Chapter II

Research Methodology & Review of Literature

This part covers the process through which the research was carried out. It describes and discusses different methodological issues used in the thesis.

Method of Research:

Quantitative or qualitative methods: Even though the research is mainly qualitative, in conducting the study both qualitative and quantitative techniques were used. The qualitative techniques are more used than quantitative ones in collecting, processing, and analyzing the information that were gathered. This depends on the nature of the study, which is qualitative and the kind of information needed. A combination of both techniques is advantageous for this thesis since it allows to identify, understand and tackle in a deeper way the research issue. It also contributes to the relevance of the study i.e. A Study of the Impact of Global Financial Crisis on Selected White Goods (With Special Reference to Marathwada Region).

In the process of answering the research issue different approaches were used. Primary approach was used. we went through the literature to document of the White Goods related issues in order to get basis information about the research issue. We also used a descriptive approach during the theoretical part where we give a general view on the existing White Goods. The thesis has
also a prescriptive part where we explain what ought to be done in this area of creating awareness and maximization of White Goods sale. We believe these approaches are best for the study since they allow us to know better about the issues related to White Goods. Describe and prescribe furthermore, all these are vital in answering the research issue.

**Method collection:** “Research is simply gathering the information you need to answer a question and thereby help you to solve a problem” In order to carry out the research project, we needed to collect the method. Since getting the method was one of the important parts of the work, we had to determine which kind of method would help us to better answer the research issue. We decided to use literature study and primary method so that we would be able to have a balanced picture of what took place and also of what is currently going on in the research areas. The discussion below describes each type of information and discusses in detail what we actually did with each type of method.

**Type of research:** the type of research used is explorative research / Survey research. It’s a research method involving the use of questionnaires.

**Data type:** The research involves both the primary data and the secondary data. The primary data was collected through administering surveys with closed-ended questions i.e. through Questionnaires, whereas the secondary
data was collected through internet, journals, magazines and other related books.

**Data collection tools:** The tool used for data collection in the research was; interviews through questionnaires

**Sampling Plan:** In the study we could not include all the White Goods Dealers and respondent individuals in the study because of the practicability and the time limit. We then had the task of choosing the Dealers and respondent individuals that should be included in the study. In order to narrow down the sample eligible criteria were set i.e. that Dealers and respondent individuals must fulfill to be included. Those criteria were the following:

- Those Dealers and respondent individuals who can be easily reached and have a good knowledge of White Goods.
- Listed Dealers; the reason for this is that it is much more possible to measure the impact on White Goods due to recession.
- They have a history stretching back more than 10 years the Dealers with long histories are believed to be more stable and could manage to face the future challenges than those that are recently established and basically the research involve a period of 10 years.
• Finally, those Dealers of those white goods company who deals in white goods in international environments since such Dealers and respondent individuals are believed to disclose more information than others.

**Sampling frame:** Stratified random sampling frame has been used in the research. Stratified in the sense that after identifying both the respondent’s individual and the dealer’s respondents through random sampling they have been aggregated on the basis of income and profession.

**Sample Size:** Meets the criteria for the study, who are willing to complete all questions and are available when they are needed. This means that we took a list of White Goods Dealers and respondent individuals that fulfilled the criteria.

*Description of Dealers and respondent individuals:* We are giving in this section a short description of all the Dealers and respondent individuals included in the study to help and give the reader general idea of the Dealers and respondent individuals in case he or she may not know the Dealers and respondent individuals.

*Respondents Individuals:* out of the eight districts of Marathwada we chose Five hundred (500) respondents from each district. The total respondent’s individuals who participated in this research were Four thousand (4000). These respondents were interviewed through questionnaire and their opinions were segregated on income basis, buying behavior and occupation wise.
Dealer’s respondents: out of the total hundred and eight (108) organised dealers in the eight district of Marathwada. The sample size that was chosen was a hundred (100) dealers. Which comprises from the various major White Goods manufacturers of India.

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**Data analysis techniques:** the research being a primary research involving the four thousand (4000) respondents’ individuals and hundred dealers (100) which amount to a small number of respondents individuals and dealers, we have used the percentage analysis and as for the proving of the hypothesis the decision rule has been applied with Expectation.
Objectives of the study:

1. To analyze the impact of global financial crisis on white goods sector
2. To know the reasons behind decline in demand of white goods
3. To study the rationale behind change in patterns of money spend on white goods
4. To suggest the modus operandi for overcoming the challenges of white goods sector
5. To study the relation between customers income and the money spend by customers of white goods, after the fall out of global financial crises

Hypothesis to be tested:

1. There is a negative impact of global financial crises on White Goods
2. The recession had affected spending patterns of customers
3. The decline in sales of white goods is due to global financial crisis

Scope of the study: The scope of the study covers the variation in sales of white goods sector and the factors responsible for the same after the fall out of global financial crisis. The study is divided into seven chapters. The study provides scope for conducting further studies in the areas of:

1. Fall out of Indian white goods markets in era of global financial crisis
2. Developing Sales of white goods by focusing more or customize goods
3. Role of Govt. in improving the overall market conditions related to white goods
**Tools used**

1) Graph and Chart are used for presentation
2) Percentage Analysis and ratio analysis
3) Comparison tables are used for method pertaining to different segments like
   - Business outlets / companies
   - Customers related to white goods market sector

**Limitations of the study:**

The study is restricted to Marathwada Region only. Due to a number of constraints only major white goods product are studied. Due to time, money and geographical difficulties, we have limited the study to Marathwada Region only.

**Chapter Scheme:**

1. Introduction
2. Research Methodology and Review of Literature
3. Global Trends of White goods
4. Pre and Post Recession: Buying Trends of White Goods in India
5. Method Analysis and Interpretation
6. Summary, Conclusion and Suggestions

Bibliography
Summary: The methodological part indicates that the study is done under the positivist perspective. The explorative, descriptive and prescriptive approaches are used in different parts of the work. In the study the qualitative methods are used but some quantitative elements can be identified. The literature review method is collected from different documents and Internet sites while we collect the primary method through the Questionnaire. The sample of the study includes hundred (100) White Goods Dealers and four thousand (4000) respondent individuals.

The discussion that follows in Questionnaire covers the reason why we chose to use Questionnaire. We chose to use the Questionnaire because of the nature of the study and we were convinced that Questionnaire was the best way through which we could get information, which was reliable, detailed and up to date that was needed for the study. We then proceeded in contacting the right persons and explaining further the research issue. This was made again since we were aware of the problem that might arise from getting the wrong person if we let the Dealers and respondent individuals choose for us whom to talk with. Thus we wanted to be very sure that the interviewees were the right people. Fortunately, in all the cases this was the right person to talk with. The interviewees were of different characteristics since they worked in different professions and their tasks were not exactly similar this helped us to reap a rich content of information.
Review of Literature:

The vast literature available on white goods industry provides a mixed picture of competition in this sector. Some authors say that this industry is still in its infancy, while others say that this industry is among one of the mature group of companies in India. A brief note on some of the findings by celebrated researcher, journals, magazine, newspaper and websites are presented below.

Seshaiah and Krishna (2003) say that branding of white goods is an important factor in determining the choice of white goods by buyers, which depends not only on age, education and income, but also on personality and psychological dimensions. Consumers buy not the products but bundle of emotions. A “Usage Factor” runs through the data. Many more people tend to associate a positive attribute with longer brands than associate it with smaller brands. The explanation is that a larger brand has more claimed user than a smaller brand and the users of brand are more likely than non-users to give a positive attribute response. This effect is known more generally as “Double Jeopardy” or DJ Effect. Talking of white goods industry per se, on one hand, the production of white goods has stagnated around six million sets a year since 1995 and is not likely to improve its performance in the near future, while on the other hand, competition in other white goods, LCDs, etc. is so fierce that some of the companies have completed shifted from the market.
The literature also says that the industrial circles are of the view that the competition offered by the foreign brands in white goods has almost killed 60-odd indigenous manufacturers but has strengthened the position of the three Indian leaders. Over the years, these Indian brands have set up their distribution networks in urban areas besides the four metros, namely, Mumbai, Calcutta, Chennai and Delhi. The multinationals therefore will face severe competition in the vastly spread-out, semi-urban areas.
Richard N. Williams | July 2010 | “White goods and Appliances - Buying Eco” http://ezinearticles.com writes on Ezine article website, that many of the most power hungry devices in our home are situated in the kitchen. The white goods; fridges, freezers, ovens, washing machines, and driers account for a large chink of both our energy bills and Co2 emissions. And while there are alternative methods of cooking, cleaning and washing clothes, we still need our appliances. However, ensuring you buy the most energy efficient device can make a drastic difference considering the frequency of use and the amount of power these devices consume. Fortunately there are some energy labels on many white goods that can give you guidance on the eco friendly credential and the power and water these devices consume. These energy efficiency labels are governed by the EU so you can ensure of the power consumption of the device you are buying.

Washing machines and Tumble Dryers

For washing machines the energy efficiency scale goes from A to G with A being the most efficient. The labels also contain other information too: There are other devices that are deigned purely for their efficiency. These are often far more efficient methods that traditional devices. Eco Kettles are one example. An eco kettle will only boil the required amount of water and is far more efficient than traditional kettles. Halogen ovens are an eco friendlier
approach to cooking too. These heat-up instantly and require less energy than conventional ovens to produce the heat - saving money and energy.

2. Annie Bai, February 2010, "Brand Implementation for White goods in China “article on webpage, http://www.asianbrandstrategy.com/haier-aspiring-chinese-global-brand.asp In her research projected the following conclusion, The white goods market in the world’s most populous country expanded rapidly during 2009 and will keep growing in the future. White goods brands, both domestic and global, have the potential to experience huge growth in the years to come, but they need to pay attention to their brand strategy. Growing brands should first focus on increasing brand strength by increasing their differentiation and relevance in the minds of consumers. By identifying codes being used by other brands in the industry, a white goods brand can locate a free space to launch their brand implementation efforts in China.

3. Asia Pulse |January 2010|News Flat White goods’ Won, White goods Lost In Japan ’09 Appliance Purchases. Asia Pulse News, Tokyo. In the news article presented by Asia pulse News they stated that Frugal consumers held off on buying white goods like refrigerators and air conditioners last year despite the government's eco-point program, even as that same program helped spark record-high sales of flat-panel white goods. With Japanese terrestrial White
goods to fully switch over to digital broadcasting in 2011, consumers took advantage of the eco-point subsidies to buy compatible sets. Domestic shipments of flat-panel WHITE GOODSs exceeded 10 million units for the first time ever in 2009, increasing 40.4 per cent on the year to 13.62 million, according to figures released Tuesday by the Japan Electronics and Information.

4. **Fagor Master Cook**, |January 2010| “*Investments in white goods in Poland*”
*Journal of Retail and FMCG sector Poland, http://www.retailpoland.com* a producer of white goods, is planning to commence the production of dishwashing machines and built-in ovens in Poland in 2010. Two new factories are to appear in Wroclaw, where the company already manufactures washing machines, refrigerators and ovens. The dishwasher market is very promising in Poland, as in 2008 only 10% of Polish households had such equipment. In 2009, sales of dishwashing machines grew by 8% year on year, despite the recession and a decline on the electronic appliances market. As a result of the Fagor Master Cook investment, Poland will reinforce its position as a producer of white goods on the European market. Furthermore, Samsung is also planning to invest in white goods in Poland. The Korean multinational recently bought two factories belonging to Amica which produce refrigerators and washing machines (see the news brief "Samsung buys two white goods
factories in Poland” for details). Currently, the white good market in Poland is estimated at PLN 4.8bn (€1.2bn).

5. Sah, Rakesh, Agarwal, Raj Jain, Shruti, [Jan, 2010] “Recessionary export policy: the case of white goods in India” European Journal of Management Publisher, ISSN: 1555-4015 in their conclusion they concluded that to build resilience in an economy to external trade shocks, it is imperative that the country has to stabilize its exports. This can be accomplished by improving the competitiveness and size of the export basket. One of the short run methods of increasing competitiveness is to rationalize an economies export and import policies. An increase in the volume of exports can be accomplished only by changes in the composition of exports and by diversification of exports. Changes in the composition of exports is very difficult to accomplish in the medium run for countries that export value added goods, however, changes to the direction of trade and the discovery of new and stable markets can be a feasible strategy. More specifically, there is need to identify more countries for diversification of exports to new geographical destinations and strengthening of regional, bilateral trade agreements for diversification of exports to boost volume.

6. Dr. Serkan Toto, [April 2010] “How Japan’s electronics giants are weathering the recession”, ACC Journal he analysed that it seems the first
steps for a structural makeover have been taken, but there’s still a rocky road ahead. The long-term prospects ride not only on how Japan’s electronics firms will weather the after-effects of the recession, but also on how well they will stack up against their powerful Asian competitors. A case in point is Samsung, whose operating profit in the third quarter of 2009 was more than twice the size of the quarterly profits of nine major Japanese rivals (including Sony, Hitachi and Panasonic) combined. Against this backdrop, all eyes are on whether Japan’s electronics can regain their “mojo” in the future.

7. **J.B. Steenkamp** | August 2009|*in The Economist* “The recession has spelt disaster for most brands of packaged goods, but not all”, New York, the newspaper speaks about the recession and its impact on consumer goods like “Consumer goods were once believed to be as recession-proof as any industry can be. Shoppers might not be able to afford Rolex watches and champagne during a downturn, the theory ran, but everyone still needs staples such as soap and toilet paper. Yet sales have fallen in this downturn, thanks largely to growing competition from stores’ own brands, or “private labels”. Private-label goods tend to cost about a quarter less than branded ones, and so appeal to penny-pinching consumers. Some shoppers are also forgoing altogether items that they used to consider staples, such as air fresheners or special detergents for sensitive skin. The big brands’ recent, ill-timed price hikes of
as much as a fifth in response to rising commodity prices have accelerated the trend. Retailers have also been giving more shelf space to their own products, on which they earn better margins, further squeezing the big brands by making them less visible. Jan-Benedict Steenkamp, a marketing expert at the University of North Carolina, estimates that the share of private-label goods is now 20% at Wal-Mart and 35% at Kroger, two huge American retailers.

8. Emmeline Zhao, |2009| "Who Needs to Eat? Americans devote more dollars to TVs, computers and all kinds of iStuff" The Wall Street Journal, he emphasized that If Americans are cutting back on big purchases for the home, they’re doing so while talking on their iPhones about their new flat-screen TVs. Recent government data show that after pouring money into all aspects of their homes during the previous decade, consumers are now redirecting their purchases to eye-grabbing technology and socking away more of what’s left over into savings. In the first half of this year, spending on televisions, computers, video and telephone equipment grew 1.8% from last year’s first half. By comparison, spending on appliances dropped 3.6% during the same period, and spending on furniture fell 11%.

9. Matt Hamblen, |January 2009| Computerworld "Consumer electronics to stay ahead in recession" Matt Hamblen was realistic about the dreary
economic outlook for 2009, but noted that consumer technology spending will fare better than other segments of the economy. "2009 will remain a very bad year," he said, and estimated that the current recession started in December 2007 and should last through June 2009. "In 2010, we start to get back on track," he said. Still, periods of economic downturn can help spur innovation, Matt Hamblen noted, pointing out how the founders of Google Inc. bought surplus servers off the backs of trucks after the Internet bubble burst in 2001. In technology fields, the newly unemployed "can be the ones who get the new ideas" and put them into practical technologies. "We could see tremendous innovation in the next five years," he said. While the recession will have an impact on electronics and audio products sold in cars and digital TVs sold for homes, smart phones will continue to be a strong product segment, Matt Hamblen and Loenig said. Netbooks, which emerged in 2007, hit 10 million units sold in 2008, and will mushroom to 18 million in 2009, they said.

China, Taiwan and South Korea, South Africa, Brazil and Turkey. It makes a substantive contribution to the understanding of the diffusion of management methods, the role of the state in employee relations, the nature of trade unionism and the impact of social structure on production relations.

13. **Dr. Sharad Sonwande** | *February 2009* | “*White goods may be cheaper but not immediately.*”, *Economic Times New Delhi PTI - The Press Trust of India Ltd.* in his article about the price of white goods concluded that Consumer durables could become cheaper by up to Rs 5,800 after the government's move to cut excise duty by two per cent, but end users cannot just yet reap the benefit as companies are yet to work out the details. "We have not yet discussed this issue internally. We would be able to say how much we will pass on to consumers only after we discuss it," LG India Director Sales and Marketing V.Ramachandran said. LG, the leading player in the Indian consumer durables market, has white goods priced between ` 6,200 and ` 83,000, air conditioners priced between ` 11,400 and ` 22,000.

14. **Mr. Jonny Disoza** | *December 2009* | “*Consumer goods firms get makeover to blend with changing times*” *(Flashback 2009)* *The Hindustan Times in the Hindustan times* expressed his conclusion “Whether it was Onida's horned devil or Hindustan Unilever's Liril girls, 2009 saw white goods firms bid
farewell to iconic brand ambassadors, looking for more innovative marketing strategies and revamped product lines. Bajaj Auto decided to exit scooters business, which had become a household name with the "Hamara Bajaj" campaign, while the "fast to cook and good to eat" Maggie turned 25 and became a complete food brand of its own rather than just symbolise Nestle's range of noodles. And if the cuddly pug campaign of telecom major Airtel had captured people's imagination in 2008, this year saw the emergence of Zoozoo. "We should welcome these."

15. Jake Ansell And John Banasik, (October 2010) *Forecasting white goods in a recession*, IMA Journal Of Management & Mathematics Volume 21 Issue 4) Volume 6, Issue3 Pp. 315-331. Oxford University Press. The forecasting models discussed in their paper deal with the sales prospects of three categories of an unspecified white good. The forecasts pertain to UK deliveries both of a particular firm and of all UK suppliers. The forecasting approach essentially resorts to multiple-regression models that employ leading indicators with liberal resort to polynomial distributed lags. Considerable structural differences in these models as between firm and industry reflect distinctive features of the firm's product line and policies. The models are first analysed in terms of their predictive performance, both in-sample and ex-sample. Features of these models and of their predictions are then considered in terms of what they indicate about the firm's policy options.
16. **Federico Bonaglia, Asli M. Colpan and Andrea Goldstein** (2008) “Innovation and internationalisation in the white goods GVC: the case of Arcelik,” *International Journal of Technological Learning, Innovation and Development, Turkey, vol. 1, issue 4, pages 520-535*. In their article they researched on the process that has allowed a firm from a developing economy to transform itself successfully from an original equipment manufacturer to an own original brand manufacturer multinational enterprise. They studied the case of Arcelik, consumer electronics MNE from Turkey and identify four factors for successful internationalisation: rapid strategy execution, investment to build technological capabilities and organisational adaptation, focus on international marketing capabilities and distribution networks and leverage on business group resources. The analysis suggests that globalisation is being driven not just by the giant incumbent firms but also by emerging firms internationalising from the periphery, thanks to the above mentioned four strategies they adopt.

concerned with the situation where goods are produced by workers in underdeveloped countries. Their research is about consumer durables, under the direction of managements which have access to modern management techniques. In particular, it considers the significance of new management methods, especially Total Quality Management, for workers employed in white-goods manufacture in Turkey.

18. Federico Bonaglia, Asli M. Colpan, Andrea Goldstein | March 2008|

“Industrial Upgrading in the White goods Global Value Chain: The Case of Arcelik” in ITEC Working Paper Series Doshisha University, Japan, In their research they found that The white goods sector is a mature industry. Although OECD-based MNEs retain the lead in production and innovation activities, countries and firms from the periphery are increasingly involved in production of appliances, and not merely of their components. Moreover, demand growth is much higher in emerging markets than in industrialized countries. In their paper they have presented the experience of three latecomer firms which have established themselves as key regional players, in one case with global ambitions. As in the successful cases documented by Bartlett and Ghoshal (2000), the recipe of their success has been the ability to treat global competition as an opportunity to build capabilities, move into more profitable industry segments, and adopt strategies that turn latecomer status into a source
of competitive advantage. This does not mean that there is one way only to reach, or at least approach, global competitiveness.

19. Mr. Mehta | August 2008| “Tight money puts consumer durable makers in a squeeze” The Hindustan Times, India, in his article said with inflation looming and interest rates rising, it’s a double whammy for consumer durable makers who went for sweetened offers to boost demand when the going was good. Already reeling under fast shrinking profit margins on the back of high input costs, manufacturers say they now have no other option but to bear higher interest cost of "zero interest" schemes introduced to lure customers into buy-now-pay-later schemes. Industry estimates show that around 20 per cent of air-conditioners, refrigerators and other durable products are sold through finance schemes. With inflation remaining close to worrisome 12 per cent in 2008

20. Household Appliances (White goods) Market Report | September 2008| Key Note Publications Ltd, Pages: 108 | www.market research .com, in this Market Report, the UK household appliances (white goods) market consists of three sectors: home laundry appliances and dishwashers; cooking appliances; and cooling appliances. The total UK retail market for white goods was valued at £3.33bn in 2007, representing a 2.9% increase on 2003.
Electric and gas cookers comprise the most valuable sub sector, accounting for 30.1% of the total market value in 2007, with the second-largest sub sector being that of washing machines, including washer-dryers. Although the refrigerators sub sector does not account for a significantly large share of the total white goods market, it is the fastest-growing sub sector, increasing by 32.1% in value between 2003 and 2007. Between 2008 and 2012, the tumble dryer sub sector is forecast to show the strongest growth, with value sales driven by rising penetration levels and consumers trading up to premium appliances with large capacities and sensors that detect when clothes are dry. In comparison, value sales of microwave ovens are projected to continue to fall as the average price per appliance drops further. Overall, sales of white goods are expected to continue to grow over the forecast period.

21. Mona Mehta, [August 2007]“White goods majors line up price hikes, new launches”  The Financial Express, reported that, the white good companies will embark upon a dual strategy of hiking prices of white goods and simultaneously launching hi-tech models in refrigerators, washing machines and microwave ovens. Consumer durables majors like Videocon, LG, Samsung and Haier are all planning price hikes by 2-7%. At the same time, the white goods industry is up for a lot of action with Videocon Industries planning to launch refrigerators with built-in colour white goods and Internet,
which can be operated by remote controls and priced between ₹20,000 and ₹1 lakh, soon.

22. Marianna Herold | June 2007| “A Multinational Perspective to Managing End-Of-Life Electronics” Helsinki University of Technology (Espoo, Finland), *ISBN 978-951-22-8799-4*, in her thesis submitted to Helsinki University of Technology focuses on how multinational electronics manufacturers manage used products in the EU, USA, Japan and China. Managing used or end-of-life products has interesting environmental and commercial implications. Recovering end-of-life products can reduce the environmental effects of disposal, raw material extraction, transport, and production. Whereas the commercial effects include image benefits and savings on raw material costs. Manufacturer involvement in end-of-life management is especially topical in the electronics industry, which is the focus of this thesis. Electronics products, such as white goods and computers, have been targeted with extended producer responsibility (EPR) legislation in different countries across the world. EPR is an environmental policy approach that forces manufacturers to take physical and / or financial responsibility for end-of-life products. The main objective of this dissertation was to increase understanding of how multinational manufacturers manage end-of-life
products in the EU, in the USA, and in China and Japan, and the regional and company-specific factors explain their levels of involvement.

Conclusion:- In general, it is thought that remanufactured products may affect the sales of new products. Sales can either be increased, through a better environmental image (Rogers and Tibben-Lembke, 1998; Krikke et al., 2003) or decreased through cannibalization (Guide and Van Wassenhove, 2003). However, these findings suggest that the image of a remanufactured phone may hurt the brand image of a company that produces high-tech fashion-conscious phones. This finding is also linked to the discussion in Lebreton (2006) concerning markets for recovered products. According to him there are no markets for recovered fashion products, whereas there are markets for functional products. Lebreton, however, suggests that this depends on product type as opposed to the findings here that suggest that it may depend on the branding made by the manufacturer within a product category.

23. Debdatta Das | April 2007 | “Hot war for cold comfort” The Hindu, Business Line, In his article the author emphasized on the competition between the white goods industry in this way, “In 2007, the focus areas would be the high-end frost free and large capacity direct cool (over 230 litres) refrigerators. LG will also aggressively market its new range of Green Ion Door-Cooling Refrigerators that emphasise health-related features and technologies.” It is
hoping to achieve a 25 per cent growth in its refrigerator's business this year. Samsung also has extensive plans up its sleeve. "The company has launched nine new refrigerator models, both frost-free and direct-cool. In fact, we have identified refrigerators and air-conditioners as the growth engines for our home appliances business this year," said R. Zutshi, Deputy Managing Director, Samsung India Electronics Pvt Ltd. Samsung, which is the market leader in the over-350 litre frost-free refrigerator segment, is seeking to consolidate its position by launching three new, advanced, feature-rich models in 375 litres, 400 litres and 704 litres in the Indian market. The company currently has a range of 42 frost-free models priced between `13,000 and `1.5 lakh. "We are expecting the frost-free refrigerators to contribute 45 per cent by volume to our total refrigerator sales this year," said Pradeep Tognatta, Director (Sales), Samsung India.

24. Nils Boysen, Malte Fliedner, Armin Scholl,| February 2007| “Sequencing Mixed-Model Assembly Lines: Survey, Classification and Model Critique”, Working and Discussion Paper Series School of Economics and Business Administration Friedrich-Schiller-University Jena, ISSN 1864-3108, In their research paper conclude that, it gives a comprehensive review of the three major approaches for sequencing mixed-model assembly lines as well as related multi-criteria and hybrid problems in white goods industry. A
hierarchical classification scheme is developed, which covers all proposed problem extensions in a systematic manner. The classification provides insights in the status quo of research in each field, but also allows a comparison of the different approaches with regard to the level of planning detail and the actual problem characteristics considered. As was established, there seems to be a dire need for theoretical and empirical results concerning the relationship between the three approaches and the resulting consequences for business practise. In addition to the tremendous academic effort spent on describing the mathematical properties of alternative models and deriving suitable solutions procedures, there is an apparent lack of empirical research evaluating the goodness of fit of alternative sequencing approaches for real-world applications. Therefore, contributions which provide insights into this complex matter are to be seen as especially valuable.

25. Federico Bonaglia, Asli M. Colpan and Andrea Goldstein | January 2006 |

“Accelerated Internationalization By Emerging Multinationals: The Case Of White goods” In Journal Of International Business Studies Entitled “International Expansion Of Emerging Market Businesses” in their research they During the study they found that / The major finding of their research were the views that originated from the study were the visible trends that make it more plausible to argue that globalisation has lately been driven not
just by the giant established firms in mature economies but also by emerging firms internationalising from the periphery, which capture competitive space from incumbents because of their ability to exploit the linkages available through globalisation and to cultivate continual cross-border learning and value-addition. Nonetheless, for the white goods firms in developing economies, participating in GVC does not automatically produce upgrading and catching up with the technology forerunners. As the Arcelik which is a leading white goods company, experience clearly shows, companies must first make the necessary investments in several areas of resources and capabilities and exploit the advantages of group membership, if they happen to have one.

Economic Times (New Delhi, India) rightly predicted that the Home appliances like refrigerators and washing machines have become dearer with manufacturers hiking prices by 5.5 percent with effect from August '06. The price hike comes in the wake of rising input prices and a higher octroi duty which are being passed onto the consumer. The move will primarily affect consumers in three states -- Maharashtra, Punjab and Gujarat -- where the octroi is being levied. For the moment, prices have not been hiked on colour white goods, which are currently recording a sluggish growth rate. Says
Girish Rao, VP, sales and marketing, LG India: "Our margins are under pressure for the past couple of months.

27. **Bonaglia, Federico, Goldstein, Andrea Mathews, |July 2006|**

*Accelerated Internationalisation by Emerging Multinationals: the Case of White goods Sector*, University Library of Munich, Germany, In their research they concluded that the emergence of a "second wave" of developing-country multinational enterprises (MNEs) in a variety of industries is one of the characterizing features of globalization. These new MNEs did not delay their internationalisation until they were large, as did most of their predecessors, and often become global as a result of direct firm-to-firm contracting. Many grow large as they internationalize conversely, they internationalize in order to grow large. This is a striking pattern which, if confirmed, indicates that enterprises from developing countries have pursued distinctive approaches to internationalisation. It is a further interesting hypothesis to investigate to what extent such firms, born as suppliers of established incumbents, have leveraged on their "latecomer" status to accelerate their internationalisation. This paper documents how emerging MNEs may follow quite different patterns to reach, or at least approach, global competitiveness. In particular, it investigates how three latecomer MNEs pursued global growth through accelerated internationalisation.
combined with strategic and organizational innovation. Haier (China), Mabe (Mexico) and Arcelik (Turkey) emerged as Dragon Multinationals in the large home appliances (so-called "white goods") industry.

This is a producer-driven global value chain, characterized by mature technology and rapid delocalization to developing countries, where not only input costs are lower, but demand growth rates are higher - giving a decided latecomer advantage to these MNEs. Haier, Mabe and Arçelik leveraged their strategic partnership with established MNEs to upgrade their operations, evolving from the production of simple goods, into new product lines developed through their own design, branding and marketing capabilities. The recipe of their success has been the ability to treat global competition as an opportunity to build capabilities, move into more profitable industry segments, and adopt strategies that turn latecomer status into a source of competitive advantage. At the same time, their experiences show that there are many strategies and trajectories for going global.


*Purpose* – Aims to determine how robotics is used in white goods manufacture.
Design/methodology/approach – Assesses robot applications at several white goods manufacturers, examining the challenges posed and the achievements made.

Findings – The white goods sector offers diverse opportunities for robotisation, but the number of units installed is low.

Originality/value – Reveals how the white goods industry views robotics and its value to production.

29. Kushan Mitra | July 2005| “Bloodbath In White goods Rising input costs, overcapacity, slow growth, and huge losses plague the country's Rs 5,000-crore white-goods industry. Is there a way out?” Business Today, India, in his research article in business today observed “Home appliances like refrigerators and washing machines have become dearer with manufacturers hiking prices by 5.5 percent with effect from August '06. The price hike comes in the wake of rising input prices and a higher octroi duty which are being passed onto the consumer. The move will primarily affect consumers in three states -- Maharashtra, Punjab and Gujarat -- where the octroi is being levied. For the moment, prices have not been hiked on colour white goods, which are currently recording a sluggish growth rate. Says Girish Rao, VP, sales and marketing, LG India: "Our margins are under pressure for the past couple of months."
Martin Malcolm Coles, June 2004


director United Kingdom white goods magazine, Posted on Thursday, UTC by kwatt, writes in UK consumer watchdog magazine recently rated the reliability of appliance brands, stating that Dyson and Hoover appliances are among the most unreliable on the market, while Bosch and Miele come up on top. In November 2004, the magazine sent questionnaires to 30,000 of its readers, and 14,296 replies were received. Results revealed those brands that are most likely to be recommended, as well as the brands that are most reliable. The research covered vacuum cleaners, washing machines, washer dryers, tumble dryers, fridge-freezers, and dishwashers. The annual product reliability survey said Hoover is the only brand with below-average reliability for its fridge-freezers, washer-dryers, tumble dryers, and washing machines, and is one of the brands least likely to be recommended to a friend, along with Hotpoint. A Hoover washing machine is more than three times more likely to need a repair in the first 6 years than a Bosch or Miele machine. Iconic brand Dyson also fared poorly for both its cylinder and upright vacuum cleaners, according to the survey results. However, says that Bosch and Miele appliances rate particularly dependable in certain product categories. Bosch is in the top group for dishwashers and washing machines, while Miele makes trustworthy washing machines and is in the elite group for cylinder vats. "Bosch and
Miele are brands you can trust, and they're not going to leave you with dishwashers full of dirty dishes or vacs that won't suck,"

31. Helen Johnson |June 2005| Market analysis: white goods. Article from: ERT Weekly, A fall in disposable income and the growing concerns of ballooning debt have led the consumer to ease off the gas pedal in recent months. While growth in the white goods market continued in the 12 months to April, lack luster Christmas and first quarter retailing saw the rate of sales increases fall by around 4.9 per cent, down on like-for-like growth last year of 6.3 per cent. Although volumes have slowed, consumers are paying more for their appliances than a year ago. Price erosion has leveled off in recent months, successfully bringing back value to the market. On average, those buying major appliances are paying around 1.5 per cent more.

32. Appliance magazine, |June 2004| India “White goods Sales Vibrant in India's Rural Markets”, News Article,. Long thought of as luxuries for urbanites, appliances are finding their way into Indian rural homes. Products such as microwaves and air-conditioners -- which are considered to be very urbane in India -- have penetrated the semi-urban markets. Experts say that a study of the rural cross-section shows that in villages in a place such as Punjab, India a sarpanch (garment maker) would have all the gadgets from a
vacuum cleaner and microwave to an air-conditioner in his or her house. The latest report by FICCI pegs the growth of consumer durable goods in the rural markets in the last financial year at around 25 percent. Compared to 7 to 10 percent in its urban counterparts, rural India becomes the next destination for consumer durable goods sector.

The report shows buoyant trends in white goods sector heralded by color white goods and refrigerators, followed by air-conditioners, microwaves, and other electronic gadgets paving the way for further investment in the rural sectors. Rural markets have not been tapped in such a big way, and there is a lot of potential for growth, says Anil Arora, head of Marketing for LG Electronics. He adds that in the company's last financial year, 55 percent of its total sales turnover was from rural and semi-urban markets. (The Hindu Business Line)

33. Mr. Zentai | April 2004| "Hungarian Supplier Bakony Muvek to Expand into White goods Market" Hungary's Bakony Muvek Rt, closed last year with a profit of HUF 173 million (approx. $829,000) on HUF 7 billion (approx. U.S. $33 million) revenues, and plans net earnings of HUF 256 million (approx. U.S. $1.2 million) this year, with revenues rising to HUF 8.4 billion (approx. $40,000). Steady growth is planned through 2007, by which time the company targets HUF 1 billion profits and HUF 17 billion revenues, Zentai
said. Long-term plans are to reach turnover of EUR 100 million (HUF 25 billion) in order to remain competitive within the EU, he added. In a simultaneous project, the company will expand its capacity in Veszprem with a HUF 1.15 billion project to upgrade the current facility. After completion in August, deliveries to Electrolux's Swedish factories will begin in September. The headcount will increase by 80 in Veszprem. Electrolux is currently building a new EUR 65 million refrigerator plant in Nyiregyhaza which plans to start production next year, and produce 560,000 units when production gears up by 2007. Bakony plans to finance the projects from its own sources and bank loans, and also hopes to receive government support.

34. Boy Luthje |2003| “Why China Matters IN Global Electronics”, International Journal Of Occupational and Environmental Health, Vol 9, No. 4, in his PhD. Thesis he concludes that, In the universe of the global electronics industry, China has emerged as the rising star. In the wake of the recession in information technology—the worst in the industry’s history—the world’s leading electronics companies are flocking to China in search of low-cost labor and a share of the rapidly growing Chinese market. The electronics industry is in line with many others, not only shoe and garment companies with their notorious appetite for cheap labor, but also technology-based manufacturing industries such as automobiles. However, electronics has a
pioneer status for higher-technology manufacturing in China, since no other industry has production networks of similar size and scope in China. The figures are impressive. The UN Conference on Trade and Development reports foreign direct investment (FDI) in China of $46.8 billion in 2001. Growth rates for FDI have been constantly on the rise since the 1990s, reaching 15% between 2000 and 2001. This development has been linked closely to the deflationary forces behind the so-called “new economy” in the United States and other industrialized countries, as illustrated by the electronics sector. According to Far Eastern Economic Review, China’s exports of television and audio equipment to the United States rose by 13% per year between 1998 and 2001; in the same period TV-set prices fell by 9% each year. In the wake of the economic downturn, this trend has accelerated. In the first seven months of 2002, China’s export of electronics goods to the United States rose by 47%, reaching $1.2 billion in June 2002 alone.

35. Bridget T. Heneghan | 2003 | Whitewashing America: Material Culture and Race in the Antebellum Imagination. Jackson: University Press of Mississippi. Pp. xxvii, 204, draws on a diverse array of archaeological, literary, and other textual sources to support the thesis that "whiteness," as a racial category, was constituted through a discursive relationship between gentile practice and material goods. White goods, such as ceramics,
gravestones, houses, and women's clothing, became popular in the late eighteenth century among the elite as the white/black racial binary that has come to characterize American society became entrenched. White goods were not only more popular as the nineteenth century progressed but became more highly valued than nonwhite items. In favoring white materials, Heneghan suggests, the white elite was legitimating the racial hierarchy and making assertions about the relative worth of white versus black persons. So pervasive was the reification of whiteness through white materials, argues Heneghan, it is evidenced in the literary works of white authors like James Fenimore Cooper, Edgar Allan Poe, and Herman Melville, among others. Indeed, African-American authors such as Frederick Douglass and Linda Brent were also aware of the materiality of whiteness and sought to problematize and counter it in their abolitionist writings. Heneghan focuses on a limited number of issues, stating her thesis in her brief introduction and then offering four chapters that focus on particular aspects of that thesis. In the first chapter she presents the majority of the material culture evidence, predominantly derived from archaeological and literary sources. Because Heneghan's entire thesis hinges upon whether her reader is convinced by the evidence presented in this chapter, I will give some attention to this portion of the work.
Mike Bourne and Andy Neely | 2003 | “Implementing performance measurement systems: a literature review” International Journal of Business Performance Management, Vol. 5, No. 1, in their conclusion, the performance measurement literature is at the stage of identifying difficulties and pitfalls to be avoided based on experience with few published research 20 M. Bourne, A. Neely, J. Mills and K. Platts studies on the topic of implementation successes and failures. They concluded that, it must be remembered that there are wide differences between the published approaches to designing and implementing performance measurement systems. In an attempt to create a better understanding of the alternative approaches, this paper has created a framework and categorized published approaches to highlight the differences in practice. In all these approaches, little reference is made to the softer aspects of change that will be encountered during the implementation of a new performance measurement system. It is, therefore, highly likely that a review of the design and implementation processes, from the perspective of the literature on change management, will create further insights into why performance implementations succeed and fail. The dearth of research into the success and failure of the implementation of performance measures in white goods industry is an important deficiency in our knowledge of performance measurement. The literature presented above suggests that there are problems and difficulties in implementation of performance measurement
systems, which are just beginning to be recognized. To date, our knowledge is based primarily on the reflections of practitioners and, therefore, further comparative studies of the success and failure of the implementation of performance measures in different businesses, using a consistently high quality application of a single process, would add to our knowledge in this area.

37. M. Atilla Öner, Burcu Tokan, Ebru Türkkan, Serra Topçuoğlu, [December 2003], “Technology Processes Management Capability Profiles Of Firms In Automotive, White goods And Electronics Sectors In Turkey”, Yapı Kredi Economic Review, Turkey, in their research paper concludes that “Having a potential to create technology generates the economic power of a country. The more a country creates its own technology, the more it is powerful economically. To create and operate technology determines a company’s technological capability. The competitiveness of companies depends highly on these technological capabilities. Therefore, technology is one source of competitive advantage, which is also found in finance, marketing, distribution, and various other activities. However for firms that compete in a technological arena, industry leadership demands a technological competence that is sustainable. Of the factors that change the rules of competition, technological change is among the prominent. As a
competitive advantage, besides technology, another challenging factor to many companies is the integration of technology management systems into established business processes. Linking engineering, science and management disciplines in order to achieve objectives of the company requires effective management of technology. In this paper, the possible reasons of why some companies make use of technology and enhance their success more effectively than others were examined. This paper was designed to assess technology management practices and draw technology management capability profiles of firms in automotive, white goods and electronics industries in Turkey. The model can be applied to any service and manufacturing sector regardless of the services and products. Based on an improved process model (TPMCPM) of technology management, the research provided a means to assess the effectiveness of the critical technology management activities, and identify areas for improvement. The existence of high technology processes management capabilities within a firm implies that the firm has sufficient capabilities for integrating technology management with its business strategy and the firm views technology management as an integrated component of its general management.

channel for white goods” DBA thesis, University of Nottingham, England, in his dissertation accomplishes several tasks. First it surveys the literature in the resource-base theory of a firm and retailing for establishing the vital links necessary for firm heterogeneity in the retail channel for white goods. The review depicts not only the various dimensions of the concepts of resources, capabilities and competitive behaviour on competitive advantage but also the specific organisational/inter-organisational and strategic adaptation capabilities that direct some firms to outperform other firms in this retail channel. The empirical analysis for testing competitive advantages included a main survey analysis that consisted of all retailers and another for the small retailers. A model was constructed to diffuse simultaneously the critical resources, capabilities and competitive behaviour to competitive advantages pertaining to this retail channel in the UK. Furthermore, this method of linking and ranking of key resources and capabilities to competitive advantages is expected to encourage managers to leverage existing resource positions into superior future positions. The outcome of the analysis illustrates that efficiency and / or effectiveness of outlets (key resources) were subject to delivery of customer values from product portfolios that increased market shares (proxy for competitive advantage) for the retailer organisations. This study also demonstrates how retailer outlets became a source of competitive advantage by fulfilling the conditions of value, rarity, inimitability and in
substitutability. Finally, this study also reviews the current retail structure of this retail channel to understand why it could be efficient and effective than its counterparts in Europe. The result of the two surveys suggests some evidence of imperfect competition and directs attention not to the concentration of firms but to the imbalances of outlet classes prevailing in this retail channel. Moreover this study also reveals that the number of small retailer outlets prevalent in this retail channel may indirectly control to a certain degree the extent of the advantages of economies of scale/scope that is available to the larger retailers.

39. **Mac Fadden Communications Group** [2001] *Gale, Cengage Learning* year

“white-Goods Brands Remain Firm Despite Turbulent in 2000”. New York-, observed in brief about their white goods industry as If major appliances provided any trend in 2000, it was that flagship brands got the support and most of the volume increases. Even the high-end labels, which soared during prosperity, began to ease a bit. Major appliances didn't have a bad year in 2000. It only seemed that way after years of record growth. Anecdotally, many retailers have been saying they would be happy with an encore of last year. In those circumstances, evidence.. Ultimately, what stands out in HFN's annual brand-share report is the relatively minor shifting that took place last year despite the major upheaval. The leader in each of our seven categories
has been the same for the past three years. It helped a GE or a Maytag to participate in the white-goods rollouts by Home Depot. The Home Depot (NYSE: HD) is an American retailer of home improvement and construction products and services. Headquartered in Vinings, just outside Atlanta in unincorporated Cobb County, Georgia, Home Depot employs more than 355,000 people and operates 2,164 big-box and Wal-Mart last year. For that matter, Whirlpool, revolving current in an ocean, river, or lake. It may be caused by the configuration of the shore, irregularities in the bottom of the body of water, the meeting of opposing currents or tides, or the action of the wind upon the water. Benefited from an alliance with Lowe's, now No. 2 among the nations favored white-goods chains.

40. **Beatty, Gerry** | *March 2001* | “White-Goods Brands Remain Firm despite Turbulent 2000.” *Weekly Newspaper for the Home Furnishing Network, New York,* in their article specified that if major appliances provided any trend in 2001, it was that flagship brands got the support and most of the volume increases. Even the high-end labels, which soared during prosperity, began to ease a bit. Major appliances didn't have a bad year in 2008. It only seemed that way after years of record growth. Anecdotally, many retailers have been saying they would be happy with an encore of last year. In those circumstances, any stability was welcome, and famous brands backed by
extensive programs offered some continuity. For that matter, Whirlpool benefited from an alliance with Lowe's, now No. 2 among the nations favored white-goods chains, Of course, No. 1 far and away remains Sears. With the emphasis on manufacturers' lines, it's sometimes overlooked that Kenmore is the leading name in major appliances. The retailer increased its share last year, and so did its house label. Given all these conditions for 2008, the GE brand also tended to pick up market share. Frigidaire, with its focus on key customers, generally grew. Maytag -- diversifying with its Performa series at opening price points for the brand -- held its own, and Whirlpool and Amana yielded a point or two.

41. **John A. Quelch, Robin Root** | September 1997| “Koc Holding: Arcelik White goods”. *Turkey, Prod. #: 598033-PDF-ENG*, in their research work observed that Management is considering its options for future international expansion. Koc is the dominant supplier of white goods (kitchen appliances) in Turkey and has been increasing its export efforts. As lower import tariffs invite foreign competitors to enter Turkey, Koc must decide how to balance defense of its domestic market share against further foreign expansion.

42. **Jake Ansell and John Banasik**, 1995,"Forecasting white goods in a recession", *Department of Business Studies University of Edinburgh 50 George Square, Edingburgs,EH8 9JY, UK,©IMA Journal of Management*
Mathematics, Volume 6, Issue 3, Pp. 315-331. Oxford University Press, The forecasting models discussed in their paper deals with the sales prospects of three categories of an unspecified white good. The forecasts pertain to UK deliveries both of a particular firm and of all UK suppliers. The forecasting approach essentially resorts to multiple-regression models that employ leading indicators with liberal resort to polynomial distributed lags. Considerable structural differences in these models as between firm and industry reflect distinctive features of the firm's product line and policies. The models are first analysed in terms of their predictive performance, both in-sample and ex-sample. Features of these models and of their predictions are then considered in terms of what they indicated about the firm's policy options.

43. Stopford, John M., Baden-Fuller, Charles W. F., 1991 “Globalization frustrated: the case of white goods”. Strategic Management Journal, ISSN: 0143-2095, the authors in their article emphasized on the appliance industry of Europe, examined from the washing machine industry's domestic scene, illustrates how shifting economic conditions can reduce global strategic value, questioning the commonly-held idea that mature firms are always ready for such global strategies. Integral to the economic variations are the accompanying variety demand increases and the manufacturing scale decreases which lessen the national potential of the strategic market. Three
categories of firms were considered in the strategic analysis: the national firms, the exporters, and the global firms. Strategic choice is seen to be the key factor in the fluctuating finances of leading companies. In Europe, no single trend can be identified in the industrial sector, rather trends are dependent on the industry-type and on the time factor.

44. Mr. Robert Dicosta | May 1992 | “The European market for white kitchen goods and small electrical appliances.” (New & Reports) International Journal of Retail & Distribution Management, in his report reported the following, Increased efficiency and reliability, coupled with quieter running, are the main preoccupations driving kitchen white goods manufacturers. Increasing attention is also being paid to "green" pressures, such as the reduction of Freon emission from fridges and reduced use of power, water and detergent in washing units. But it is doubtful whether consumers use, or even understand, many of the modern gadgets, such as warning controls and lights, which new technology has allowed designers to incorporate.

45. Sergio Paba | 1996 | “Brand-naming' as an Entry Strategy in the White goods Industry” Cambridge Journal of Economics, Oxford University Press, vol. 10, issue 4, pages 305-18, In his research he has focused on a particular type of export sale of manufactured goods: the supply of final products to a foreign firm which produces the same or similar goods and which markets this prearranged supply under its own brand labels. Such "brand-naming"
agreements cannot be described either as a typical subcontracting agreement or as a simple cooperative arrangement between independent firms. The aim of this study is to show how the use of this practice, as an entry strategy into markets protected by high product differentiation barriers due to brand asymmetries, helped the Italian white goods industry to rise to world prominence.