Factors Determining Inbound and Outbound M&A in an Industry in India

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Abstract

There is an increasing trend in outward and inward FDI from India and in India over last one decade. It is interesting to observe that some industries have attracted more inward and outward FDI as compared to others. This paper is an attempt to look at the industry level factors that determine the inward and outward FDI in an industry. We measure FDI with number of M&A deals in that industry in that year. The findings of the paper suggest that capital intensity of the industry has a positive impact on outbound M&A in that industry; however import growth rate and domestic growth rate did not have any impact on outbound M&A. Similarly, import growth rate is positively related to inbound M&A as per our expectations; however domestic growth rate and capital intensity had no impact on inbound M&A.

Determining Inbound and Outbound M&A in an Industry in India

INTRODUCTION

There has been an increasing trend of internationalization from emerging markets as well as in emerging markets. Ramamurti and Singh (2009) state four motivations behind internationalization of firms: a) market seeking, b) resource seeking, c) strategic asset seeking, and d) opportunity seeking. Different firms have different motivations to go for internationalization. Similarly, firms choose different modes of entry foreign markets like alliances, Joint ventures, mergers and acquisitions (M&A), and internal development. There are firm, industry, and country specific factors that determine the internationalization decisions of the firm (please see review by Hitt, Tihanyi, Miller, and Connelly, 2006). Firm specific factors like firm's size, age, leverage, R&D intensity, synergies, ownership and board structure impact firm's degree of internationalization as well mode of entry in international market.

I would like to thank Mr. Vikram Agarwal (student, IIM Ahmedabad) for initiating this project and helping in compiling the data. This work would not have been possible without Vikram's help.

Similarly, industry level factors like competition, capital or labor intensity of industry, external risk involved (like acceptance by customers), and growth rate, to list a few, determine such choices. Further, country specific factors like labor cost, ecosystem of the country, trade policies, regulations etc. too impact firm's choices related to its international strategy.

In this paper, we examine the impact of industry level factors on the inbound and outbound M&A in an industry in India. The motivation to examine this relationship came from interesting trends of inbound and outbound M&A in India. Please refer to various figures shown in Appendix of this paper that depict inbound and outbound M&A trends on different industries over a span of eleven years. It is interested to observe that some industries are experiencing cyclical patterns of M&A activity, some have very high level fo M&A activity like IT/ITES and

Pharmaceutical industry; on the other hand, some industries experience very low level of M&A activity. Overall, there seems to be increase in M&A activity over the last two decades. These figures raise interesting questions on what is driving these M&As in and out of India and why are there industry level differences. Therefore, we examine this phenomenon in this paper. We choose to examine internationalization (Foreign direct invest or FDI) via M&A because of availability of longitudinal data on this variable. Therefore, number of deals in M&A in an industry in a year is a good indicator of level of FDI in that industry. Researchers have done substantial work on determinants of M&A both in western and emerging economy context; however there is limited work in the Indian context that looks at the relationship between industrial factors and industry's level of M&A activity. Therefore, it is important to examine if the existing theories that have originated from the western context are valid in Indian context or not.

HYPOTHESES

As discussed above, there are many firm, industry, and country specific factors that would impact a firm's decisions related to internationalization. We study impact of industry level factors: capital intensity, growth rate of industry, and imports growth rate in the industry on industry's M&A activity.

India has certain comparative advantages over other countries. These advantages are related to low cost of raw material and labor, increasing purchasing power parity and hence increasing market size, English speaking population, Information technology, availability of skilled labor to list a few. Further, post liberalization of the Indian economy in 1991 and recent changes in FDI regulations, Indian market has become more open to inward FDI in many sectors or industries. Corporate governance norms in India have been evolving and are at par with some of the western countries. Given these positive changes in the Indian economy, many foreign firms are investing in India in the way of inward FDI (inbound M&A in this paper). These firms have market seeking and resource seeking (raw material, labor) and sometimes opportunity seeking (future potential of growth) as motivations to enter Indian market. Similarly, Indian firms are

experiencing competition from foreign MNCs in their domestic market and also feel the need to compete with these foreign MNCs at global level. Indian consumers are becoming more demanding with increasing exposure to foreign brands; consumers want good quality products but at cheaper prices. Given these changing environment, Indian firms are feeling pressure to acquire new technology and keep up pace with foreign MNCs. Therefore, many Indian firms are venturing abroad either to seek technology (strategic asset) or gain knowledge about foreign markets and what their consumers want to stay ahead of competition (opportunity seeking), and sometimes for market seeking (esp. in other emerging markets).

Therefore, we expect industries in India that are high on capital intensity to have more outbound M&A activity than inbound M&A.

Hypothesis 1 a: Capital intensive industries in India will have more outbound M&A as compared to labor intensive industries in India.

Hypothesis 1b: Capital intensive industries in India will have low inbound M&A as compared to labor intensive industries in India.

On similar lines, if an industry is growing then it would attract more inbound M&As because there is scope for other companies to cater to increasing demand. Further, when your own market is growing then firms may not explore outbound M&A and would prefer to focus on domestic market first. Therefore,

Hypothesis 2a: Domestic growth rate of an industry in India is negatively related to outbound M&A from that industry in India.

Hypothesis 2b: Domestic growth rate of an industry in India is positively related to inbound M&A in that industry in India.

Further, if the import growth rate in an industry is high, that means competition in that industry is increasing and domestic firms may like to go for outbound M&A to be able to compete with foreign MNCs both in their domestic market as well as foreign market. On the other hand, if

import growth rate in an industry is high, this indicates that foreign MNCs are able to establish their footprint in the industry and therefore, these firms will like to commit high resources in these industries and exploit their existing capabilities more in this market. This is in line with Uppsala model of internationalization (Johnson and Vahlne, 1977), which proposes that firms go for low resource commitment option in foreign markets first and once they get success, they increase their resource commitment (FDI) in these markets. India is a foreign market for foreign MNCs; therefore, these firms try to test Indian market first with imports and later with FDI. Therefore,

Hypothesis 3a: Increase in import growth rate in an industry leads to high levale of outbound M&A from that industry.

Hypothesis 3b: Increase in import growth rate in an industry leads to high level of inbound M&A in that industry in India.

DATA and VARIABLES

We looked at data on inbound M&A in India and outbound M&A from India for the period 2004-14. The data has been collected from venture intelligence. It is an unbalanced panel for 30 industries for a period of 10 years leading to 226 industry-year observations.

Dependent variables: There are two dependent variables for two different regressions. One is no. of deals under inbound M&A category in India. This is the number of M&As being done by firms of foreign origin in India. Second variable is no. of deals under outbound M&A category from India. This is the number of M&As being done by Indian firms in foreign countries.

Independent variables: We use capital intensity of the industry, import growth rate in the industry, and domestic market growth rate as independent variables.

METHODOLOGY

We use fixed effect panel data regression to test our hypotheses. This helps in controlling for industry and year effects. We use Eviews to run regressions. White cross-section test has been used to take care of heteroscadisticity. The results of the regressions are presented in tables 1 and 2. VIF for the variables is less than 10 so there is no issue of multi-collinearity.

Results and Discussion:

We present results corresponding to outbound M&A in table 1 and results corresponding to inbound M&A in table 2.

Table 1 shows that coefficient corresponding to capital intensity is positive and significant at 10%; this indicates that industries that are capital intensive go for more outbound M&A. This supports our hypothesis 1 a.

However, coefficients corresponding to imports growth rate in the industry and domestic growth rate of the industry are not significant and therefore, we do not find support for hypotheses 2a and 3a for outbound M&A.

Table 2 shows that coefficient corresponding to capital intensity and domestic growth rate are not significant indicating lack of support for hypotheses 1b and 3b. However, coefficient corresponding to imports growth rate is positive and significant. This shows support for hypothesis 2b. This result indicates that if the imports in an industry are higher, we would see more inbound M&A in that industry.

The findings of the paper suggest that capital intensity of the industry has a positive impact on outbound M&A in that industry this is in line with what we observe in the Indian context. Capital intensive industries need more technology and Indian firms venture abroad to acquire technology so that they could compete with firms in domestic as week as foreign markets. This finding is in

line with the work of researchers like Gubbi et al., (2010) where they state that most of the outward FDI from India are to seek strategic assets (technology).

Further, it is surprising to see no impact of domestic growth rate on outbound as well as inbound M&A. One possible explanation for no relationship between growth rate and M&A is the level of competition and the level of product/service differentiation in the industry. Therefore, there is need to add more variables in the regression to understand nuances of these relationships.

Another interesting result is positive impact of imports growth rate on inbound M&A. this result supports the view that firms test foreign markets by entering with low resource commitment options. IN this case, foreign firms enter Indian markets with low cost option that is Import. Once they see growth in imports, they go for next level of internationalization cycle that is FDI or high resource commitment option. That is why inbound M&A by foreign companies in India are more for industries with high imports growth rate. Similarly, capital intensive industries do not see to be having high inbound M&A; this is again in line with the existing literature. In Indian context, technology is not easily available for industries and that is why a capital intensive industry will not experience M&As from foreign companies in India. However, a labor intensive industry is expected to have higher level of inbound M&A. Since the variable 'capital intensity of the industry' is a dummy variable where 1 means the industry is capital intensive while the 0 means industry is not capital intensive indicating it is labor intensive. So, we can't conclude from the non-significant result that labor intensive industries are attracting more M&A in India. We need to look more closely at the data to understand this relationship more in our future work.

CONCLUSION

This paper is an attempt to examine the impact of industry factors on outbound and inbound M&A in the Indian context. We use unbalanced panel on 30 industries for a period of 10 years. The results show support to some of the existing findings in the literature in an emerging economy context (India). At that same time, some results do not support to already established beliefs related to impact of domestic growth rate on firm's inbound and outbound M&A. This intrigues us to look at the industry-FDI relationship further to examine if already established notions/theories of western and developed context will be valid in an emerging economy context as well. Therefore, our future work on this paper will look at more industry related factors to understand the relationship between industry-FDI in a better way.

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TABLES

Table 1: Regression Results with Outbound M&A as a dependent variable

Dependent Variable: OUTBOUNDMNA
Method: Panel Least Squares
Date: 02/28/16 Time: 01:05
Sample: 2004 2014
Periods included: 11
Cross-sections included: 21
Total panel (unbalanced) observations: 226
White cross-section standard errors & covariance (d.f. corrected)
WARNING: estimated coefficient covariance matrix is of reduced rank

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_INTENSITY_IN_PER	0.052650	0.030432	1.730095	0.0852
DOMESTIC_MARKET_GROWTH_G	0.027163	0.025028	1.085294	0.2792
IMPORT_GROWTH	-0.000900	0.001177	-0.764861	0.4453
C	3.788854	1.491490	2.540315	0.0119

Effects Specification

Cross-section fixed (dummy variables)
Period fixed (dummy variables)

R-squared	0.848322	Mean dependent var	6.504425
Adjusted R-squared	0.822252	S.D. dependent var	12.45588
S.E. of regression	5.251420	Akaike info criterion	6.292720
Sum squared resid	5294.864	Schwarz criterion	6.807313
Log likelihood	-677.0773	Hannan-Quinn criter.	6.500389
F-statistic	32.54050	Durbin-Watson stat	1.123350
Prob(F-statistic)	0.000000		

Table 2: Regression Results with Inbound M&A as dependent variable

Dependent Variable: INBOUND_MNA
Method: Panel Least Squares
Date: 02/28/16 Time: 01:04
Sample: 2004 2014
Periods included: 11
Cross-sections included: 21
Total panel (unbalanced) observations: 226
White cross-section standard errors & covariance (d.f. corrected)
WARNING: estimated coefficient covariance matrix is of reduced rank

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_INTENSITY_IN_PER	-0.021376	0.013616	-1.569935	0.1181
DOMESTIC_MARKET_GROWTH_G	-0.006932	0.009281	-0.746943	0.4560
IMPORT_GROWTH	0.002319	0.000454	5.108832	0.0000
C	5.757781	0.606776	9.489133	0.0000

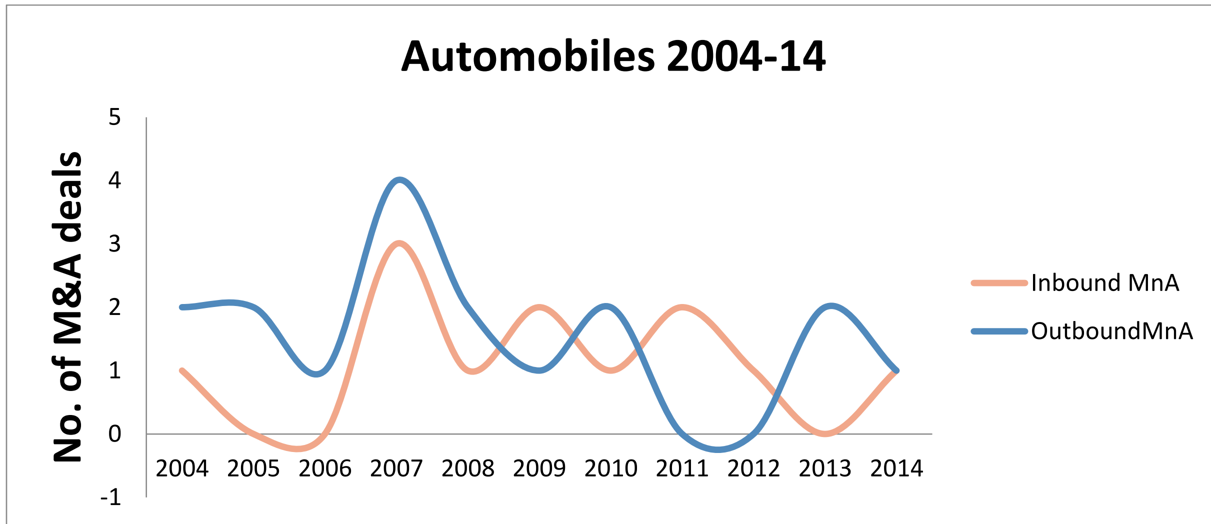
Effects Specification

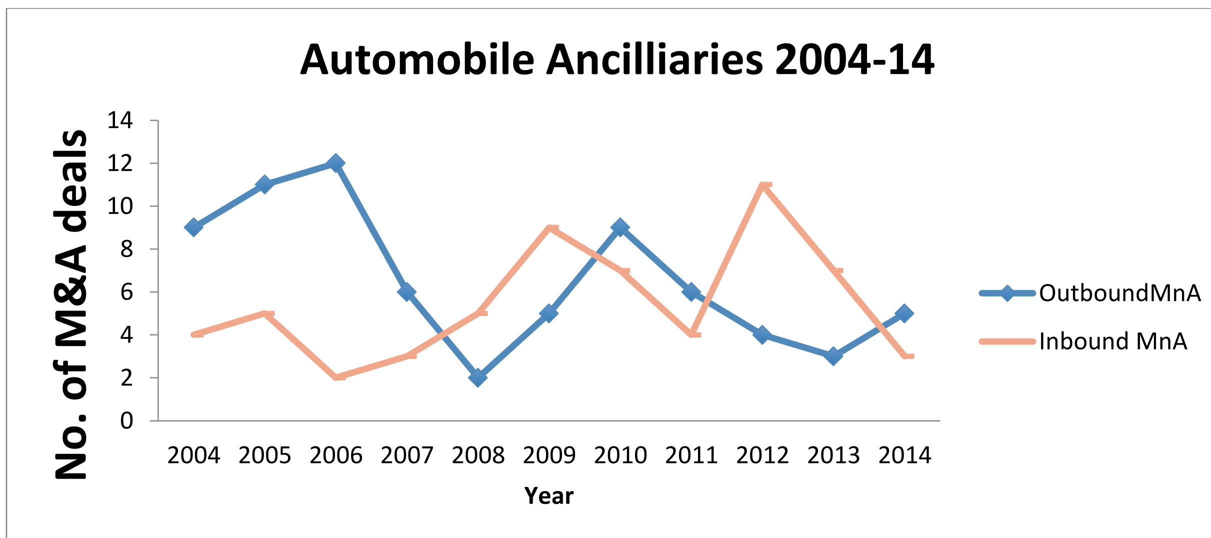
Cross-section fixed (dummy variables)
Period fixed (dummy variables)

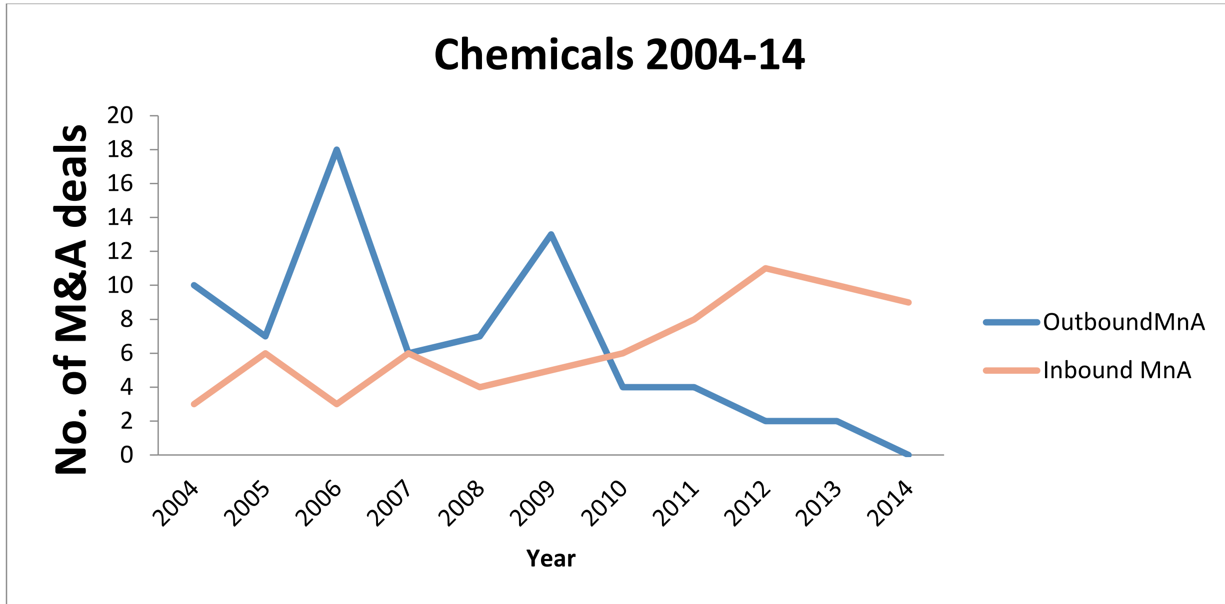
R-squared	0.844230	Mean dependent var	4.867257
Adjusted R-squared	0.817456	S.D. dependent var	6.311900
S.E. of regression	2.696766	Akaike info criterion	4.959829
Sum squared resid	1396.329	Schwarz criterion	5.474423
Log likelihood	-526.4607	Hannan-Quinn criter.	5.167498
F-statistic	31.53281	Durbin-Watson stat	1.915184
Prob(F-statistic)	0.000000		

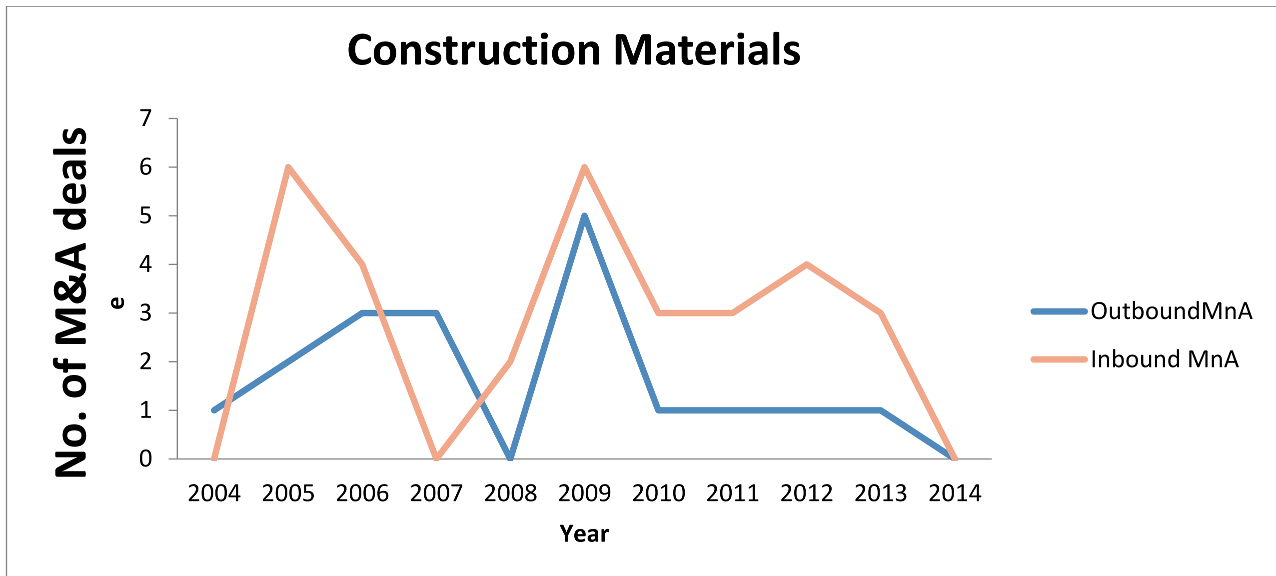
Appendix

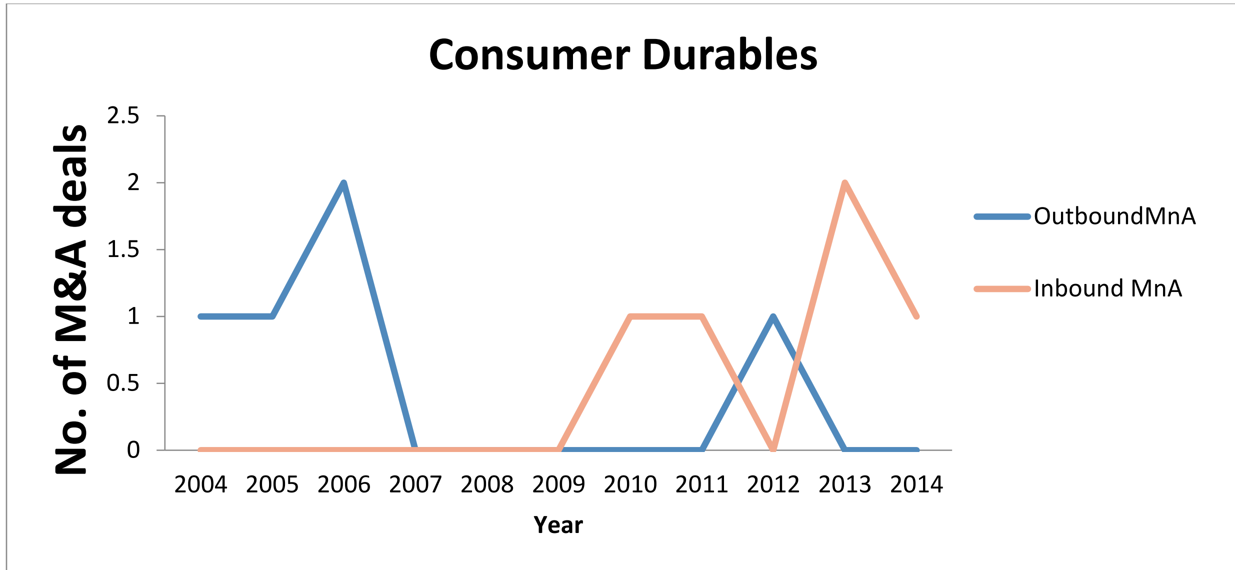
Outbound and Inbound M&A Plots on Different Industries for the Period 2004-14.

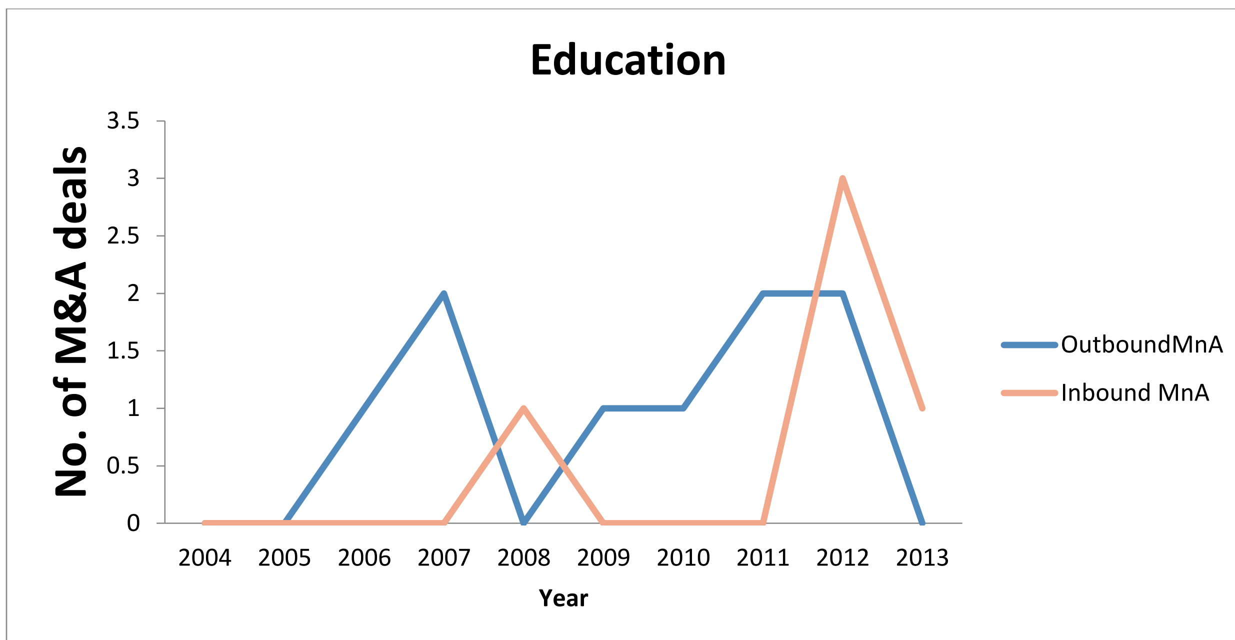


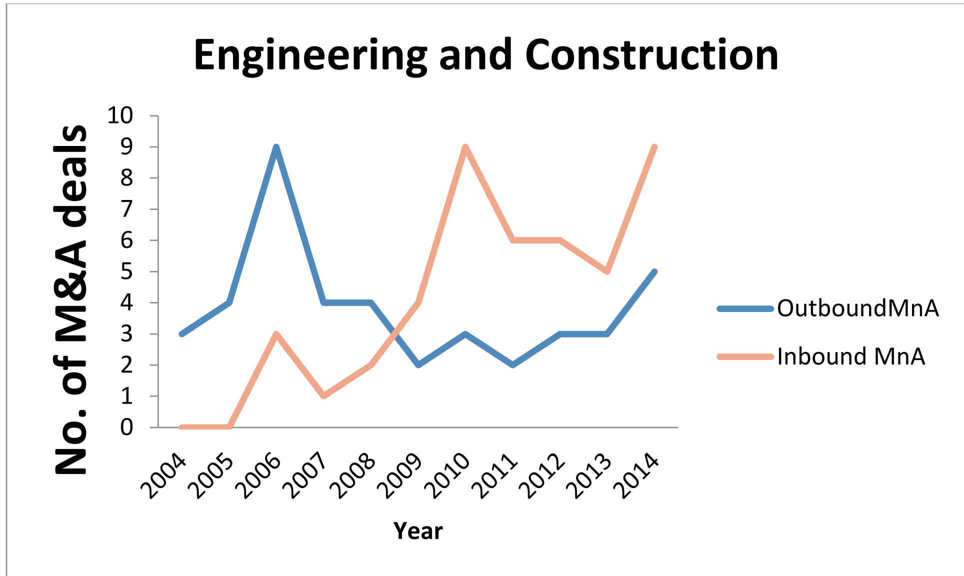


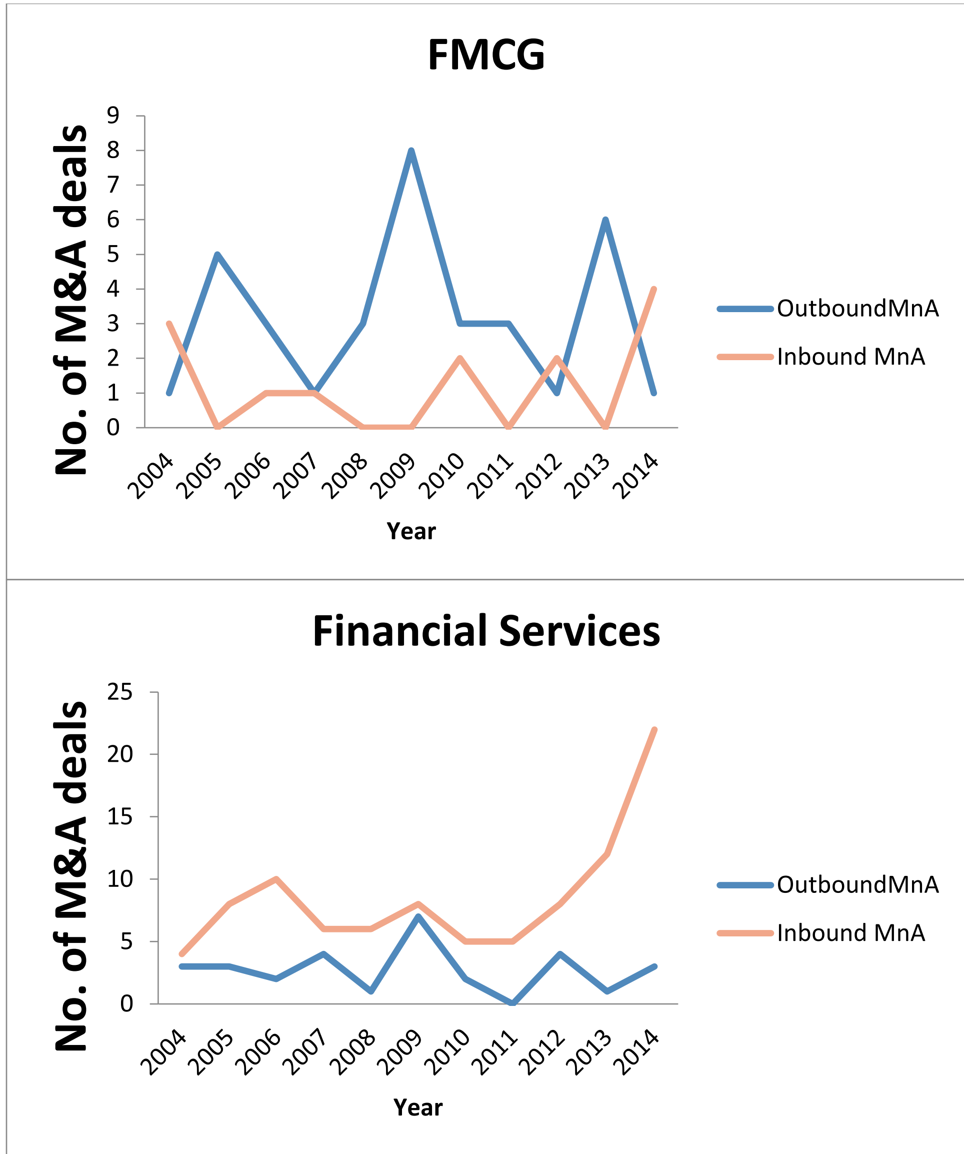

Chemicals 2004-14
No. of M&A deals
20
18
16
14
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

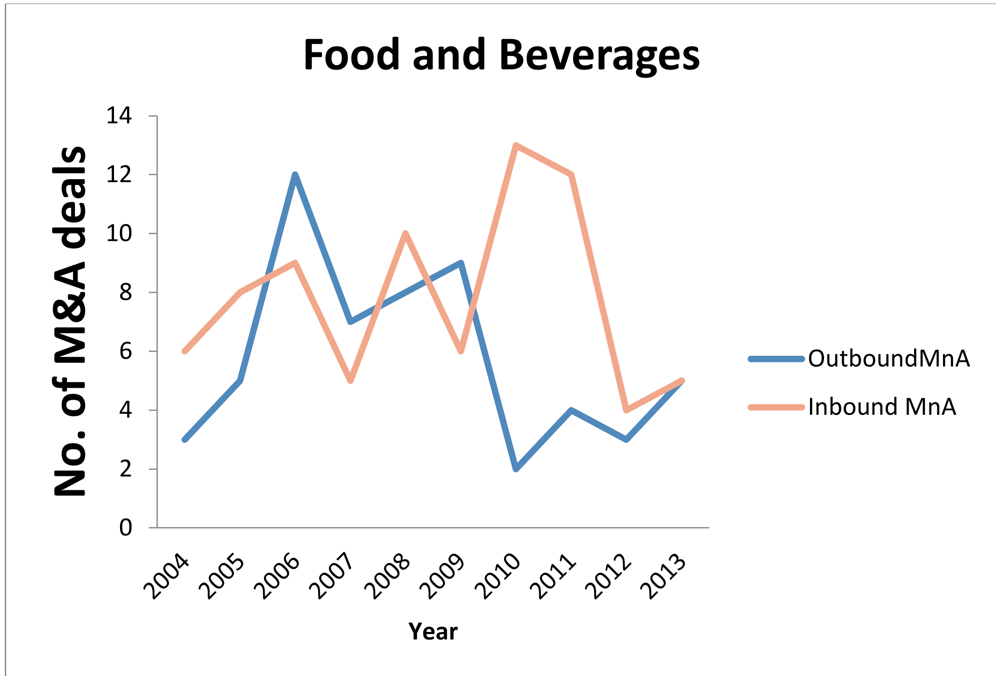

Construction Materials
No. of M&A deals
e
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

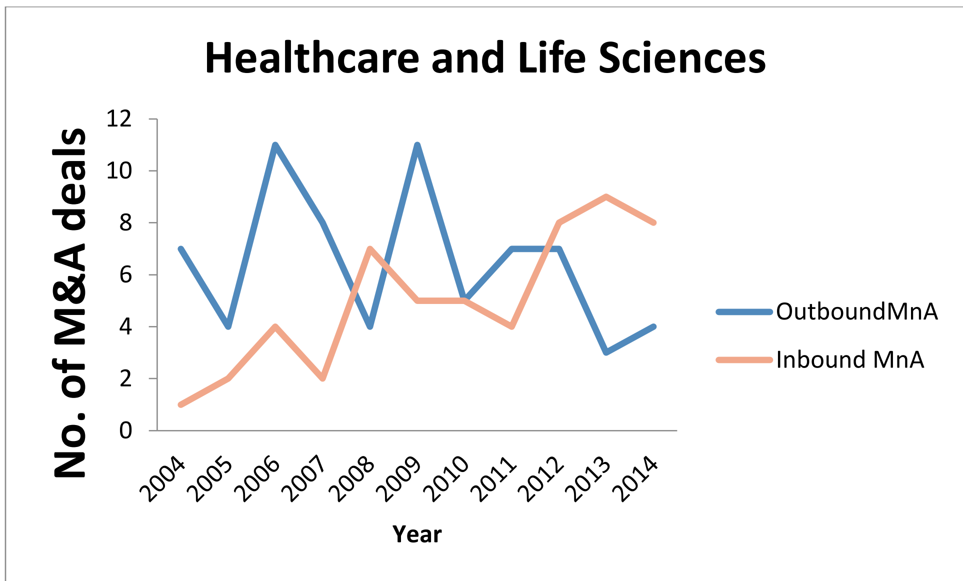

Consumer Durables
No. of M&A deals
2.5
2
1.5
1
0.5
0
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014
Year
OutboundMnA
Inbound MnA


Education
No. of M&A deals
3.5
3
2.5
2
1.5
1
0.5
0
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
Year
OutboundMnA
Inbound MnA

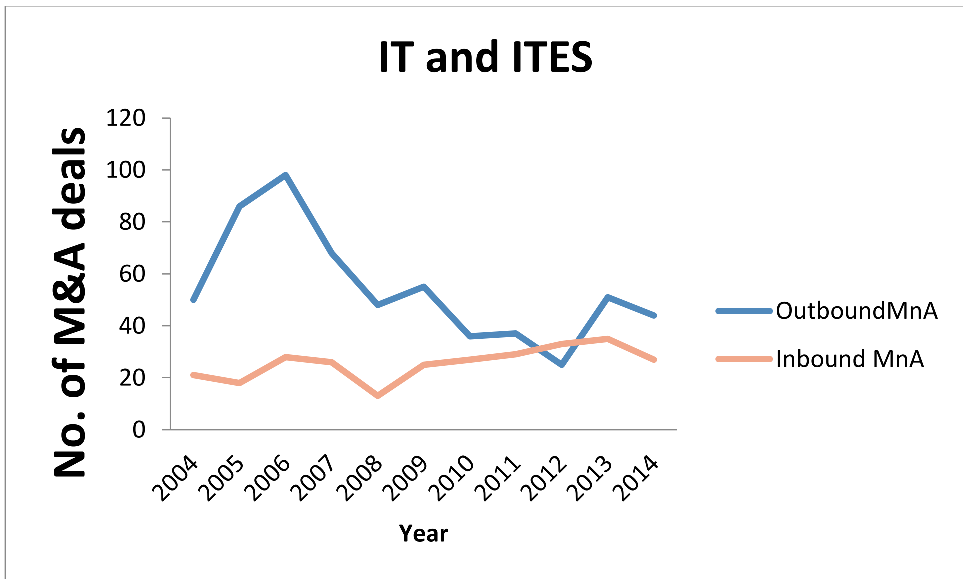

Engineering and Construction
No. of M&A deals
10
9
8
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

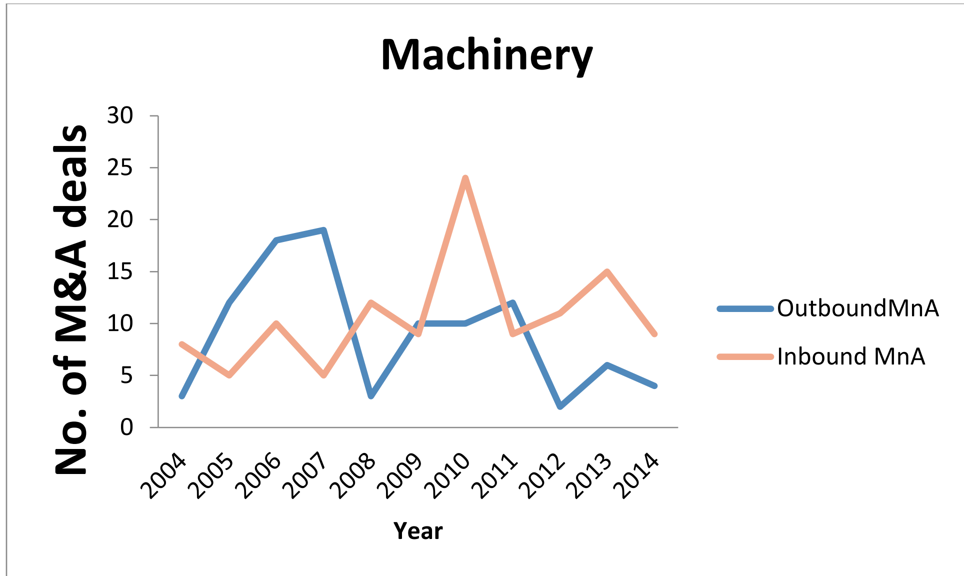

FMCG
No. of M&A deals
9
8
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA
Financial Services
No. of M&A deals
25
20
15
10
5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

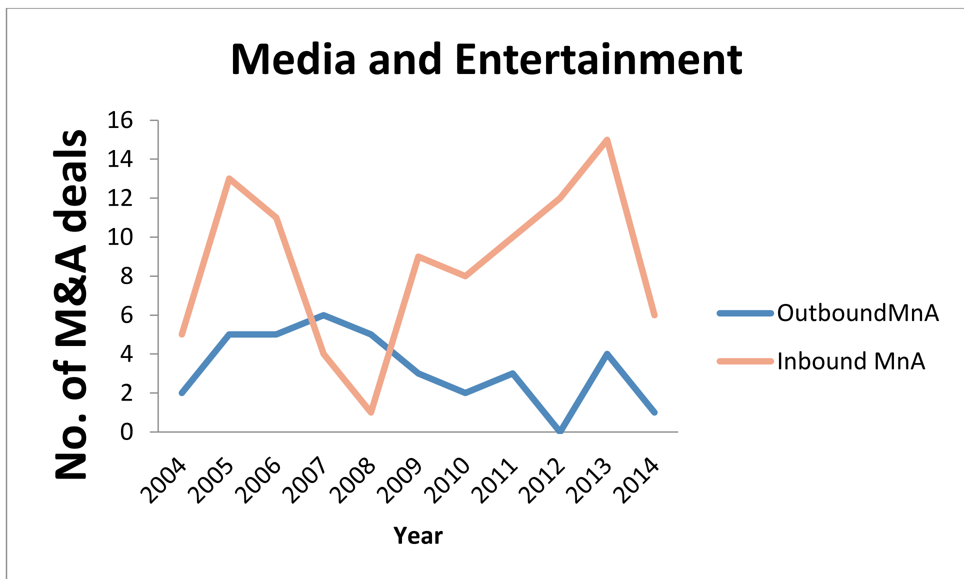

Food and Beverages
No. of M&A deals
14
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Year
OutboundMnA
Inbound MnA

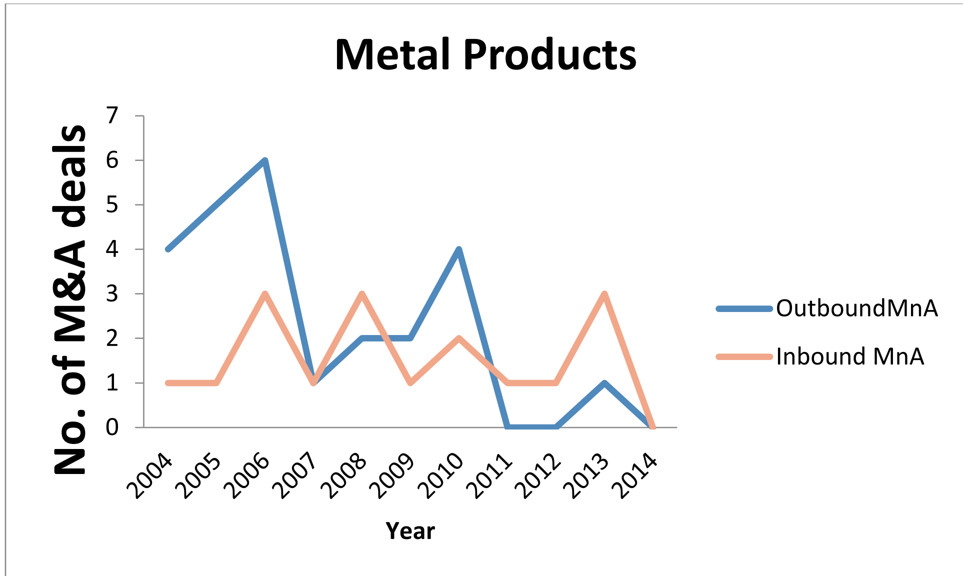

Healthcare and Life Sciences
No. of M&A deals
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

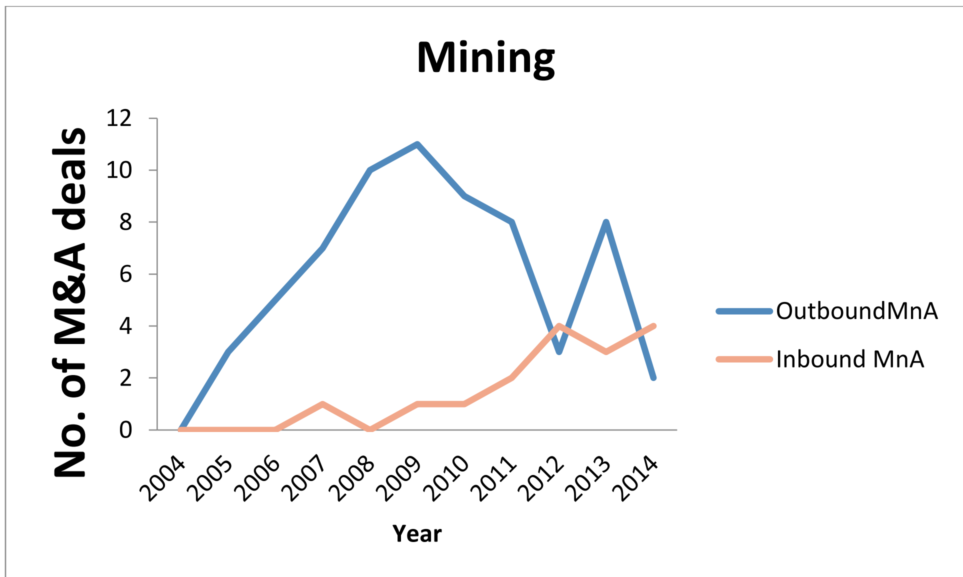
Hotels and Resorts
No. of M&A deals
8
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

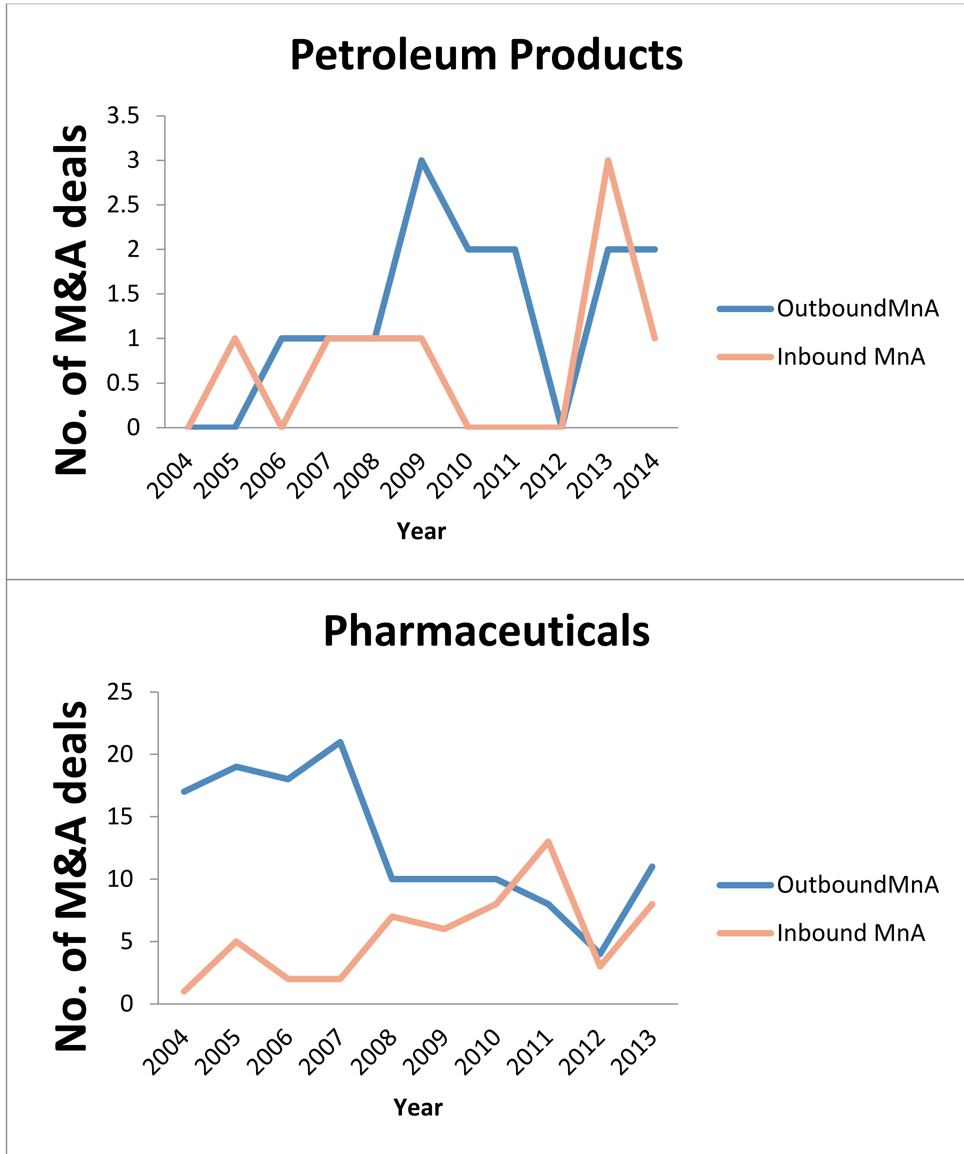

IT and ITES
No. of M&A deals
120
100
80
60
40
20
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

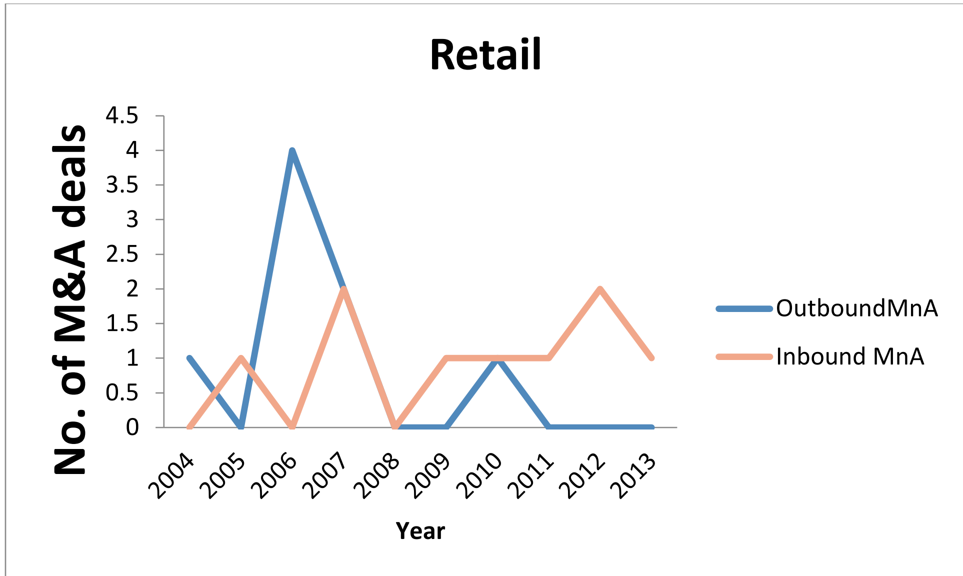

Machinery
No. of M&A deals
30
25
20
15
10
5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA

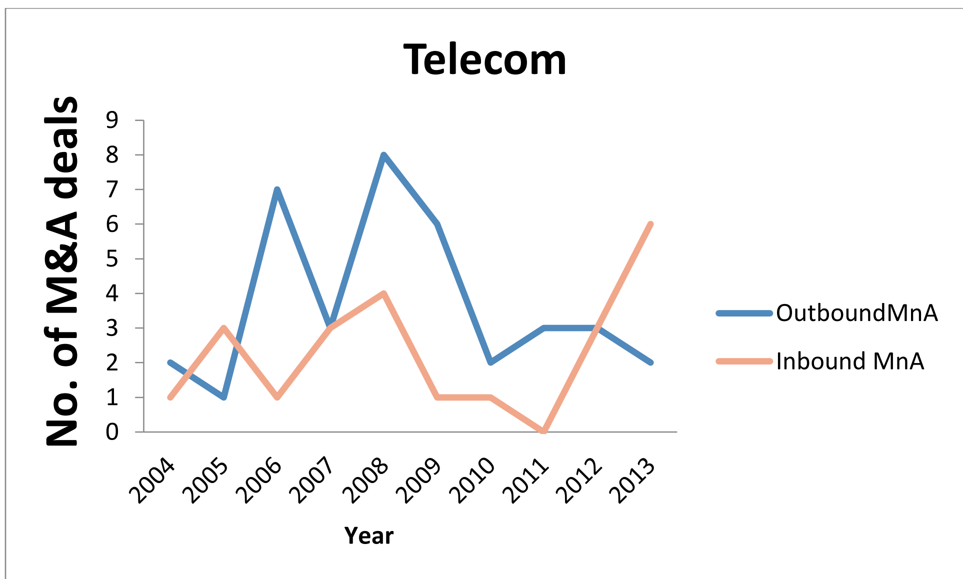

Media and Entertainment
No. of M&A deals
16
14
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA


Metal Products
No. of M&A deals
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA


Mining
No. of M&A deals
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA


Petroleum Products
No. of M&A deals
3.5
3
2.5
2
1.5
1
0.5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
OutboundMnA
Inbound MnA
Pharmaceuticals
No. of M&A deals
25
20
15
10
5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Year
OutboundMnA
Inbound MnA


Retail
No. of M&A deals
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Year
OutboundMnA
Inbound MnA


Telecom
No. of M&A deals
9
8
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Year
OutboundMnA
Inbound MnA