ABSTRACT

Firms in the electrical equipment industry manufacture equipment used in generation, transmission, distribution, or consumption of electric power. These equipment include transformers; electric motors, generators, and motor generator sets; switchgear and switchboard apparatus; relays; contactors; timers; fuses; energy meters and industrial controls. The electrical equipment industry has evolved over the past 150 years. The technology in this industry is relatively stable and does not change as rapidly as in the electronics industry. There has been no evidence of a breakthrough technology in the past few decades which has shaken up the entire industry. However, the electrical equipment industry is steadily and gradually converging with the electronics industry, with a lot of intelligence being built in these devices making them more feature-friendly and compact.

There has been a history of Mergers & Acquisitions in the industry. The late 1980s saw a surge in acquisition activity from global majors like ABB, Schneider Electric, GE and Siemens. The global players have been extremely active during the 5th and 6th merger waves. Schneider Electric has emerged from near bankruptcy to become a leading player in the global industry through extremely well-thought acquisitions. Eaton Electric and Cooper Industries, both US based, are making rapid inroads through acquisitions. Eaton, in particular, has made a couple of big-ticket acquisitions in Europe to expand its geographical footprint. Siemens has been growing through a combination of organic means and selective acquisitions. General Electric, once a very aggressive acquirer, is probably facing the heat and has slowed down its inorganic growth. Areva T&D has become a global player on account of its big-ticket acquisition of Alstom’s T&D business. ABB, an aggressive acquirer in the late-1980s, has just recovered from near bankruptcy, due to its asbestos liability which stemmed from one of its acquisitions.
This research is a pioneering study in the field of M&As with specific focus on the electrical equipment industry. Many studies, though not related to the electrical equipment industry, have focused either on merger motives, or post-merger integration, or value creation in M&As. Relationship between merger motives and M&A performance has not been studied by previous researchers, and this study attempts to plug this gap in the existing research literature with focus on the electrical equipment industry which has also not been researched in detail till date. This study makes a valuable contribution in the field of M&As by studying the effectiveness of various merger motives. The 5th (1992-2000) and 6th (2002-2007) merger waves have been studied in detail to study distinguishing features. The study provides valuable insights about a possible relationship between economic conditions, merger waves and strategies of the key industry players.

This research study begins by exploring the evolution of the global electrical equipment industry. To that extent, the study is exploratory in nature. It then goes on to identify the main motives of M&As which took place in the 5th and 6th merger waves in the industry, and studies the difference between the 5th and 6th merger waves w.r.t. merger motives and financial performance of the firms. Effect of different merger motives on the financial performance of the merged firms in the Electrical Equipment industry is then analyzed. The study concludes by studying the effect of consolidation on the development of the electrical equipment industry. This study researches events that have already taken place, and no control is exercisable over the variables. Hence, this study is ex-post facto causal-explanatory in nature.

For the purpose of exploration i.e. to study the evolution of the industry, data on history of key industry players for the past 150 years was collected from their respective websites and independent authentic web sources.
Unstructured interviews with experts from the industry were conducted to get a perspective on the industry and the merger motives. For this purpose three senior people within the researcher’s organization, connected with business strategy and M&As, were interviewed. Four senior investment bankers from the top consulting firms, specifically connected to the industry in question, were also interviewed. The respondents were asked open-ended questions on the evolution, current state and future prospects of the electrical equipment industry. The respondents were asked about the role and main motives for acquisitions during the period under question. Industry organization websites of National Electrical Manufacturers Association (NEMA), Indian Electrical and Electronics Manufacturers Association (IEEMA) and United Nations Statistics Division (UNSD) were also scanned to get an overall perspective of the industry.

An authentic M&A database, Capital IQ, was used as a starting point for collating the list of acquisitions that took place in the electrical equipment industry during the 5th and 6th merger waves. The database covered all the acquisitions which had taken place globally since 1990. Websites of all the key global players were studied in great detail to get first-hand data on all acquisitions undertaken by them during the period under question. The final sample consisted of 201 acquisitions that have taken place all over the world during the 5th and 6th merger waves. SEC filings and EU filings were also extensively studied to get all possible data on the acquisitions. Industry publications were studied to get an independent perspective on the industry and acquisitions. Merger motives for such acquisitions were derived on the basis of this extensive research. Financial data like sales and profitability for key players was taken from their annual reports.

Secondary data was the backbone of this research study. The sources of secondary data are an internationally renowned and authentic M&A database;
websites of key companies in the acquisitions, annual reports, all the
associated press releases and investor presentations; SEC filings and EU
filings; and independent industry publications like NEMA, IEEMA. The
sources for the secondary data are authentic, valid, highly reliable and
internationally acceptable.

It needs to be mentioned here that data collection was a big challenge and took
more than a year. Getting access to the M&A database, which was the starting
point of data assimilation, was itself a task. Such databases are not available in
any educational institution in India, and most of the Indian corporate houses
also do not subscribe to such databases. Only top notch investment bankers
subscribe to such databases, and the researcher had to get special permission to
gain access to it. The database also had its own limitations, as it was mostly
US-centric. The researcher had to rigorously scan websites and annual reports
of all industry players for the past fifteen years, as also all industry
publications, SEC and EU filings.

Statistical tests were used to analyze the data. SPSS software was used
extensively for the purpose. ‘Chi-squared’ and ‘t’-tests were used to test the
various hypotheses.

The research findings are quite interesting. During the period under question,
i.e. 5\textsuperscript{th} and 6\textsuperscript{th} merger waves in the electrical equipment industry; expansion of
product range, access to new markets and consolidation in same market were
the main merger motives accounting for around 80\% of the acquisitions that
took place in both waves 5 and 6. Expansion of product range has been the
most dominant motive accounting for 42\% of the acquisitions. Access to new
markets / geographies and consolidation in same market have accounted for
23\% and 16\% of the acquisitions respectively. It was also found that there is
no significant difference between merger waves 5 and 6 in terms of merger
matters and financial performance of the merging firms.
In terms of effectiveness of dominant merger motives, it was found that acquisitions for which ‘Entry into New Markets’ is the primary motive have produced better sales and profit growth than acquisitions having ‘Expansion of Product Range’ as the primary motive.

It was found that consolidation has improved the financial health of the global majors. The operating profitability of the top acquirers has gone up corresponding to an increase in consolidation. The R&D intensity of the top 6 players has reduced corresponding to the increase in consolidation. This indicates that the major players are spending less on R&D, as they are increasing their market share. This may stifle the technological developments in the industry.

These research findings, though specific to the electrical equipment industry, can be applied to any manufacturing industry in a similar stage in the life cycle. The electrical equipment industry, driven entirely by end-user demand for electricity, and investment by electrical utilities, is in a growth phase being an ever-green industry (though temporarily affected by the ongoing recession). The technology, though mature, is not easy to master and is guarded closely through patents. The products which comprise the electrical equipment are not commodities, especially in the medium and high voltage segments.

These research findings can also be applied to emerging markets within the electrical equipment industry, where the industry is in a relatively nascent stage. Consolidation will be driven by the global players in these markets depending on their attractiveness. Predominantly local players in these countries will need to expand their geographical reach, or operate in niche markets, or merge with (or acquire) other players to survive and sustain in the industry in the long run.
Other industries where these findings can be applied include the pharmaceutical industry and telecom equipment manufacturing industry. Merger motives, effects of consolidation, etc. would be similar in these industries.

The researcher has studied the impact of industry consolidation on profitability of the players and the amount spent on R&D by them. Since the findings indicate that the profitability has improved and R&D spend has reduced with consolidation, it would be interesting to research whether the same is detrimental to the suppliers and customers. If the profitability of the companies has increased, it is very likely that either the suppliers and/or the final customers have borne the brunt. It would also be interesting to analyze whether the reduced R&D spend is because of consolidation, or due to the state of the technology. Future research can analyze the effects of consolidation on the stakeholders of the firms.

Another interesting area of research can be to analyze the impact of emergence of alternate energy sources on the electrical equipment industry. Nuclear, wind and solar as energy sources are going to gain momentum in the foreseeable future, and this could have a significant impact on the technology in the electrical industry, and the products. A forward-looking study which can predict the state of the electrical equipment industry with the emergence of these energy sources would be of great use to the industry players and researchers, and a very good contribution to the existing body of knowledge.