.

Although the dynamics of a firm doing business is quite similar whether it is operating in the US or Nigeria. A business has certain needs to be successful, a good financial plan, strategy, market opportunity as well as other organisational factors in order to have a sustainable business model. However, even if the requirements of running a business is similar in both countries, a cross-border merger or acquisition involve other factors and challenges that could compromise the business opportunity. When the company decides to go from a domestic operation to a multinational enterprise, they need to acknowledge and identify the different economic, institutional and cultural structures in the host country of the acquired business.

In the pursue of cross-border M&As firms need to address various conditions within the target country. The main conflict area is industry- and firm-level factors which can differentiate for both sides of the table within a deal, both the acquiring and the target firm needs to address these issues. At firm level, the strategy used in the internationalization process is reliant of the possibility and need to acquire a target company in a foreign country, and what they need to identify and evaluate in the process. After the acquisition the most important key to success is to incorporate the target firm into the operations of the acquiring firm so that the operations can realize the potential value of the investment.

Historically, the theoretical foundation within cross-border M&A research have been transaction cost economics (TCE) or ownership-location-internalization (OLI) framework based on (Dunning, 1993; Williamson, 1975). The explanation for this is that when they examined M&As in context of FDI, the emphasis was on the entry mode decisions and the result of wealth creation. Mode of entry can be divided in to three different ways, (1) diversification in a foreign market, (2) as a dynamic learning process, and (3) as a value-creating strategy. A major focus in research have been the uncertainty and risk associated with acquiring a firm with a different national culture and institutional settings. And how to minimize the risk and inefficiencies in entering a foreign market could be explained by transaction costs (Shimizu et al, 2004).

Entry mode can vary among equity-based M&As (e.g., greenfield, acquisitions or joint ventures). (Delios and Beamish, 1999; Nakos and Brouthers, 2002; Pan and Tse, 2000).

The differences in national culture, such as customer preferences, business practices and institutional forces represent pitfall which can hinder the firm from realizing their strategic objectives when their going in to another country. Both uncertainty and asymmetry in foreign markets can make it difficult for firms to adjust and understand the local market and target firm. In cross-border M&As, there are various conditions, including country industry-, and firm-level factors, which apply to both the acquiring and to the target firm. At national and industry levels, factors such as capital, labour, and natural resources. Also, legal, political and cultural environment, are highly significant. Organizations that want to internationalize, need to pursue a good strategy in order to succeed. They need to identify and evaluate targets that are potential in the host country. After the M&A is completed, it is important to incorporate the acquisition into their own organisation, so they can realize the potential value of their investment. (Shimizu, et al. 2004)

The strategic choice of a specific mode of entry is crucial to the success of the internationalization strategy; there are several ways to enter a foreign market, and each has its own strengths and weaknesses. Once the firm chooses to enter the foreign market by making an acquisition, the search of the most suitable target begins. There are multiple processes involved in M&As, such as due diligence, negotiation, and integration. All pre and post-acquisition processes are dynamic and involve learning. In fact, in each of them, the acquirer should improve its knowledge of how to use each of the processes to reach a successful conclusion. Prior experience, if any, can of course be helpful; past mistakes can be avoided as the knowledge from past acquisitions is applied (Shimizu, et al. 2004).

2.1 Theoretical framework – The OLI Eclectic Paradigm

The current standing of literature of Mergers and Acquisition relies and lends on contribution from the conventional theory of MNE (e.g. Buckley and Casson, 1976: Dunning, 1977: Hymer, 1976) and research studies conducted in emerging economies (Lebedev et al., 2015; Chapman, 2003; Reddy, 2014). The aforementioned theories and findings regarding cross-border M&A flows has revealed that transnational transactions of such nature in general involve numerous components and phases, each involving usage of resources that the acquiring partners bears. For instance, the mergers and acquisition flows in cross-national front include issues and processes such as; the process around a potential deal negotiation, deal announcement returns, motives driving particular M&As wave into a specific location, determinants (Home – Host country) that propel an M&A flows, issues related with post acquisition performance and integration and the overall impact an M&A has on the economic performance for countries which are affected parties to such deals, (Xie et al., 2017).

When it comes to emerging economies and the characteristics of their general country environments, literature of MNE reveal that EE are characterized by high degree of volatility and uncertainty while simultaneously going through a transition phase in spheres such as; their economy, political structure, social and demographics aspects, with the major transition happening in their approach towards a conversion from a transaction related commitment to an institutional commitment (Mody, 2004).

As our theoretical model revolves around the OLI eclectic theory postulated by John H. Dunning (1977), we believe the applicability of this model fits well with the scope of our research and the data materiel we use for the analysis. Specifically, we believe that the location (L) component and to some degree Ownership (O) component of the OLI framework makes a good case to explain the anomaly of variation of M&As flows within India and its defined states and union territories.

In the international business literature Lucas Paradox (1990) is often cited to explain the lack of investments and capital flows from developed countries to developing countries. Numerous researcher and scholars have examined the issue raised in Lucas paradox in different institutional and geographic settings such as Africa, Asia and Latin-America, and the

overarching theme seems to resemble around weak institutional structures to be the primary causes of Lucas paradox (1990) impeding capital flows from developed countries (Alfaro, Kalemli-Ozcan, & Volosovych, 2008; Slesman, Baharumshah, & Wohar, 2015).

In relation to our thesis, which explores determinants of the vast disparity between state level in M&As in India, the institutional determining aspect of quality and development of institutions will vary between Indian states and should explain the correlation between high levels of institutional quality in some states with high levels of M&As flows. This also fits well with the two prime components if out theoretical framework, OLI eclectic paradigm, (Dunning, 1977), which in its L component of the paradigm postulates the resources exhibiting in a specific location leads to both sustainable economic development and inflows of attract FDI.

2.1.1 The OLI Eclectic model

The OLI eclectic theory is a three-tier holistic approach to understanding why firms engage in international business. The theory was developed during the 1970s by John H Dunning and has later been further evolved by the same author. OLI theory stands for O ownerships advantages, L location advantages that a firm can exploit and I international advantages (Table 7). The basic premise of the Oli theory is that firms are in possession of certain advantages that are rooted in the corporate and administrative history. As firms becomes bigger and the markets they have previously served starts to reach a saturation point, searching for new markets and segment starts to become part of a firm's strategy and future agenda.

Ownership or firm-specific advantages	Location advantages	Internalization advantages
Access markets, products and factors.	Market potential.	Reduction of transaction costs. Protection of property rights.
Product differentiation; risk diversification; specific endowments .	Differences in input prices. Quality of the inputs (e.g., natural resources, sophistication of the labor). Financial resources. Transport costs, communications and infra-structures.	Asymmetric information among suppliers and buyers (market imperfections). Reduction of exchange rate costs. Agreements are possible.
Greater efficiency, coordination and leverage of the resources accessed in each location improving firm's capabilities and resource pool.	Barriers to free trade (e.g., import quotas, tariffs). Distance to the factor markets and inputs.	Avoid or exploit governmental intervention (such as tariffs or investment incentives).
Use of headquarter's resources (e.g., through transfer prices).	Investment policies; country risk, tax incentives of the host country.	Reduction of buyer and/or supplier uncertainty.
Larger size, economies of scale and scope. Prior multinationality.	Physical distance, language, culture.	Control the supply in terms of quality and quantity. Control sales.
Flexibility in the acquisition or production due to better location. Recognition of opportunities for mergers and acquisitions, new competitive advantages ou increase of the market share.	*Clusters* of related firms, benefiting from agglomeration externalities.	Strategic gains. Internalization of externalities.

Figure 7: OLI-model

Source: John Dunning's Influence in International Business/Strategy Research: A Bibliometric Study in the *Strategic Management Journal, Ferreira et al., 2011.*

The content and postulations of the OLI eclectic paradigm is a result of numerous economic and business theories that are embedded together. The fact that the theory is "eclectic", which literary means taken from different sources, illustrates this very eclectic characteristic of OLI theory (Pedersen, 2013). Thus, viewed separately, these components (e.g. Ownership, Location and Internationalization) will not provide a satisfactory explanation for an MNEs multi-nationality and internationalization growth, but taken together as a group they provide a holistic understanding of the functioning of MNEs and their international ventures (Dunning, 2000).

Below is a detailed description of the OLI eclectic theory where ownership (O), Location (L) and Internalization (I) components of this model. Though the model was first published in 1977, the author (Dunning, born) has several times revised the theory and its OLI components (Dunning, 1980; Dunning, 1994; Dunning, 2000; Dunning, 2004; Dunning & Landon, 2008; Dunning & Zhang, 2008). We also back the OLI Eclectic paradigm and its three

component with research and studies conducted that show support for the postulations of OLI paradigm in the field of transnational FDIs.

2.1.2 Ownership advantages

This aspect of the OLI theory spurns from the notion that a firm that seeks to invest abroad must be in possession of certain unique sets of advantages that will provide it with certain competitive edge *Vis*-à-*vis* local actors in the overseas market it wishes to expand to. Such ownership advantages can derive from a firm owning assets such as managerial skills, technological development, accumulation of knowledge, product processes capabilities etc (1977, Dunning). Furthermore, Dunning (1977) argued that such ownership advantages could be seen from three strands firm specific or Ownership advantages, namely, (1) advantages that provides firms with the wherewithal to exert monopoly power that create barrier to enter for competing firms, (2) advantages related to be in possession of scarce, rare and unique sustainable sets of resources and capabilities that render competitors inferior, and (3) advantages that relate to such firms managers capacity to identify, enhance and garner resources form external environment that go beyond their national border and integrate them existing firms resources in most efficiently as possible.

However, with the passage of time the relative importance and impetus of these advantages have changed - acerbated by more liberalized global markets and intensification of wealth creating activities which characterises today's global business environment driven by dynamism and flux. For Dunning (2000) firms during the last two decades since the OLI theory was published (1977) put increasing efforts to organize their knowledge specific asset throughput the world and integrate them with both existing assets and with firms that provide value adding complementary activities. Incorporating the changing nature and boundaries of O specific advantages to the OLI theory from 1977, Dunning (2000) categorises O advantages into static and dynamic O advantages. Static O advantages are income generating resources and capabilities that are possessed by a firm in a given time and are static in nature, while those dynamic O advantages are viewed by the firm advantages that increases its ability to sustain and increase it assets over time, (Dunning, 2000).

As posited earlier, organizations gather and accumulate knowledge and organizational know-how over time that translates into advantages, and these can be either tangible or intangible assets. Dunning (2000) argues how from firms can use such advantages, which he distinguishes as Oa advantages (tangible ownership advantages possessed or exclusive access to) and Ot advantages (ownership advantages that derives from firms ability to organize asset internally and externally in most efficient way), and that Ot advantages will generate from the presence of firms in international locations in terms of different political, economic, and cultural structures.

The notion of firm's willingness to learn from their experiences that aids their international expansion is strongly embedded in the Uppsala model proposed by Johanson & Vahlne (1977), and here where step by step international experience play vital determinant role for firms seeking multinationalism for their global corporate expansive businesses. Dunning (1998) further highlights the growing importance of MNEs to engage in foreign acquiring as assets in different countries which enables them to protect and augment new assets as locational needs are dynamic and changing, thus assets such learning experience becomes an important asset or ownership advantage of MNEs. It is suggested that MNEs general international experience enable them to cope with different location specific aspects of entering a foreign location, such as political, administrative, institutional and cultural differences that exists between countries. International firms that engage in acquisitions in foreign countries in hope of gaining local markets will face competition that in most cases derives from their Liability of Foreignness (LOF), (Petersen and Pedersen, 2012).

MNEs that seeks to expand their presence in new locations in will have certain advantages or capabilities, such as economies of scale, brand recognition, superior technology or managerial skills. But according to the literature, such capabilities will also be in possession of local firms who can through their knowledge of local environment make foreign firms less profitable, and thus foreign firms seeking to penetrate into local markets will face liability of foreignness, (Zaheer & Mosakowski (1997). The notion of liability of foreignness means that local actors operating in a given market will have the upper hand as they have necessary information about local markets that foreign entrants lacks, and these include information about local economy, local laws, local politics and local culture (Petersen & Pedersen, 2002).

The theory around the concept of “liability of foreignness” was developed by researcher Stephen Hymer (1976) in his quest for disseminating reasons for why firms engage in foreign direct investment and how they entered these markets. Hymer (1976) through his findings argued that firms opted for licensing in foreign markets as opposed to setting up subsidiaries as the latter would entail facing liability of foreignness and potentially impede profitability, (Hymer, 1976). Furthermore, Hymer (1976) postulated that when foreign firms enter overseas markets, the liability of foreignness would be very high when their presence in a foreign location is in its early nascent state, but with the passage of time and through learning and adapting to the local environment would lead to reduction in LOF. The concept of liability of foreignness was further evolved by the work of Zaheer & Mosakowski (1997), who building on the works of Hymer (1976) did a study in the global currency trading industry between 1975 – 1993. Their study sought to investigate the existence of LOF and how this phenomenon evolved over time and its impact on the survivability on firms who entered foreign markets. The findings of Zaheer & Mosakowski (1997) showed that the notion of LOF indeed exists and that it varies with passage of time, meaning that firms through their intangibles asset such as evolution of knowledge specific type of locations-based learning, they can apply their knowledge.

2.1.3 Location advantages

This component of the OLI paradigm centres around locations that are chosen by MNE and the potential advantages such locations offers These advantages can derive from locations that offer the acquiring firm location endowments such as markets size, lower production and transport costs aided by better general infrastructure, tax benefits, access to protected markets, low risk natural resources, proximity to a market, legal and commercial environments in which endowments are regulated, market structure and governmental policies and legislations (Dunning & Zhang, 2008; Dunning, 1980). For example, the macro financial perspective in the Asian context reveals that levels of improvement corporate government and institutional quality positively favours more transnational inwards inflows of M&As, but other country specific traits such as population and the potential growth of its GDP can favour inward M&A inflows.

The market-size hypothesis claims that for creating economies of scales and exploiting resources more efficiently, a large market is needed, and with the passage of time markets size will reach a critical mass enabling inflows of capitals from abroad (Chakrabarti, 2001). For especially East Asian and South Asian countries, it seems that when acquirer is faced with a choice of partial versus full ownership when controlling for target countries corporate governance mechanism, partial ownership is the preferred choice if entry, regardless of a country's economic development. Several studies reveal that acquiring firms tend to invest in country's that offer substantial attractive levels of population, market size, size of economy in terms of its GDP and real per capita GDP, (Nagano, 2013; Li et al. (2016a; Ang, 2008).

Keeping up with need to adapt the OLI paradigm theory and its eclectic components to the globalization dynamics of the 21st century, a third dimension, inspired by the work of Pournarakis and Varsakelis (2004) that consists of political and social structure, is added to location endowment of the original OLI theory (Dunning,1977). Based on this, Dunning (2004) postulated a wider scheme for location (L) specific endowments determinates for country specific FDI that encompassed three dimensions: (1) Policy framework for FDI, (2) the economic determinants and (3) facilities for business development. These new additions to the OLI theory were developed by Dunning (2004) under the auspices of the growing importance of theory of New Institutional Economic (North, 1990) that posit that a country's institutional quality and their institutional infrastructure are important endowments for both economic development and attracting FDI.

Institutions and the institutional infrastructure of a country functions as a location bound market instrument that are built under the purpose of creating facilitative functions for economic activity. The level of development of a country's institutional infrastructure is also said to influences inflows of FDIs by reducing transaction cost, as transactions costs associated often associated with and presents the "hassle" cost of doing business and they include search, negotiations and enforcement costs (Dunning, 2004). For Dunning (2004) the existence of effective and well-functioning market facilitating institutional infrastructure is a prerequisite to minimize transactions cost, and such costs may include among other things include lack of property rights, poorly regulated banking system, corruption and under developed financial markets.

For Dunning (2004), policy framework, which falls under the ambit of government control both helps to create and monitor the institutional infrastructure, but business facilitating activities (e.g. effective bureaucracy, adequate infrastructure support services) are contingent upon the quality of the general societies institutions, and finally, the market-oriented determinants are dependent upon the incentive and enforcement procedures.

A further study by Dunning and Zhang (2008) tried to deepen the understanding by examining the three main resources that MNEs interact with in foreign location, Resources, Capabilities and Markets (RCM) and together with institutions as ingredients for a country's national competitiveness and how their content and quality effects inflows of foreign direct investment (FDI). It is argued that MNEs foreign expansion is also guided by measuring and comparing the competitive surroundings for the locations they choose. For Dunning and Zhang (2008), MNEs will consider the countries and regions within countries as determinants for locate their value adding activities in terms of their abilities to offer them RCM and institutions impetus (e.g. developed and functioning institutions).

It is posited that the traditional economic literature and management specific studies, particularly from the perspectives of scholars, has mostly devoted their attention to the availability and qualitative impetus of RCM as main salient determinants for economic welfare (Dunning and Zhang, 2008). But neglecting the role human environment and institutions shaping general behaviours of its constituents and how it effects economic growth leads to a narrow focus. In their findings (Dunning & Zhang, 2008) institutions, defined as formal institution (e.g. constitutions, laws, treaties), informal institutions (e.g. tradition, trust, goodwill) and enforcement mechanisms (e.g. incentives, penalties, fines, enforced transiency) appears to have greater effect on inwards FDI than the traditional RCM driven perspective. They (Dunning & Zhang, 2008) postulates that in the context of flows of inward FDIs from abroad, the following components of the institutional environment leads to higher levels of economic development and FDI; market efficiency, structure of incentives, technological capacity, infrastructure and support services and innovation systems.

The institutional narrative as explanation for location-based determinants for foreign inflows of acquisition is further propounded in international business literature, thereby positing

how institutions play an important role in shaping both business activities and putting constraints in an economy activity, whereby the quality of these institutions will have effects of incoming FDI flows (Nielsen et al., 2015). The concept of New institutional economics was postulated by Olivier North (1990) who defined institutions as "the rules of the game in a society, that more formally, are the humanly devised constraints that shape human interaction". The institutional perspective has also been advanced by various scholars when relating it to MNE international behaviour for search of location for expanding their businesses beyond the national borders. For example, in a research done by Owen & Yawson (2010) that examined US companies making cross border acquisition, countries which scored high on human development Index (life expectancy index, levels and quality of education and standards of living) and corporate governance (systems that defines rules, regulations and processes for how a company is governed and controlled) attract higher levels of cross border acquisitions. Furthermore, the findings remain unchanged when controlled for intuitional quality on the human development index (Owen &Yawson, 2010). Another study by Hattari and Rajan (2010) revealed that locations that offered higher levels of schooling enrolment, more educated populous and R&D would receive higher levels of FDI from DE.

Another aspect of a locations regulatory and institutional environment and its attractiveness for foreign MNEs relates to the general state of rule of law a location offers. In a broader sense, rule of law can be measured though the ability of official governments ability to offer its constituents rights protection, hamper corruption and independence of courts, and as such is attributed to the institutional quality of governments and a necessary attribute to actuate effective functioning and regulation of society (Belton, 2005). The element of crime and specially organized crime falls within the ambit of national and local government responsibility, and as such is closely tied to the regulative and institutional aspect of governance. The literature of FDI posits that internationalization brings additional cost for the acquiring firms, and crime adds to the costs to of doing and slows down economic growth (North, 1990; North et al., 2009; Peri, 2004). It is further suggested that weak legal framework and poor governance as a result of dysfunctional law and order institutions lead to weaker enterprise growth, leading to businesses and enterprises to either rely on private protection or payments to organized crime (Kroska & Robeck, 2006).

In the context of locations specific attributes of a country and within the framework of OLI eclectic paradigms and its O component (ownership advantages), it seems reasonable to assume that locations that are characterized by lower levels of crime or crime related incidences will attract higher levels of general FDI and M&As flows.

2.1.4 Internalization advantages

This strand of OLI eclectic framework deals with how a firm can utilise and exploit its internalization advantages to conduct operations overseas, and how it can be done either through wholly-owned subsidiaries, joint venture, exports or licensing. It is suggested that this component of the OLI electric paradigm is crucial to explaining why MNEs exist as it explains why MNEs resorts to licencing rather than exploit the internally setting up subsidiaries – with further suggestions to changing the Internalization advantages mentioned in the OLI-theory to mode of entry (M) since the internalization component in practical terms refers to choice of entry mode (MP Ferreira, 2011; Guisinger, 2001).

The internalization component of the OLI paradigm was added to this framework in 1980 by Dunning (1980), and the internalization aspect of OLI spurned from the notion of why some MNEs opted for exploiting its ownership advantages themselves by internalizing its technology, management skills to produce the goods abroad, while others leased out their core competencies to local actors. The main explanation for why firms internalized their ownership endowments was posited by Dunning (1980) to derive from avoiding disadvantages or capitalize impactions of what he called two external mechanism of resource allocation, namely (1) *market imperfections* and (2) *Public interventions*. Sources of market imperfections spurns from transaction costs high, its becomes less feasible to coordinate economies of interdependent activities and when information related to products or services that is being sold or marketed simply becomes too costly (Dunning, 1980). Public intervention in terms of access to resources refers to national and legislative policies that can motivate firms to internalize their activities, and these include laws and legislation aimed towards production and technology, paten laws, differential tax preferences and exchange rate policies (Dunning, 1980).

When it comes to cross border M&As and especially M&A flows from west-south perspective, the internalization dimension of the OLI paradigm can provide a perspective on how why some MNEs opt for full equity or ownership participation while others opt for partial ownership. Emerging Economies and the potentiality of the growth prospects of their market attracts many global Multinational Enterprises (MNEs) to invest and expand their operations in these economies. MNEs and their expanding approach to consolidate their business empires usually involves three sets of strategies; (1) Greenfield or (2) Acquisitions and (3) Joint Ventures (Kogut and Singh, 1988; Anand and Delios, 2002; Elango and Sambharya,2004). Integrating the resource-based consideration with institutional setting in four different EE settings (Egypt, India, South Africa and Vietnam), it appears that when MNEs encounter weaker institutional settings in the host settings they opt for acquisitions, while in settings which offer stronger institutional wherewithal, the entry strategy is greenfield (Meyer et al., 2008).

The link between stronger institutional settings in host countries and the proclivity by MNEs to adapt greenfield as an entry strategy is further supported by the work done by Estrin and Meyer (2011) who find brownfield projects to be preferred way entry in EE when the global parent company is more integrated with the desired project and the local institutional settings are strong coupled weaker local firms.

2.2 Explanatory factors

We have selected a set of country-specific and deal-specific explanatory variables that we test in our regression analysis. In choosing explanatory variables for this study, our focus is mainly on the variables which were found to be significant in similar studies. We also include variables that other studies used, but did not find to be significant, but they are still used since this study is being applied on a different market. In addition, most studies mainly worked with target firms which are public. We wanted to see the impact of acquisition of both public and non-public target firms; as such we use those deal-specific variables from previous studies which are applicable to all target firms.

2.2.1 Dependent Variable

Our dependent variable in this study is *number of Mergers and Acquisition deals* that took place within Indian States and its Union Territories. Our initial goal was to study M&A deals

in India during time-period 2005-2017. But because of limitation of the data we used for our study, we divide the event window into different part. We first run a OLS regression for M&A deals ranging from 2005-2017 and use social-economic factors as independent variables. Then we compute OLS for access to educational resources for period 2010-2014. Then we do a cross-section for 2016 using for the socio-economic factors. We also did a Poisson regression on firm levels determinants to see if they could explain level of M&A inflows. Lastly, we conducted a Poisson regression with the same dataset as used for cross-section OLS 2016 to compare the finding

2.2.2 Explanatory Variables sorted according to OLI paradigm

Our explanatory variables are based on our theoretical framework which is centred around the OLI eclectic paradigm and prior research findings of our topic. Based on this, we selected location specific explanatory variables that are integrated in the L (location) component of the OLI framework. We also include firm specific explanatory variables into our thesis as it is propounded by the O (ownership) component of OLI framework. Our choice and regard for including location and firm specific variables were also influenced by previous studies and research attempts that sought to delineate determinants of general FDI flows, acquisitions and mergers between firms from developed and emerging economies.

2.3 Location specific factors and M&As

2.3.1 Macroeconomic factors

Market size hypothesis propagates the importance of size of the target market and is often measured through a country/location and its Gross Domestic Product (GDP). There are several studies that find a strong correlation with higher levels of GDP for target countries influencing higher levels of general FDI flows and M&As flows (review article). A study measuring the impact of GDP growth for Malaysia suggested that 1 percent increase in GDP resulted in an increase of 0,95 percent of foreign inflows into Malaysia (Ang, 2008). In case of size and growth of Gross State Domestic Product (GSDP) within India, the GSDP varies heavily within Indian Statas and Union territories. For example, the state of Maharashtra, which is regarded as India's financial hub, the size of GSDP of the state of Maharashtra in 2017 in 2017 accounted for 16 percent of India's total GDP despite having a population ratio of 9.28 percent of India's total population (Ministry of finance Maharashtra, 2017). Another peculiarity with India and its subnational differences at state level is the vast difference in population size of its states and Union territories. States like Uttar Pradesh, Maharashtra and Bihar have population of 200 million, 112 million and 103 million respectively (national consensus 2011), and since GDP growth is strongly correlated with population size we find it highly relevant to include GDP as a proxy to measure market potential of Indian states and UT for influencing number of M&A deal flows. Thus, we believe the size of Indian States and UTs GDP merits to be used as an explanatory variable to explain determinant for M&As flows within India.

Hypothesis 1: *Mergers & Acquisitions inflows is positively related to Gross State Domestic Product within targets States and Union territories.*

2.3.2 Power Capacity Levels

General level of infrastructure development in a country is often attributed to the effective deliverance of institutional services and functioning of the governments as such responsibilities fall within the ambit of national and subnational local authorities. It is suggested that both the availability and quality of infrastructure which facilitates transportation, communication and energy supply play a key determining role for inflows of

FDI, whereby minimizing transaction costs (Fedderke & Romme, 2006). It is further argued that infrastructure is especially important for trade in services, meaning traded item such as freight, flight, banking and businesses services which are heavily contingent on existence of high level of capacity and efficient networks in countries that are engaged in trade activities (Nicoletti, G. *et al.* 2003).

Because of the posited correlational relationship between infrastructure development and inward flows of M&As in a country, usage of infrastructure as an explanatory variable for our thesis makes a strong case. Furthermore, in case of M&A flows between developed and Emerging economies, it is posited that infrastructure endowments of a country plays a key determining role for foreign inflows of M&As (review article), we use the availability of *installed power capacity* between Indian States and UT as proxy to measure the infrastructure hypothesis as determinant endowment for foreign investment at subnational level in India. Thus, our hypothesis for infrastructure is as following:

Hypothesis 2: *Higher infrastructure levels within targets State and Union territories functions as pull factor for Mergers & Acquisitions inflows.*

2.3.3 Crime

Occurrences of crime and violence has an overall negative impact on the society which often translates into greater uncertainty, lower levels of productivity, jobs uncertainty and lower levels of general trust in governments and its institutions. It has been suggested that existence of high levels of crime impedes foreign MNEs ability to expand their businesses markets they have entered, and in most extreme cases force MNEs to exit and move their operations into saver locations (Kroska & Robeck, 2006). As internationalization of MNEs brings addition costs to acquiring firms that enters a foreign market such as unfamiliarity of host countries culture, language, institutional and administrative peculiarities, high levels of existence of crime adds to such costs. Therefore, it is pustulated that crime will add to cost of doing business for MNEs, affecting the economy capacity of a country and often lead to costs of doing business reaching a level that forces foreign MNEs to relocate their activities (Ramos & Ashby, 2013).

Considering the negative effects crime has on FDI and general economic activities for a country, we find strong merit for including occurrences of crime across Indian States and UT as one of our explanatory variables.

The data we have gathered amounts to total registered crime cases across India on yearly basis in accordance with the Indian penal Code (IPC).

Hypothesis 3*: Crime is inversely related to Mergers & Acquisitions inflows in targets state and Union territories*.

2.3.4 Access to educational resources

A countries education system reflects the quality of its national and subnational institutions and its ability to offer its constituents services of quality where educational institutions will be a reflection of the larger national institutional framework. Education is also useful in analysing the quality of skilful labour supply of a country's inhabitants for determinants of foreign FDI and willingness of MNEs to engage in M&As. The availability and quality of skilful labour supply is most easily measured by educational levels in a location, and at subnational levels, it is argued that location that offers higher levels of educated populous would attract higher levels of FDI (Broadman, et al., 1997).

There is a general census that posits that higher educational levels leads to increase in FDI while the same relationship is negative when there exist lower levels of educated populous. In a study conducted by (Broadman & Sun, 1997; Coughlin and Segev (2000) which examined the skewed distribution of FDI across Chinese regions, illiteracy and lack of availability of higher educated populous impeded inflows of foreign FDI into locations where high illiteracy existed and was the cause of skewed distribution of FDI in Chinese regions. The above-mentioned studies are relevant for our thesis as China exhibits many of the same traits India in terms of their large population and skewed distribution of wealth across and FDI at subnational level. Applying the education narrative for our thesis, our explanatory variables for measuring education across Indian states and UT is measured by the following proxies:

(1) Number of Universities
(2) Domestic postgraduate students
(3) Domestic PhD candidates
(4) International postgraduate students
(5) International PhD candidates

In line with the literature and research studies that postulates higher education to positively correlate with higher levels of FDI flows to locations that offer more educated populous, we assume that inflows of M&As in India will vary based on how developed their locations are in terms of higher education. Thus, we formulate the following hypothesis:

Hypothesis 4: *Mergers & Acquisitions inflows is positively related to access to educational resources within target States and Union territories.*

2.3.5 Firm level determinants for Mergers and Acquisitions

As MNEs grow by expanding their activities beyond their national border so does their repertoire of knowledge and experiences associated with new locations they enter. These type of knowledge and experiences gradually matures and adding to intangible assets of a firm. The international economic and international business argue that prior experiences enable MNEs to overcome the hurdles and cost of doing business in foreign markets, and such costs are often associated with liability of foreignness (e.g. local competitors, lack of knowledge about local culture, language) which foreign firms face entering new locations (Nielsen et al., 2015; Zaheer & Mosakowski, 1997).

As India is an Emerging Economy characterized by going through a transformation phase, and where its economic and general regulatory institutions are gradually gaining impetus to deliver the levels of institutional performances found in developed countries, foreign MNEs from developed countries will view India and its State and UTs as potentially risky location to enter. Simultaneously, MNEs entering the Indian market will be in possession of intangible assets as prior international experiences from similar locations and setting that resemble the

Indian market. Thus, the international experience argument merits an inclusion in our thesis to investigate if firm's international experiences can explain their willingness to Indian market.

To find a correlation relationship between international experience and number of M&As we visited website of each specific firm which was engaged in the M&As deals for time period 2005-2017. We measure the international experience of each firm by the time they first entered a foreign market and the time laps that occurred when the same firm entered India specific to the date of their entrance in our dataset. We decided to also look at the age of the firms and measured their age from when they first established themselves as a corporate entity and time lapse that occurred until a specific deal was concluded found in our dataset. Finally, we also seek to measure size of the deal in order seek to delineate if there is a correlation for deals size and number of deals that were attributed to each Indian State and UTs.

Hypothesis 5*: Higher international experience of acquiring firm is positively correlated with Mergers & Acquisitions inflows.*

HYPOTHESIS 1:	**Mergers & Acquisitions inflows is positively related to Gross State Domestic Product within targets States and Union territories.**
HYPOTHESIS 2:	**Higher Infrastructure levels within targets State and Union territories functions as pull factor for Mergers & Acquisitions inflows.**
HYPOTHESIS 3:	**Crime is inversely related to Mergers & Acquisitions inflows in targets state and Union territories.**
HYPOTHESIS 4:	**Mergers & Acquisitions inflows is positively related to access to educational resources within target States and Union territories.**

HYPOTHESIS 5:	**Higher international experience of acquiring firm is positively correlated with Mergers & Acquisitions inflows.**

Figure 8: State-level and Firm-level Hypothesis Summarized

In the next chapter we are going to present the methodology, research strategy and some limitations associated with our paper.

Chapter 3 – Methodology

This chapter provides an insight into the methodology chosen for our thesis. The reader is also provided with the limitation of our dataset used in the analysis and its impact on the results that our analysis generated.

3.0 Scientific approach

This paper applies a deductive approach using economic theories and previous empirical studies to identify our research gap and to form hypotheses for the purpose of the study. This is an observational study where we use both cross-section and panel regression analyses to observe developments over time.

At first, after completing our sample data, we need to figure out which way we wanted to go with our analysis. Ordinary least squares (OLS) is one of the most reliable regression methods. For each line in the scatterplot there is a collection of remainder values on the vertical distance between each data point and the line. If you square and sum these remainder values, you will have a measure of how good this line fits your data, which is called sum of squared errors (SSE). With these estimates by using squared sum it will give you the expected value. So, there is no tendency that these estimates are systematic for either high or low ratios within the population. This is also the method that gives you the least amount of statistical uncertainty. Other regression methods often provide imprecise estimates (Thrane, 2017).

When computing an observational study, with short timeseries, using a cross-section could be helpful to investigate the phenomenon. One effect with cross-section is that it shows which effect one variable has on another, in a shorter amount of time, which can provide you with some stronger associations in the analysis (Thrane, 2017). Since the cross-section method only uses data from one defined period, and the effect can't be measured in the same period as the cause, this design wouldn't provide us reasonable answers.

However, we had a quite big data sample, stretching our multiple time periods. Therefore, we tried applying a panel data design. The advantage panel data have vice versa cross-section is that you can reduce the causality requirement through the design, and panel data could be applied to almost every regression model. These regression models have one thing

in common, that if the prerequisite still stands, you can get a more correct b-value than with a cross-section. Especially using a *fixed effect* or *random effect* regression. (Thrane, 2017). We also saw the possibility to use a time series data, which is quite similar to panel data, however, you follow the time series of on unit, which in our case would be number of M&As.

Finally, due to our dependent variable being an observation of deals and transactions being completed, this could be considered as s *count data*, and a *Poisson* distribution could be advised. Poisson distribution is used when you are observing a phenomenon and counting how many times this have occurred. Even if Y-data as this does not require any specific methods, is become more usual to analyse them through count-data-regression. There are two different models typically used, Poisson and negative binominal model. Poisson is a more restrictive model than negative binominal model, and the negative binominal often functions better in practice due to *over dispersion* (Dunteman, G, H., & Ho., M.R. 2006).

3.1 Research strategy

The research approach used in this thesis is a deductive approach (Bryman and Bell, 2011). We will form hypotheses based on the literature on economic theory and from previous empirical studies. When reviewing theory and going through the empirical studies, it became clear to us that there is a research gap on determinants of M&As on state level, and we focused on doing a research on India, a country that receives many inflows of M&A deals and that also has seen variation in foreign investments at subnational level. In this study, we wanted to research what types of factors that generate cross-border M&As, and we focused on socio-economic factors on a state level, and firm specific determinants which can contribute to an understanding of number of M&A inflows to India. This type of research is earlier conducted on a country level, however, we wanted to see if this earlier research could be implemented in a state level perspective.

3.2 Exploratory design

When conducting our research, we had an exploratory design which is known for researchers having a small to none knowledge of the concept or area their trying to examine, exploratory design could be used if the primary goal of the research is just to get a better understanding of a theme or context. So, we wanted to understand what generates M&A inflows, and we had some knowledge on the general theme, however, not as much as

prerequisite for choosing other designs. The main target of this research is to understand and interpret the phenomenon in best possible manner. In most cases it would be natural to start generating hypotheses, then do a literature study, search for secondary data, and at the end produce own data. So, this is what we did, we started reading up on earlier research, and review articles, to get a grip of possible pull-factors that can explain the phenomenon of cross-border M&As.

3.2.1 Validity and reliability

Either the purpose of a research is set to plan for new analysis or to re-evaluate a former analyse, it is important to consider how "good" this research really is. The question is about how good the link between the research being conducted and the validity and reliability of it. These two concepts are often used when we measure either one or more phenomenon.

Validity is a measurement of how good the concept it intended to interpret was really measured. Even if we have accomplished a high degree reliability in the research, there isn't necessarily a correlation with validity (Thrane, 2017). It is possible to measure something with accuracy and reliability, and get consistent results from time to time, however, if we measure something other then what was intended, this is called a systematic error. Validity refers to these systematic errors within the research.

Reliability on a parent level describes how reliable the results of the research are. If the research is done the same way again, or with other methods, reliability describes whether you will get the same results as the first time or not. This means that random errors always in some way or another will occur, and reliability is a way to measure the degree of random errors connected to the research, and how it may affect the results. (Skog, 1998)

3.2.2 Ordinary Least Squares (OLS)

In statistics, the usage of Ordinary Least Squares (OLS) regression is a popular and widely used technique to delineate and state correlation of one or more variables. OLS regression is chiefly beneficial when one seeks to explain and predict values of a dependent variable that is continues with the help of one or more explanatory variables (Hutcheson, 2011). OLS aims to explain the linear relationship between variables, and as such is a generalized linear modelling (GML) technique that is used in social sciences as GML is posited to provide descriptive and predictive models that are generalizable (Hutcheson & Moutinho, 2012). The

OLS models consists of three components*, random component*, the *systematic component* and the *link function*, whereas the random component is attributed to the response variable and assumed to be normally distributed, the systematic component which represent the fixed values of the explanatory *X*1 and *X*2 variables linear function and the link function maps the systematic component into a random component (Hutcheson, 2011; Hutcheson & Moutinho, 2012).

For the sake simplicity and clarity, we start with simple OLS regression equation which demonstrates a direct and linear relationship between two variables, variable Y and variable X.

$$y = \alpha + \beta x + \varepsilon$$

The equation above a represents the intercept of the line in the Y axes, while β is the slope of the line, and according to this equation, the value of Y can be precisely obtained and calculated through value of X and the slope of the line (β), which is also known as regression coefficient as it shows the effect the explanatory variable has on the response variable, and the basic assumption is that Y changes as X increases with one unit (Hutcheson, 2011). The above equation also ε , which represents the error, meaning the difference between the observed value of Y and the predicted value of Y. The ε component of the OLS regression equation simply outlines the fact that in social sciences perfect and linear relationships are more of exception than rules, and measurements we obtain will infrequently be non-error free, thus through usage of OLS regression we deal with this aspect of regression linearity through the use of least-squares-procedures, a technique which minimizes the sum of squared deviation, namely error or residual (Hutcheson, 2011).

A way of measuring how well the regression models fits the data that are used in a OLS regression. R square is a commonly used method to describe about the model fit and measure of significance (Hutcheson, 2011). Interpretation of R Square is commonly referred to as the percentage variability in Y that is explained through X, and in generally it explains how well the model used in OLS regression fits the data that used. For example, an R square

value of 0,70 will indicate that 70 percent of variability can be explained by explanatory variable (Hutcheson, 2011).

R Square is a useful tool to that provides an indication of the explanatory power of a model, but R Square is still limited as it does not address the issue if weather or if the R square value percentage was obtained through a good explanatory correlation between the variables or by chance (Hutcheson, 2011).

3.2.3 Multiple OLS regression

As with a simple OLS regression, multiple OLS regression can be used to investigate relationships between a response variable and more than one explanatory variables. The use of multiple OLS regression is handy when there is a need to explain more than one source of information required to predict more precise correlations. Multiple OLS regression is distinguished from simple multiple regressions as there the latter doesn't consider the aspect of interrelatedness among the explanatory variables, which can lead to misrepresentation of data (Hutcheson, 2011).

As with the simple regression equation, the multiple OLS regression aims to describe a relationship between a response variable and a number of explanatory variables, except that OLS accounts for more than one explanatory variable. The general form of the OLS regression equation can be formulated as following:

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \ldots + \beta_k x_k$$

In the equation above, α represents the value of Y when each of the X variables are X_i, X_{i+1} and X_{i+k} represent the values of different i predictive and explanatory variables, while β1 and βk are the partial regression coefficients.

Below is the representation of our OLS model that measures our dependent, variable *number of M&A deals,* and our independent variables, represented by *GSDP*, *Installed Power capacity*, *Crime*, *number of Universities*, *number of Postgraduate Domestic Students, number of PHD Domestic Students, number of International Postgraduate Students* and *number of PHD International Students*.

$$y_i(\boldsymbol{\tau}^1, \boldsymbol{\tau}^n) = \boldsymbol{\beta GSDP}^n + \boldsymbol{\beta powercap}^n + \boldsymbol{\beta Crime}^n + \boldsymbol{\beta Universities}^n + \boldsymbol{\beta postgrad\_dom}^n + \boldsymbol{\beta PhD\_dom}^n + \boldsymbol{\beta Postgrad\_dom}^n + \boldsymbol{\beta PhD\_int}^n$$

3.2.4 Poisson model

In social sciences a researcher investigating a phenomenon will sometimes encounter variables that take shape of counts. Such count data could resemble number of crimes committed in an area of geographic location, number of sick leaves for a specific department in a company or number of days it rains in a particular period in a year. In addition, count data are characterized by distances between the variables that go into an analysis being constant and having many zeroes values, while count data are also notoriously known to have a skewed distribution, which posits scenarios involving counts to use Poisson methods over traditional ordinary least squares, analysis of variance (ANOVA) and t-tests (Dunteman & Ho, 2006).

As our main dependent variables is “number of M&A deals per year” across Indian States and UT, usage of Poisson methods and particularly Poisson regression analysis should be the ideal approach to use in our thesis. The skewness of Poisson distribution is determined by how small or how large its mean is, and when we have a smaller mean, the Poisson distribution will be more skewed towards the right, while as the mean increases the shape of the distribution will be more symmetric (Salkind, 2016).

The Poisson distribution is generated by a what is referred to as a *Poisson process*, a straight line that often represents time or space, where each point represents an independent Bernoulli random model, where the event or phenomena being studies either occurs or does not occur (Dunteman & Ho, 2006).

Form and parameters of Poisson

$$P(Y = y) = \lambda^y e^{-\lambda}/y!,$$

The basic boundary or parameter of a Poisson distribution is the mean represented by λ, which measures the average of Y, and which will be the phenomena one is interested in finding out and often is the dependent variable in a study (Dunteman & Ho, 2006). In case of our dependent variable (Numbers yearly of M&A deals in Indian States and UT), a Poisson regression will measure and be represented by lambda (λ) which will yield mean count for the population (Indian States and UTs) and be represented by the likelihood of the M&A deals factualizing. A peculiarity with Poisson distribution is its mean equalling its variance, meaning that λ will represent both the population of an analysis and its mean. However, if the variance is in a Poisson distribution is above its mean leads to *over dispersion, a phenomenon* which is enabled and caused by controlled variables heterogeneity among subjects (Dunteman & Ho, 2006).

Poisson Regression Model

Poisson regression model is utilized when the dependent variable consists of count data with nonnegative integers (i.e., X = 0; 1, 2; …). Poisson regression models are expressed as generalized linear models where canonical link function is denoted as log link with Poisson distribution representing the dependent variable (Salkind, 2016).

In an ordinary and standard case of Poisson regression where there will be K linear predictors (x1; x2; … xK) and a dependent variable Y (representing number of counts), the Poisson regression model, it can be represented through the following equation:

$$\ln(\mu_{ij}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_{ij}^{AB},$$

where Ln is the natural logarithm, μ(x) is an expression of the expected count of Y provided x1; x2; … xK ; and b0; b1, …, while bK are the regression coefficients (Kato & Bart, 2012). The distribution of Y (denoted as count) given x1; x2; … xK is the assumed Po[μ(x)], where expected value μ(x) is a result of and determined by combination of predictors x1; x2; … xK

and where regression coefficients are estimated by observed data from N sets (Yi; x1; x2; … xK); i = 1, …, N, (Salkind, 2016).

Below is a description of our Poisson regression model where we are measuring number of yearly M&A deals within India with our earlier identified dependent and explanatory variables.

$$\begin{aligned} \boldsymbol{ln(\mu_{i}j) = \lambda GSDP_{i} + \lambda Powercap_{i} + \lambda Crime_{i}} \\ \boldsymbol{+ \lambda Universities_{i} + \lambda Postgrad\_dom_{i}} \\ \boldsymbol{+ \lambda PhD\_dom_{i} + \lambda Postgrad\_int_{i}} \\ \boldsymbol{+ \lambda PhD\_int_{i}} \end{aligned}$$

3.2.5 Stepwise regression

When conducting OLS multiple regression one might have different explanatory variables, each having different effect on the response variable, and this might provide a good justification to either enter or remove variables in the model used. Such decisions are often made on the basis of t-statistics and through procedures such as *forward selection* (terms are entered singularly), *backward selection* (all terms are first entered and then singularly removed from the model sequentially) and *stepwise* (a combination of forward and backward selection), (Hutcheson, 2011). The stepwise selection approach is one of the most commonly used methods to of automated selection methods and is quite similar to forward selection method, however, with stepwise approach the currently added variables are step by step assessed to decide whether they can be removed (Hutcheson, 2011).

In our model if analysis we use stepwise selection where we first run a OLS and Poisson regression where all the explanatory variables are included, and then we examine if the elected variables meet our criteria for retention. Our criteria for retention of explanatory variables is defined by the generated t-values and z-values for each of the variables that

generated, and we retain only values that are above 1 or -1 for both the OLS regression and Poisson regression.

3.2.6 Multicollinearity

When performing multiple regression analysis, one might encounter a problem called *multicollinearity*. The basic assumption of multiple regression analysis is that one seeks to obtain a relationship between several independent or predictable variables to estimate one dependent variable. A multiple regression approach posits that one should be able to obtain reliable and robust regression coefficients, and that that there should be minimal to no multicollinearity present in the obtain results (Allen M. 2017). The phenomena of multicollinearity refer to situation when there is a strong relationship between two or more of the independent variables present in model, whereby these intendent variables no longer are independent from each other; thereby leading to multicollinearity.

Effects of occurrences of multicollinearity in a regression model can lead to instability deriving from the variances of the models coefficients being large, regression coefficients may turn out to be contrary of what is expected and the entire model may turn out to be statistically significant and provide a good fit to the dependent response variables, even though the coefficients are poorly estimated (Salkind, 2017). While multicollinearity is an undesirable event and should be avoided, occurrences of multicollinearity does not necessary signal any problem with the underlying theory used to construct a regression model, it simply states that the data being used in the regression model does not allow the separate effects of the two or more independent variables (Kahane, 2008).

3.3 Defining and deciding the selection frame

When we started our research, we had to option out what type of databases we could use, and which was available. We decided to use Thomson Reuters Eikon, and then we had to define our limits for the data sample. First, we started with every deal made from 2005-2017, and the we needed to delineate the data, and chose to set a cap space value of 10 million USD per deal to screen out some smaller deals, but still incorporate as many states as possible in our analysis. After this we removed all domestic deals and the deals from EE to EE, because it didn't suit our paper or the research gap we were exploring. At last our

selection frame ended up at 656 observations. After this we divided the deals by each and every respective region within India, and then the data for our dependent variable was done. After this, we started collecting data for our independent variables. We wanted how the distribution of deals per region could be explained with socio-economic factors and started collecting data surrounding different factors such as education level, crime rate, GDP and so on. This data where mainly given in nominal numbers, although to make it more workable we sometimes divided it by population, to have the numbers per capita, this is because the explanatory power would benefit from this. After manually crunching this data, and completing our dataset, sorting each deal to their respective state and UT, we began analysing.

3.4 Analysis techniques and data cleansing

Given the quantitative secondary data that we had collected, and due to the high amount of observations in both deals per state and UT and a huge amount of data for our independent variable, we chose to go with a regression analysis. In this analysis we set number of deals per state and UT as our dependent variable. First, we used access to educational resources as our independent variables, hereunder we had domestic and international PHD students, domestic and international postgraduate students, and number of universities. And then we did a separate regression with other socio-economic factors such as crime rate, GSDP per capita and Power capacity level as a measure for infrastructure as an explanatory variable. We also had collected data for firm specific determinants for explaining a possible skewedness in the results.

We first run a OLS regression for M&A deals ranging from 2005-2017 and use social-economic factors as independent variables. Then we compute OLS for access to educational resources for period 2010-2014. Then we do a cross-section for 2016 using for the socio-economic factors. We also did a Poisson regression on firm levels determinants to see if they could explain level of M&A inflows. Lastly, we conducted a Poisson regression with the same dataset as used for cross-section OLS 2016 to compare the finding

In our research we stumbled upon phenomena known as multicollinearity, which leads to one or more of the independent variables interacting with each other and not being independent of each other. There are several ways to detect symptoms of multicollinearity.

Multicollinear can be detected when ones observe a high R squared for equation output, when one observes severe changes to parameters one removing a variable, computing the variance inflation factors (VIF), which is measures the amount of interrelationship between the independent variables and tolerance statistic, which is an expression of amount of unique variance in an independent variable (Allen, 2017; Salkind, 2007). The variance inflation factors range from 1 and above, whereby (VIF) values that start approaching 10 and above is an indication for multicollinearity, while tolerance statistics for each individual variable ranges between 0 and 1, and it is suggested that values between 0,1 and 0,2 are sign of multicollinearity (Allen, 2017).

3.5 Data collection

For the analysis, the M&A data is collected from *Thomson Reuters Eikon*. To be included in the final sample, each cross-border acquisition announcement had to meet certain criteria. First of all, we chose to include only the deals originated by acquiring companies from developed economies which are publicly listed for the purpose of the observational study. Then, we filtered out those cross-border deals which had disclosed value of deal size. Consequently, any deal that did not have a deal value in the database was excluded as we use relative deal size as an including criteria. At this point, we had approximately 900 cross-border M&A deals by publicly listed companies from DEs acquiring companies remaining in our sample. Afterwards, we removed deals which were relatively small, and excluded deals that had a cap under 10 million USD. Then our sample of deals was reduced to 880. Since this paper has a west-south perspective, deals that did not come from western countries was excluded as well. Finally, our sample was reduced to a number of 656 observations of west-south cross-border M&As dating from 2005 to 2017.

Data for our independent variables were collected from Government websites from India such as “All India Survey on Higher Education”, “Open Government Data (OGD) Platform India” and “National Institution for Transforming India)”. The data from these sources consisted of measurement factors for the 35 States and Union Territories of India that were socio economic factors and access to educational resources.

3.6 Limitations

In this section of the methodology chapter we will present some of the limitations regarding a socio-economic observational study often encounters.

If you have a good theoretical framework for exploiting the effects of how different variables could vary from state to state, one threshold can be whether the data is expedient and not necessary to collect and analyse (Skog, 1998). When doing research on state level socio-economic factors there are many variables that can affect the outcome of the analysis. When preforming a regression, one wish to get significant hits in the regression. However, there are many different things that influences cultural, economic and social situations, which make it somewhat hard to measure.

3.6.1 Validity

When preforming a study as this one, there are different problems within the validity of the study that is important to consider. Spurious contexts, also known as false correlations can affect the internal validity (Cramer & Howitt, 2005). In our study, we have used a lot of different variables, defining both infrastructure and socio-economic factors within state level India. One of the biggest issues in this paper was to define which variables that actually were relevant to describe the phenomenon and how to implement them into our design. Also, when doing a research as this, involving factors within cultural, economic and social relations, there could be problems generalizing and computing this data, which can affect the external validity.

Construct validity is a collective name of measurement problems tied to how independent variables affect the dependent variable, and how the operationalization and use of variables can measure the phenomenon in an adequate and reliable way. Due to the many aspects on how to describe a societal phenomenon, you are forced to only select a minor selection of these. And then you need to prioritize which is more relevant for the purpose of the research (Skog, 1998). In our research, where we wanted to investigate socio-economic factors, we had a lot of different variables to choose from, although we were limited to what data was available. Also, there are many different ways to measure infrastructure and educational resources, so choosing the right variables to best describe the phenomenon was a possible threshold in our paper.

Criteria validity occurs when there is a missing compliance between the true and the observed value of the variable, and this can be forced either by systematic or unsystematic measurement errors (Salkind, 2010). Both these types of errors can lead to too high or low results, therefore there are no tendency to observe and its hard prevent this from happening. In some situations, it will be possible to gather more detailed and reliant information, either the population as a whole, or a minor selection. If this is the situation, it is possible to shrink the gap between the true- and the observed value, and this will increase the validity of the data. Since the validity is the measure on covariance between the true and measured value, the easiest way is often to choose a minor selection frame, because gathering data is work- and time-consuming (Skog, 1998). In our paper, we have a fairly big selection frame, because our research is on state level, and we need to bring in data to represent the state as a unit. In some variables.

Cronbach alpha is a concept the occurs when you have a limited number of variables or indicators combined to an additive index, because all have different aspect which can measure the phenomenon. Cronbach alpha is a relevant validity measure if the current indicators is a minor selection of many different relevant indicators surrounding the same general concept (Skog, 1998). So, if you choose a set of indicators or variables, but there are also a huge number of other indicators and variables that could explain and describe the same concept that you don't include in the model. Such scenarios raise questions like if you were supposed to do this research again, would you choose the same variables as now, or would you rather prefer using other variables. And if you are choosing a new set of variables, would the correlation between the dependent and independent variables still be the same? Repeating such a process will tell you if the index is reliable or not. So, in our case, Cronbach's alpha is highly relevant, because we had almost an unlimited number of possible variables to use, however, the limitation was getting access to such data. Therefore, choosing completely freely wasn't really an option, but regardless of this we had a fair amount of accessible data.

Conclusion validity, also known as statistically conclusion validity, is another important concept which occurs when there are different coincidences in the research. Is the measured effect or context observing a real effect, or just a result of coincidences? It's common to research tendency contexts, and then the problem is that the context can be triggered just

by a coincidence, and not a real tendency in a country, market, or other social relations. This means that there is an opportunity that the results of the research are random and not a real measured effect. If this the case, it suggests the design of the research is to weak (Skog, 1998). A high correlation can be tied to the fact that there are strong trends within the data series – in the current time-period.

Trends can represent a problem, since it increases the risk of correlation between data series that does not really correlate at all. Some claims that you are able to lower the risk if a data series covers a longer time period where the variables both increase and decrease in different directions. This will lead to the probability of a fake correlation decreasing. In our data sample, we collected the number of M&As from 2005-2017, so we could avoid it being just a coincidence that the curve was increasing. Although M&As have become a trend, we believe this will continue in the future. However, the data for our independent variables stretches over a shorter time period, than the dependent. So, this could mean that some of the data is affected by coincidences.

3.6.2 Normal distribution

In social sciences the variables of interest are often in context of population distribution, where the numbers can strongly deviate from the normal distribution. Many variables can for example have a strong right leaning distribution, like income, fortune, or consumption. This right leaning distribution represent a minor part of the community. However, this leads to a bias in the data sample. If the prerequisite for the population average deviates from the normal distribution, then the prerequisite for the construction of the confidence intervals isn't fulfilled. When doing a state level research, the differences within each state, population, GSDP, and access to educational resources etc. will vary. This means that the distribution in our paper will be more or less biased.

In statistical testing's there are two errors called type 1 and type 2 when we are testing if the regression coefficient is significantly different from zero (Skog, 1998). The explanation on missing significance is, on the first hand, the correlation between the dependent and the independent variables. Alternative explanation is that there are different correlations, however, our data isn't good enough to prove it. This means that the strength of the tests is to low, and this is why we have the type 2 errors., which is divided into different categories:

A low number of observations – as mentioned earlier, the standard error for the estimate of the regression parameter is dependent on the size of the population. The fewer observations, the bigger the standard error is, and it's harder to prove the existing correlation. Assume we have a good theoretical framework to expect that the X affects Y, or that there are other empirical studies that have shown a correlation, but we can't seem to get a significant result. The reason can then be that the selection is too small to detect a correlation. The number of observations on the independent variables, is compromised due to the accessibility of data, however, we think the amount of data collected in our study is big enough to get the desired results.

To little variation – the formula of the standard error is reverse proportional of the degree of variation in the independent variable. The more uniform our material is in the values of the independent variable, the bigger the standard error becomes. And the more heterogeneous the material is, the bigger the standard error grows. If we don't observe variation in the scatterplot, but there is a relatively strong correlation between the two variables, and it's obvious where the regression line is supposed to be, then we in reality only have observed a relative degree of homogeneity within the frame and have the impression of zero correlation in the regression line. The variation of our data is restricted to a selection of socio-economic factors, and an alternative approach could have been to choose other data, that have a bigger variation than the sample we collected. But we believe that the variation in our data is sufficient, although some would maybe disagree.

The standard error to a number can be determined by coincidences, if the measured score is 20 one year, and 8 the other, the answer can be that there are coincidences pulling the number in different directions, and not an exact measurable tendency.

In the following chapter we will present our empirical findings and analysis, and then discuss the findings with our theoretical framework.

Chapter 4 - Empirical findings and analysis

This chapter consists of empirical finding and analysis where we use both OLS-regression and Poisson regression. We analyse using regular OLS, cross-section OLS, and Poisson. At the end we compare the cross-section OLS with the cross-section Poisson.

4.0 Descriptive statistics

In this chapter we will present the statistics and analysis of the sample data used in this study, then we will discuss the findings and compare this to relevant existing literature.

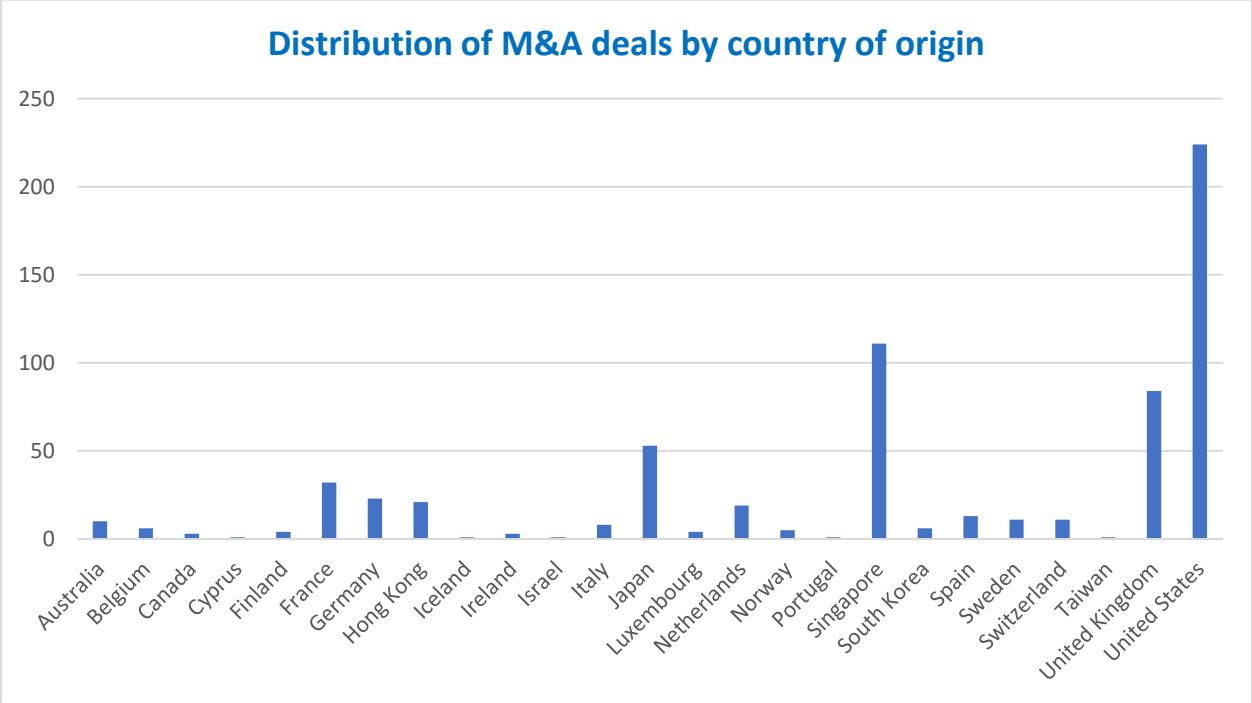

Figure 9: Distribution of M&A deals sorted by country of origin. Source: Eikon Thomson Reuters M&A database

As mentioned in the introduction section of this paper, understanding the regional and subnational dynamics of India poses a challenge because of differences and diversity that exists within the country. These differences are said to manifest themselves in different spheres of India's country characteristics and take shape in form of differences along different languages, cultural heritage, economic output and demographical anomalies (Paul & Sridhar, 2015). Furthermore, as population of some states and GDP is comparable to

entire countries, such as Andhra Pradesh and Maharashtra's population are equivalent to Mexico and Italy, while GDP for some states are comparable to Singapore and Angola (Economist, 2011). Due to these differences within the country, each state can be viewed as its own country.

In our literature we also pointed out the characteristics of developing economies and they differ when compared to developed economies in terms their institutional development, institutional distance and political stability. For example, Mody (2004) pointed out that developing economies are simply being defined in a "developing phase", salient characteristics of emerging economies are that they are defined by high degree of volatility while simultaneously going through a transition phase in sphere such as their economic, political and demographics dimensions. Since the distribution of M&As within India is so skewed (figures 10 and 11), its near to say that these states find themselves in different development situations, some are far ahead others, and some are falling bit behind.

MNEs from developed countries view emerging economies as huge attractive markets and potential avenues for future growth and profit, propelling them to invest in these markets to expand their growth by M&As (Fan, Morck, Xu, & Yeung, 2009). However, one threshold firms meet is that it exists certain idiosyncrasies within emerging economies that has effect on the likelihood of deal completion and propensity of firms from overseas to go into these markets. This can explain some of the skewness in (figures 10 and 11), because when MNEs see that other companies invest successfully in some states, this can lower the risk to invest in the same state. Since there are noticeable differences within state-level India when of comes to level of development, some states will be more deemed less risky to invest in than others. Research shows that factors such as institutional distance, level of institutional development, geographic distance and political stability has impact in the acquiring firms willingness to invest (Owen and Yawson, 2010; Demir and Hu, 2015; Fan, Morck, Xu, & Yeung, 2009; Lahiri, Elango, & Kundu, 2014; Contractor et al., 2014).

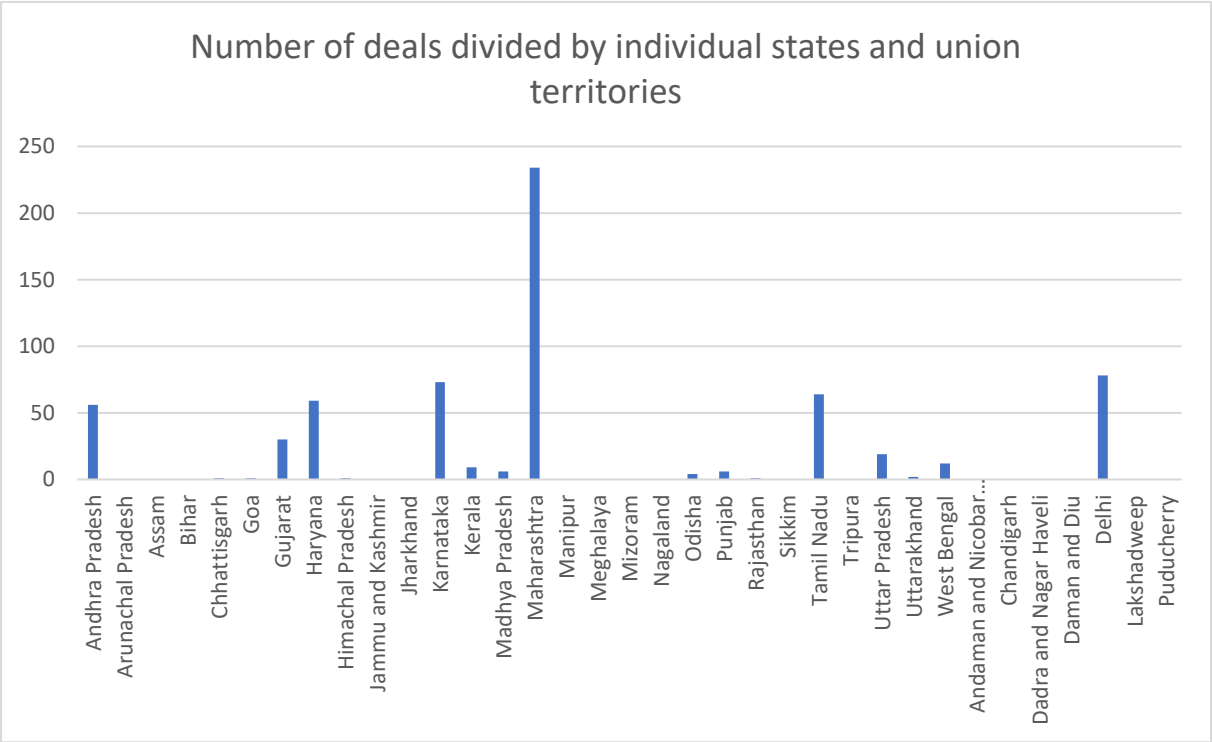

Figure 10: Number of deals divided by individual states and union territories. Source: Eikon Thomson Reuters M&A database

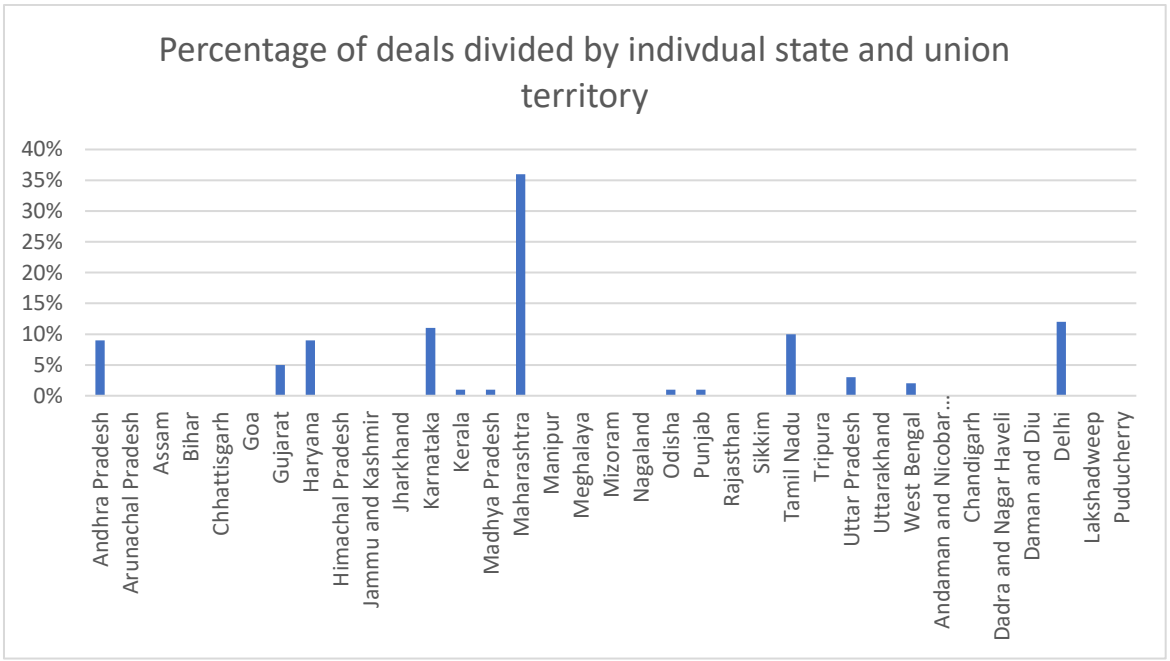

Figure 11: Number of deals per state and union. Source: Eikon Thomson Reuters M&A database

4.1 Educational resources per state and UT.

The literature of FDI and M&A highlights the importance of institutional quality and the general human environment as important determinant factor for economic growth and participation of foreign businesses in the development of a countries economy. The institutional perspective for sustainable economic growth was postulated by Olivier North (1990) and the new institutional economics where well-functioning institutions as important ingredients for measuring a location competitiveness. Seen through the lenses of OLI eclectic paradigm and its O (Ownership) advantages, access to educational resources within Indian states and UT will be a salient important determinant pull factor for factualization of inflows of M&A deals from abroad. Table 12 and 13 shows distribution of such educational resources across India measured though number of universities, total amount of domestic students studying in India and their distribution across Indian states and UTs and. As can be observed from figures 12 and 13, the distribution of these proxies that are used for measuring access to educational resources in India are skewed in favour of some states. For instance, when it comes to the distribution of domestic student across India, states like Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu and Uttar Pradesh account for 67 percent of all domestic students studying in India for time period (2016). Thus, existence of such skewness and anomaly will have impact on the results our analysis generates.

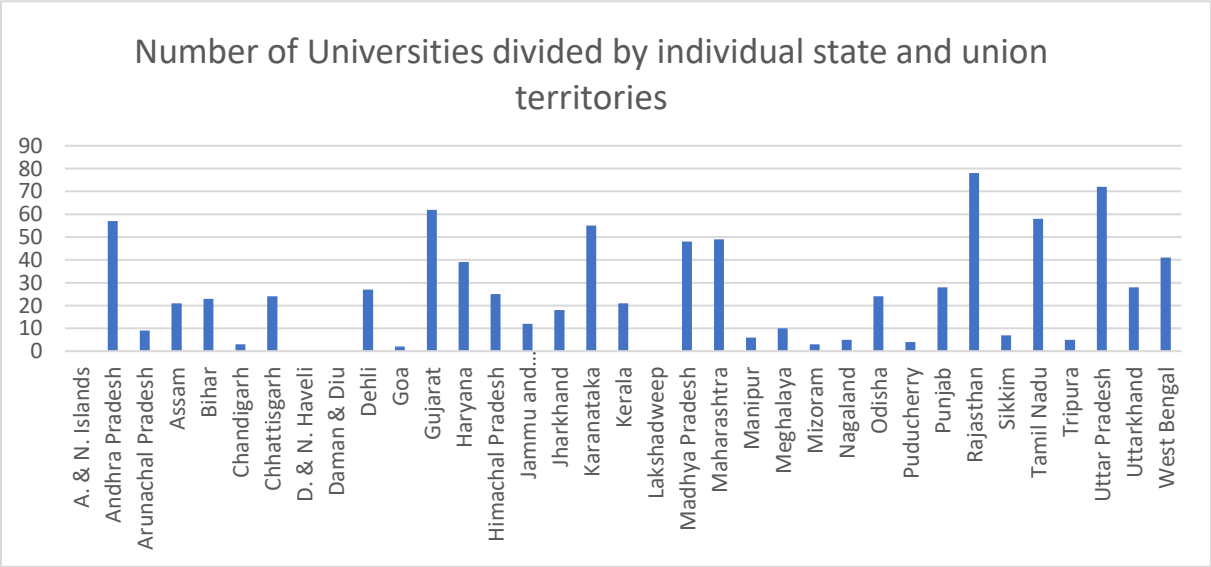

Figure 12: Access to educational resources in India. Source: All India Survey on Higher Education

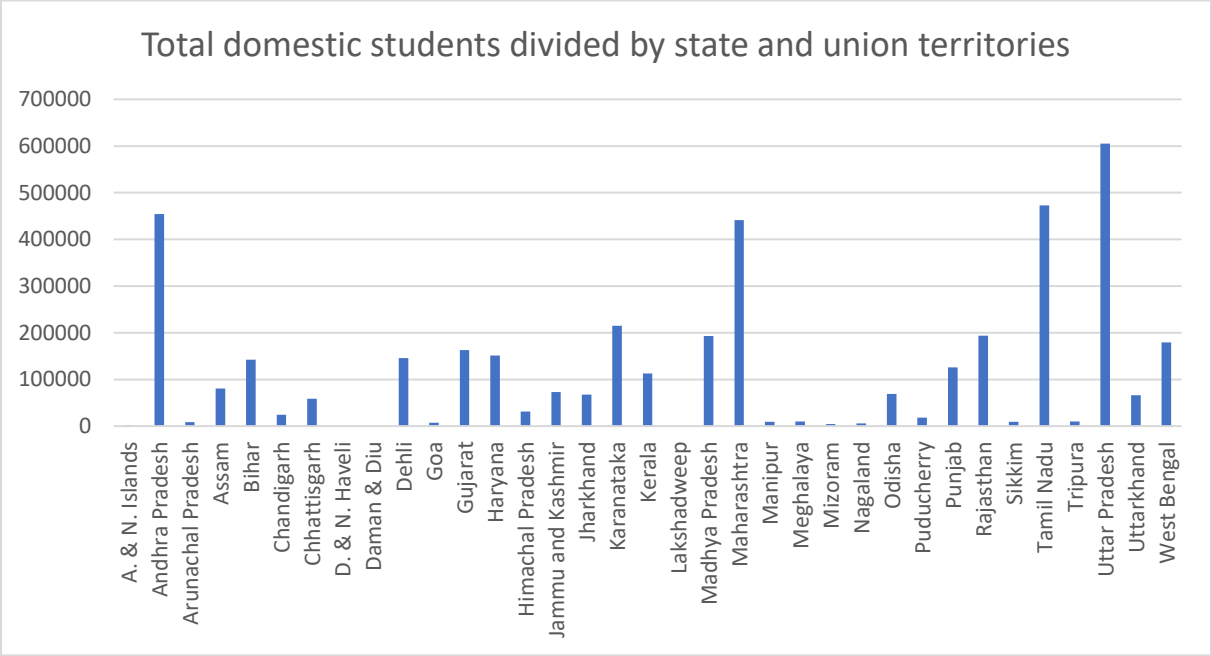

Figure 13: Total domestic students divided by state and union territories. Source: All India Survey on Higher Education

4.1.1 GSDP per state and UT

According to OLI Eclectic Paradigm, ownership advantages associated with a specific location acts as an important motivating factor driving international MNEs expansion strategy and their proclivity to choose locations based on these locations advantages (market size measured through GDP, infrastructure, tax benefits, institutional development and government policies and legislations (Dunning, 2008; Dunning, 1980). Especially, the market size hypothesis, measured though a locations GDPA, is often cited to be an important determining factor for foreign MNEs to engage in acquisition activities abroad as large markets enable economies of scale and lower productions costs, (Chakrabarti, 2001; Nagano, 2013; Li et al. (2016a; Ang, 2008).

Figure 14 below shows Gross State Domestic Product for each Indian states and UTs. As it can be easily observed from table showing the distribution of GSDP across India, some states have substantially large GSDP, for example GSDP for top six Indian states like Maharashtra, Andhra Pradesh, Tamil Nadu, Uttar Pradesh, Karnataka and Gujarat accounts for 57 percent of India's total GDP. As such and in accordance with importance of market size that the literature of FDI and cross border M&A posits, this skewed distribution of GSDP might have impact and be reflected in our analysis and the market size hypothesis we have outlined.

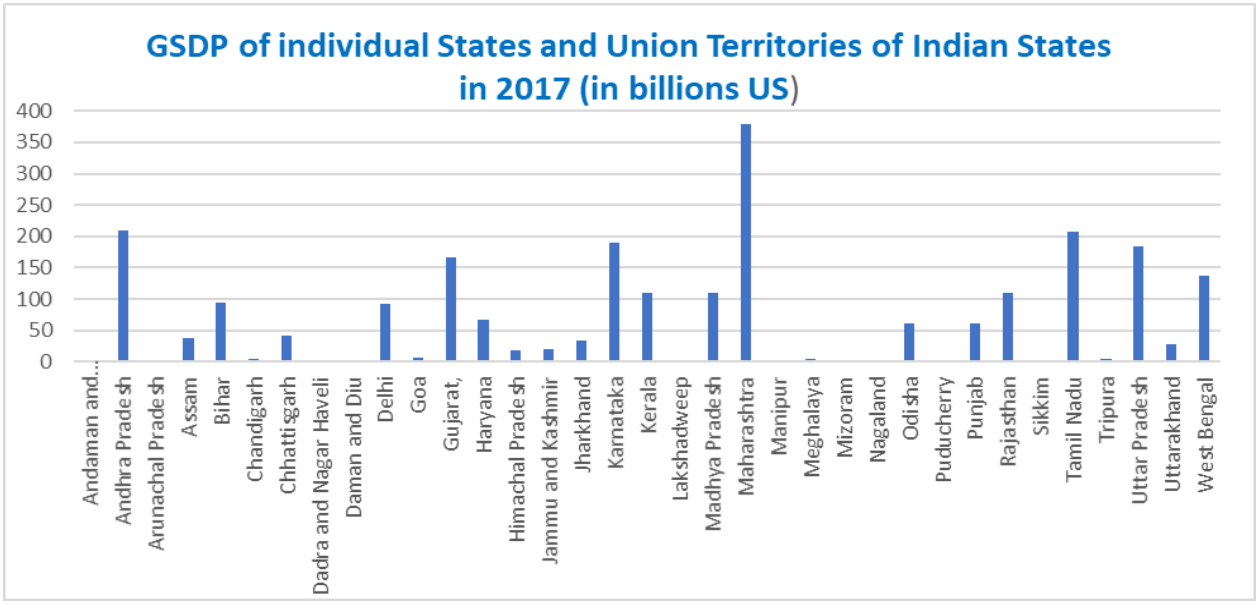

Figure 14: GSDP distribution by individual states and union territories in India. Source: Open Government Data (OGD) Platform India

4.2 OLS-regression 2005-2017

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,961[a]	0,924	0,895	5,795	1,949

b. Dependent Variable: M&A inflows 2005-2017

Figure 15: Model summary OLS-regression 2005-2017

Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
		B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	1,616	1,649		0,980	0,337			
	GSDP per state and UT	1,445E-10	0,000	0,613	1,645	0,113	0,023	43,715	
	Intstalled power capacity (kwH)	0,000	0,001	0,191	0,829	0,415	0,060	16,670	
	National highways (km)	-0,002	0,002	-0,249	-1,285	0,211	0,084	11,844	
	Crime	2,774E-05	0,000	0,161	0,803	0,430	0,079	12,623	
	Number of Universities	-0,143	0,305	-0,144	-0,469	0,643	0,033	29,882	
	Postgraduate domestic students	-5,186E-05	0,000	-0,399	-2,069	0,049	0,085	11,698	
	PhD domestic students	-0,001	0,001	-0,160	-0,715	0,482	0,063	15,870	
	Postgraduate international students	0,048	0,010	0,887	4,613	0,000	0,088	11,359	
	PhD international students	-0,036	0,042	-0,098	-0,850	0,404	0,238	4,196	
a. Dependent Variable: M&A inflows 2005-2017									

Figure 16: Coefficients matrix OLS-regression 2005-2017

HYPOTHESIS 1: ***MERGERS & ACQUISITIONS INFLOWS IS POSITIVELY RELATED TO GROSS STATE DOMESTIC PRODUCT WITHIN TARGETS STATES AND UNION TERRITORIES.***

The above is a model summary of our regression equation, and as it can be observed from the high R square value of 0,924, the model seems to provide a high correlation. We suspected that the high R square value of 0,924 could be related to multicollinearity, and thus we decided to test for multicollinearity by performing variance inflation factors (VIF) test in SPSS to delineate if there was any multicollinearity in our data sample.

As the reader can observe form the coefficients figure above (figure 16), there seems to indeed be variables that are causing multicollinearity. Variables GSDP and number of universities has extremely large VIF values of 43,715 and 29,882 respectively. These values are far above the VIF-value of 10, which are the boundary limit for variables and multicollinearity (Allen, 2017). As we had observed that there was multicollinearity in our dataset, we removed variables causing this.

Due to the variable GSDP being the highest culprit causing multicollinearity in our analysis, we couldn't measure the effects of this variable. The theoretical reasoning for including GSDP in our model was based on previous studies and research that found strong link between M&A inflows and size of a locations GDP. Furthermore, Indian states and UTs varies strongly in the distribution of GSDP, and we thought that this could be a good explanatory factor in our model. Because of the omission of this variable, we are in no position to interpret the effect of this variable on our dependent variable.

4.2.1 Stepwise-OLS regression 2005-2017

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	,932[a]	0,868	0,850	6,929	1,801	

a. Predictors: (Constant), Postgrad_interna, National_highway, Phd_domes, Cases_crime

b. Dependent Variable: M&A inflows 2005-2017

Figure 17: Model summary Stepwise OLS-regression 2005-2017

Correlations

		M&A inflows 2005-2017	National highways	Crime	PhD domestic students	Postgraduate international students
Pearson Correlation	M&A inflows 2005-2017	1,000	0,359	0,608	0,617	0,877
	National highways (km)	0,359	1,000	0,811	0,606	0,508
	Crime	0,608	0,811	1,000	0,751	0,662
	PhD domestic students	0,617	0,606	0,751	1,000	0,835
	Postgraduate international students	0,877	0,508	0,662	0,835	1,000

Figure 18:Correlation matrix Stepwise OLS-regression 2005-2017

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2,695	1,836		1,468	0,153		
	National highway	-0,003	0,001	-0,304	-2,629	0,014	0,339	2,947
	Crime	8,452E-05	0,000	0,490	3,500	0,002	0,232	4,314
	PhD domestic	-0,003	0,001	-0,517	-3,699	0,001	0,233	4,301
	Postgrad international	0,059	0,006	1,139	9,233	0,000	0,298	3,351
a. Dependent Variable: M&A inflows 2005-2017								

Figure 19: Coefficient matrix Stepwise OLS-regression 2005-2017

HYPOTHESIS 2: ***HIGHER INFRASTRUCTURE LEVELS WITHIN TARGETS STATE AND UNION TERRITORIES FUNCTIONS AS PULL FACTOR FOR MERGERS & ACQUISITIONS INFLOWS.***

Computing the OLS-regression on 2005-2017 data sample, we found that there are some strong associations between the variables. However, after conducting both a VIF test and a t-test, we had to remove some of the variables. If the t-values isn't strong enough, we take them out in the stepwise regression (1<t>-1). So, in (figure 19) we see that all the t-values are fitting, and also that the significance level is quite small (x < 0,05). This means that these variables could be possible pull-factors for M&As.

Due to high levels of multicollinearity indicating by the VIF value, we had to remove variable power capacity from our analysis. However, we also measured infrastructure through length of national highway. And there is significant evidence for that national highway has association with inflows of M&As, since the significance level for this variable is 0,014.

Based on the OLI paradigm, Location specific advantages are an important pull-factor for MNEs when they seek to expand their operations to new locations. Availability and quality of infrastructure is posited to facilitate ease of transportation and communication whereby minimizing transaction costs (Fedderke & Romme, 2006). Therefore, we chose to include *power capacity* and length of *national highways* as a measurement of infrastructure,

because existence of stable power capacity and road length tends to be important to a MNE opening business in a foreign location. One pitfall with these variables is that they are relative to the population. However, they still provide an understanding of urbanization within state-level India. So, considering the hypothesis we outlined, there are some associations that national road length functions as a pull-factor, and there is a significant evidence that can support this hypothesis. Regarding the variable power capacity, since it was causing multicollinearity in our analysis, we couldn't measure the effect of this on M&A inflows.

4.3 Educational resources OLS-regression 2010-2014 stepwise

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,882[a]	0,778	0,764	8,593
a. Predictors: (Constant), Postgrad_interna, Numb_univers				
b. Dependent Variable: M&As 2010-2014				

Figure 20: Model summary Educational resources OLS-regression 2010-2014 stepwise

Correlations

		M&A inflows 2010-2014	Number of Universities	Postgrad international students
Pearson Correlation	M&A inflows 2010-2014	1,000	0,547	0,878
	Number of Universities	0,547	1,000	0,696
	Postgrad international students	0,878	0,696	1,000

Figure 21:Correlations matrix Educational resources OLS-regression 2010-2014 stepwise

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,415	2,208		0,641	0,526		
	Number of Universities	-0,120	0,113	-0,123	-1,060	0,297	0,516	1,938
	Postgrad international students	0,050	0,006	0,963	8,305	0,000	0,516	1,938
a. Dependent Variable: M&A inflows 2010-2014								

Figure 22:Coefficient matrix Educational resources OLS-regression 2010-2014 stepwise

HYPOTHESIS 4: ***MERGERS & ACQUISITIONS INFLOWS IS POSITIVELY RELATED TO ACCSESS TO EDUCATIONAL RESOURCES WITHIN TARGET STATES AND UNION TERRITORIES.***

In our research we wanted to see how access to educational resources could function as a pull-factor on state level M&As. In the first correlation matrix in our analysis, there were a lot of highly correlated variables (> 0,500). However, after conducting a VIF-test and a t-test, we removed high VIF-values (> 10) and t-values (1 < t > -1) that didn't influence the dependent variable. That left us with number of universities and postgraduate international students as the only explanatory variables. In (figure 22) we can observe that the t-values for postgraduate international students fits 1 < t > -1, and that the significance level is > 0,05. This means that this could be a possible pull-factor for M&As. And we can say that M&A inflows is positively related t-o educational resources within states and UTs.

There is significant evidence that the number of postgraduate international student could be positively related to number of M&A inflows per state and UT. And there is no significant evidence that number of universities has an association with M&A inflows.

According to the literature of FDI, location that offer higher levels of educated populous, tend to generate a higher economic growth and investments from abroad. In previous research related to FDIs have shown that the distribution tends to follow into locations where there is higher level of educated people. (Broadman & Sun, 1997; Coughlin and Segev (2000). Since educational resources is used in previous research on the topic of FDI in a macro-level, we wanted to apply this to the state-level research we are conducting and see if there are any variations within. The empirical findings of our analysis do state that there could be some associations between access to educational resources and state level M&A inflows.

4.4 OLS-regression 2016 stepwise

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,727[a]	0,528	0,482	2,211	2,194
a. Predictors: (Constant), Postgrad international 2016, Crime 2016, PhD domestic 2016					
b. Dependent Variable: M&A inflows 2016					

Figure 23: Model summary OLS-regression cross-section 2016 stepwise

Correlations					
		M&A inflows 2016	Crime 2016	PhD domestic students 2016	Postgraduate international students 2016
Pearson Correlation	M&A inflows 2016	1,000	0,473	0,375	0,676
	Crime 2016	0,473	1,000	0,636	0,571
	PhD domestic students 2016	0,375	0,636	1,000	0,738
	Postgraduate international students 2016	0,676	0,571	0,738	1,000

Figure 24:Correlation matrix OLS-regression cross-section 2016 stepwise

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0,049	0,507		-0,097	0,923		
	Crime 2016	7,988E-06	0,000	0,253	1,551	0,131	0,573	1,746
	PhD domestic students 2016	0,000	0,000	-0,392	-1,975	0,057	0,387	2,583
	Postgraduate international students 2016	0,007	0,002	0,821	4,402	0,000	0,438	2,283
a. Dependent Variable: M&A inflows 2016								

Figure 25:Coefficients matrix OLS-regression cross-section 2016 stepwise

HYPOTHESIS 3: CRIME IS INVERSLY RELATED TO MERGERS & ACQUISITIONS INFLOWS IN TARGETS STATE AND UNION TERRITORIES.

In the analysis, crime came out with a lower correlation in the first cross-section regression ($x < 0,5$), although the t-value was fitting, so when we conducted the t-test, we had to bring it in to the stepwise regression. And there we can see that the t-value is > -1, and the significance level is quite low (0,131), (figure 25). This doesn't give us any clear answers; however, we can say that there is some association to crime being inversely related to M&A inflows, however, there is no significant evidence that crime is associated with M&A inflows within target state and UT.

Appearances of both general crime and organized crime lead to large negative effects on the society, and in relation to economic growth crime is said act as a hurdle for economic productivity and investments from abroad. Studies and research done on international business literature reveal how locations that suffer from crime, lack of governments ability to enforce legal framework can force firms and businesses to rely on private security, make payments to criminal for security (Kroska & Robeck, 2006). Because of our theoretical framework and previous research conducted by others, we included this variable in our model.

4.5 Firm level Poisson regression

States	M&A inflows 2005-2017	Average deal size 2005-2017	Average age of firm	Average firm experience
Dehli	16	5511	62	22
Gujarat	5	382	147	85
Haryana	14	733	101	38
Karnataka	19	478	67	43
Maharashtra	63	763	86	53
Tamil Nadu	7	227	48	17
Andhra Pradesh	9	205	63	34

Figure 26: Firm level statistics

```
. import excel "D:\Firm poisson 2005-2017.xlsx", sheet("Ark1") firstrow

. poisson M_Aflows20052017 AvergDeal_size_005_17 Averg_firm_age Averg_firm_exp

Iteration 0:   log likelihood = -49.608576
Iteration 1:   log likelihood = -49.602806
Iteration 2:   log likelihood = -49.602806

Poisson regression                              Number of obs     =          7
                                                LR chi2(3)        =      28.23
                                                Prob > chi2       =     0.0000
Log likelihood = -49.602806                     Pseudo R2         =     0.2215

------------------------------------------------------------------------------
M_Aflows20052017 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+------------------------------------------------------------
AvergDeal_size_005_17 |   .0001526   .0000616     2.48   0.013     .0000318    .0002734
        Averg_firm_age |   -.042524   .0092162    -4.61   0.000    -.0605875   -.0244605
        Averg_firm_exp |   .0690479    .014594     4.73   0.000     .0404441    .0976516
                 _cons |   3.240337   .280882    11.54   0.000     2.689819    3.790856
------------------------------------------------------------------------------
```

Figure 27: Firm level Poisson

HYPOTHESIS 5: ***HIGHER INTERNATIONAL EXPERIENCE OF ACQUIRING FIRM IS POSITIVELY CORRELATED WITH MERGERS & ACQUISITIONS INFLOWS.***

When testing for the firm specific determinants, we wanted to use a Poisson regression, because this was count data. As shown in (figure 27) we had to use Stata instead of SPSS, to compute the Poisson.

From (figure 27) we can see that the p-values all are nested within the prerequisite (1< p > -1). Due to this, we didn't need to remove any variables out of the Poisson regression, and compute a stepwise regression. There are some significant findings, and some that we just can say that are positively associated with M&A inflows. Also, we can see that the Likelihood ratio for a Chi-square test (28,23) and a P-value (0,000). This basically determines the incorporated predictors and how they add any significant improvement to the model versus a model with no predictors (Dunteman, G, H., & Ho., M.R. 2006). Since the value is less than 0,05, which means that regression model is in the acceptable range for acceptance.

There is significant evidence that deal size, and firm experience is an explanatory variable for M&A inflows within state and UT.

According to the literature MNEs possesses both tangible and intangible assets, and their prior international experiences with new locations gradually enables them to cope with new environments. The literature also states that establishing business abroad adds to the cost of doing business, and a specific cost is related to the concept of liability of foreignness (e.g. local competitors, lack of knowledge about local culture and language). (Nielsen et at., 2015; Zaheer & Mosakowski, 1997). As mentioned earlier in this paper, the states within India are in different developmental stages, and as a result they will be seen and evaluated on basis of the risk the states pose for foreign entering firms. As such, the strongest association to the dependent variable is firm experience. This means that the hypothesis still stands, and that higher international experience is positively related to number of M&A inflows.

4.6 Z-tested Poisson regression cross-section 2016

```
. poisson M_As_flows_16 Nation_highw_16 Postgrad_dom_16 PhD_dom_16 Postgrad_int_16 PhD_int_16

Iteration 0:   log likelihood = -56.863712
Iteration 1:   log likelihood = -35.671989
Iteration 2:   log likelihood = -32.849331
Iteration 3:   log likelihood = -31.931882
Iteration 4:   log likelihood = -31.925668
Iteration 5:   log likelihood = -31.925665

Poisson regression                              Number of obs     =         34
                                                LR chi2(5)        =     105.68
                                                Prob > chi2       =     0.0000
Log likelihood = -31.925665                     Pseudo R2         =     0.6234
```

M_As_flows_16	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Nation_highw_16	-.0010209	.0002499	-4.09	0.000	-.0015107	-.0005312
Postgrad_dom_16	.0000165	3.40e-06	4.86	0.000	9.86e-06	.0000232
PhD_dom_16	-.0001927	.000047	-4.10	0.000	-.0002848	-.0001005
Postgrad_int_16	.0055894	.0010523	5.31	0.000	.0035269	.007652
PhD_int_16	-.0034271	.0030256	-1.13	0.257	-.0093571	.0025029
_cons	-.6592037	.4168923	-1.58	0.114	-1.476298	.1578901

Figure 28: Poisson regression cross-section 2016 Z-tested

After doing a cross-section OLS-regression, we wanted to do a cross-section Poisson, to compare the data. We can see that the Likelihood ratio for a Chi-square test (105,68) and a P-value (0,000), (figure 28). This basically determines the incorporated predictors and how they add any significant improvement to the model versus a model with no predictors. When we see this up to over OLS-regression, some of the variables have a smaller explanatory power, (1< z > -1). However, all over we get more significant findings. The variables that where significant in the OLS-regression, is also significant in the Poisson regression. And additionally, to our findings in the OLS-regression, we saw that in the Poisson postgraduate domestic students and PhD domestic where significant, while it was not significant in the OLS-regression. The above-mentioned arguments reiterate that hypothesis 2, and hypothesis 4 still stands, and could have strong association with M&A inflows within state and UTs.

In the next chapter we have provide the reader with a short conclusion of this thesis and suggested direction for future research.

Chapter 5 – Conclusion and future research

This chapter consists of a short conclusion and recommendations for future research

5.0 Conclusion

This thesis was based on the identified research gap on determinants on cross-border mergers and acquisitions. We chose India as our case study, as it is an important player in the global economy and has been one of the largest recipients of cross-border M&As for the two decades. The primary objective of this study was to find which socio-economic and firm level factors which increase the willingness and likelihood of M&A flows from developed- to emerging economies. We chose to write our thesis on subnational (state) level as this was an area which lacks sufficient research.

In our study we found that access to educational resources and length of national highways may be considered as pull-factors for M&A inflows. There are a clear association with these independent variables and the number of M&As per state and UT. However, since these are socio-economic factors, using observational data, we have to be humble in our interpretation of the results, and we can't draw a causal conclusion. As such, we have to assume that there are associations between the above mentioned explanatory variables and M&A inflows.

Our main theoretical framework is centred around the OLI paradigm, and as we see from the analysis the factors that is significant is part of the location advantages component of this framework. The location specific advantages proposed by the OLI eclectic paradigm focuses on advantages associated with a location, and according to Dunning (1976) these advantages functions as a pull-factor for MNEs that want to expand into new markets. There are numerous research and studies done in other countries and markets that lend support to the location specific advantages identified by the OLI paradigm (Chen et al., 2009; Dang & Henry,

2016; Ang, 2008). and our findings support this, but with a state-level perspective within India.

We also approached our thesis from a firm specific perspective by including variables such as age of the acquiring firms, their international experience and the deal size associated with each transaction. The only significant evidence was with international experience of the acquiring firms, due to a limitation with time and resources this firm specific data sample was quite smaller than our main data sample on socio-economic factors. Therefore, we can't with certainty proclaim that there is an association with number of M&A inflows per state and UT and the firms international experience.

5.1 Recommendations for future research

Plenty of research study has been conducted in the area of cross-border M&As the last couple of years. We chose to use this previous research and apply it to a state-level perspective. With this study we wanted to contribute to the already existing research, and supplement it with the identified research gap in our thesis. However, there are still many avenues that can shed a better light on determinants and pull-factors for cross-border M&As.

Firstly, we recommend applying this research strategy to another country and investigate it within subnational and regional level. Our research has only focused on India, and it could be interesting to see if similar findings can be generated when applying it to other markets, or if the findings appear contrary.

Secondly, our focus was manly the location advantages in the OLI paradigm. We recommend that future research should apply one of the other aspects of the paradigm, such as Ownership- or internalization advantages. Either by investigating deeper the ownership advantages of the acquiring firm, or which approach is used when expanding into new markets, such as partial versus full acquisition.

Thirdly, we have applied a socio-economic and firm-level perspective. And in future research we recommend investigating the state-level markets with an industry related perspective.

This can provide answers to which industry is most attractive for developed economies to invest in, and which are not the desirable to invest in.

Lastly, these are only our suggestions, and there are many possibilities, scopes and ranges to explore and research.

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7.0 Appendices

7.1 Educational resources OLS-regression 2016 stepwise

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,701[a]	0,491	0,459	2,259	2,092

a. Predictors: (Constant), Postgrad_int_16, PhD_dom_16

b. Dependent Variable: M_As_flows_16

Correlations

		M&A inflows 2016	PhD domestic 2016	Postgrad international 2016
Pearson Correlation	M&A inflows 2016	1,000	0,375	0,676
	PhD domestic 2016	0,375	1,000	0,738
	Postgrad international 2016	0,676	0,738	1,000

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0,266	0,474		0,561	0,579		
	PhD domestic 2016	0,000	0,000	-0,273	-1,459	0,154	0,455	2,196
	Postgrad international 2016	0,008	0,002	0,877	4,696	0,000	0,455	2,196

a. Dependent Variable: Merger & Acquisitions 2016

7.2 Access to educational Resources Poisson

```
. poisson M_As_flows_16 Postgrad_dom_16 PhD_dom_16 Postgrad_int_16

Iteration 0:   log likelihood = -65.192782
Iteration 1:   log likelihood = -45.055928
Iteration 2:   log likelihood =  -42.28065
Iteration 3:   log likelihood = -42.126903
Iteration 4:   log likelihood =   -42.1267
Iteration 5:   log likelihood =   -42.1267

Poisson regression                              Number of obs     =         35
                                                LR chi2(3)        =      87.65
                                                Prob > chi2       =     0.0000
Log likelihood =   -42.1267                     Pseudo R2         =     0.5099
```

M_As_flows_16	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Postgrad_dom_16	4.33e-06	1.01e-06	4.29	0.000	2.35e-06	6.30e-06
PhD_dom_16	-.0000642	.0000359	-1.79	0.074	-.0001346	6.23e-06
Postgrad_int_16	.0022876	.0003913	5.85	0.000	.0015207	.0030544
_cons	-1.474692	.3788629	-3.89	0.000	-2.21725	-.7321344

7.3 Reflection notes

Reflection note by Preben H. Stene

Our main theme of the thesis has been what functions as pull-factors in mergers and acquisitions. We wanted to see how socio-economic factors could generate cashflow within in a country, and then could be used for attracting more M&As in the future. We have investigating variables such av access to educational resources, infrastructure and firm-specific determinants which could explain why firms choose to invest at certain countries, areas or regions. This kind of research have been conducted earlier, however, not on a state level. Therefore, we wanted to see if the same variables that functions as pull-factors on country level, could be the same for state level.

Our main findings where that education level and infrastructure could possible be pull-factors. We wanted to measure how each states GDP could explain the distribution of M&As,

however we had some issues regarding multicollinearity in our dataset, so we couldn't use this in our analysis.

International trends

The broader international trends is showing that investing through M&As is increasing. We used India as our case-study, because it is one of the fastest growing economies in the world. Also, it is interesting to see how developed economies invest in emerging economies. If this trend continues, emerging economies will generate an increasing cashflow over the next decade, which could lead to them stepping out of the term emerging, and into a developed economy. If they know how to manage and use this to an advantage in the future, they can avoid the middle income trap. The reason why this kind of research is important, is that when we can identify pull-factors, the politics and governmental institutions can use this in their work, so they can attract more M&As in the future.

Innovation

If they generate more cashflow to the respective country, it could lead to investment in more innovation. And this could make a trend in the host country of the M&As, and then it could highlight the opportunities that come from innovation. Also, when a foreign country invests in another country, it leads to knowledge- and technology sharing, which can create new ideas, and break down the technological barriers which earlier have been the threshold with innovation in the host country. If foreign investors from gather themselves and create an incubator for helping each other in the new market, and better understanding the market. It can lead to new ideas and innovation through the incubator.

Responsibility

By bringing in other respective cultures to a country and corporate culture, it can help contributing to the responsibility. People with different cultural background can learn from one another, and enlighten other of how their respective culture functions related to corruption, workers health and safety or environmental issues. This can lead to an beneficial educational experience for all parts involved, both the host country, and also the foreign investing company. Its also important that the acquiring firm follows corporate social responsibility (CSR), and do not exploit the workers in the host country. For example if a Norwegian company invest in India, only to exploit the benefits from paying the workers a

lower salary, or that it is a lower standard on the working facilities. The responsibility also relates to companies polluting in South-America, they need to follow CSR. They need to treat both workers, consumers and host country as means to their means, and not means to their ends.

After thoughts

Writing our master thesis have been a good learning experience, and I have used and tested a lot of the knowledge gained in the last five years at this university. Also, I have learned a lot of new things, like how to analysis and interpret different types of data. We have met obstacles along the way, but we have worked through with good help from our supervisor and other professors and the business and law faculty. I now feel more capable of the challenges I will meet in my professional life.

Reflection note by Tariq Nawaz

Our thesis related to cross-border mergers and acquisitions (M&As) in the context of emerging economies. The country we chose to focus our thesis on was India, and we wrote about variances in (M&As) that occur across India at regional level. We choose to write about India is an Important country with a large population and seen an upcoming economic giant. We specifically choose to write about Mergers and acquisitions investment that come into India from developed countries. Our findings revealed that access to educational resources coupled with general infrastructure such as length of national highways as possible causal link to explain why some states and union territories received more M&As than others. We also found that firm level characteristics of the acquiring firm measured through their general international experience could also be an explanatory factor effecting inflows of M&A investments in India.

Internationalization

Mergers and acquisitions is a global phenomenon that has accelerated during the past two decades where countries such as India has been receiving large levels of inflows of M&A investments from abroad. Thus, the topic we chose to write about should be considered an international phenomenon that stretches across many border and regions. As global trade and exchange of businesses is going to further expand, we believe the topic of cross-border

mergers and acquisition is a highly important topic that can shed light on how regions and countries can organize their resources to take part in cross-border mergers and acquisitions.

When it comes to how Indian states and union territories can sustain the level of mergers and acquisitions they receive, we think that continues investments in providing better infrastructure and having a more educated populous can help them to sustain the level of mergers and acquisitions investment from abroad.

Innovation

In terms of how the topic of cross border mergers and acquisitions relates to innovation, the theory of mergers and acquisitions highlights that motives for M&A flows stems from factors such as marked dominance, technology sharing or sharing of managerial skills for companies that combine their resources to merge into one company. Thus, firms that enter the India market can accelerate domestic firms' competitiveness and their ability to innovate. Furthermore, cross border mergers and acquisitions also occurs when firms from countries like India buy shares or merge with firms in the developed countries. Such firms can utilize their newly acquired knowledge, technology and innovation to established subsidiaries back in India that can benefit India as a country.

Responsibility

In terms of responsibility, we think that many firms that enter the Indian market may be mainly driven by profit. As India is still a developing country where institutions are less developed, firms that enter India may forget their corporate social responsibility and only look at India and its people as means to their own goals. I state this as there are numerous examples of western firms who have invested in developing countries and make large profit, but to not fulfil their social responsibilities. I would suggest that firms who enter the Indian market fulfil their social responsibility by creating shared value, meaning they produce products and services that create value for both for the company and the large environment around them. As an example, I would refer to telecommunication companies who entered in developing countries by empowering the poor population in the rural areas by providing them with banking services through mobile phones, thereby creating shared value for all of the stake holders.

In the end I would like to express my satisfaction working with this thesis. I have learned a lot about India as a country and mergers and acquisition in the context of what forces drive such waves in counties like India. I also feel that I have been able to utilize lots of knowledge and insight that I gained from other courses in my master's programme. Writing this thesis has therefore been a good exercise for me in terms of memorizing and reflecting on knowledge I have gained from this master's programme. I hope and think to use the gained understanding of the topic of mergers and acquisitions in my future career.