CHAPTER III

LITERATURE REVIEW

This chapter provides comprehensive survey of literature on the topic of insurance sector liberalization and related trends. Insurance markets worldwide have changed in the last two decades. Liberalization, deregulation, globalization of insurance institutions, intensified competition, electronic commerce, bancassurance etc. are among the challenges faced by insurance markets now. These developing trends pose both global and local challenges for insurance firms. Analysis of various key insurance markets highlights various homogeneous trends in the global insurance market. First, the process of deregulation can be seen in most part of the world. Several countries have deregulated their insurance market at the national and regional level, which include Europe, Japan and United States. The second trend is the promotion of globalization throughout the world. For instance, China committed to liberalize the insurance sector with its entry into World Trade Organization (WTO) in 2001. The third major trend is the wave of privatization. The number of government owned insurance companies is becoming smaller and some countries have almost entirely eliminated government-run insurance companies. The trend is true for developed as well as emerging economies. France, China and India are among others countries which have gradually dismantled the former government insurance monopoly. Increased sophistication in insurance technology, internationalization of insurance market, reforms in pension and health insurance, evolution of new product and distribution system are other key trends, which are seen at more or less the same level in various countries worldwide. These trends can be summed up as liberalization, deregulation, privatization and globalization of insurance sector.

The implications of liberalization, deregulation and globalization vary according to country. Skipper Harold D., Jr. C.V. Starr and J. Mack Robinson (2000) in their study gave an in-depth knowledge on the issues and concerns of insurance market liberalization. Dozens of countries have deregulated and liberalized their insurance markets with the belief that competitive markets are better at enhancing consumer choice and welfare than the rigidly regulated insurance market. Also, research on market liberalization and international expansion of service gave a notion that market liberalization will have a positive impact on firm performance (Reardon, Erramilli and Dsouza, 1996; Contractor, Kundu and Hsu, 2002; Vachani, 1997). Megginson William L, Robert C. Nash, Matthias Van Randenborgh (1994) in their study compared the financial and operating performances of firms before and after the privatization. They included 61 companies from 18 countries and 32 industries that experience full or partial privatization through public share offerings during the period 1961 to 1990. They found significant increase in profitability, output per employee, capital spending, and total employment and concluded that the newly privatized firms benefited from improved operating and financial performance while maintaining total employment. Megginson William L and Netter (2001) provided an extensive survey of the empirical literature and concluded that privatization leads to increase in productivity in banks. Another study by Kikeri and Nellis (2004) also reached similar conclusion. Their findings thus suggested that liberalization and deregulation together promote efficiency. But, to what extent the mere change of ownership (privatization) or the strengthening of competition (liberalization) is responsible for an efficiency gain is still unclear. Moreover privatization and liberalization often take place simultaneously, and so it is hard to disintegrate the effects simultaneously. The literatures detailing the impact of liberalization and deregulation on insurance industry's performance is still scant. The studies on the impact of deregulation and liberalization reforms will be reviewed in this chapter for different countries including India. Of the researches, insurer's efficiency improvement has been the main concern.

European Union:

There is a growing interest and concern about the international competitiveness and efficiency of European financial institutions in general and insurance companies in particular. Over the past 15 years, the European Union has gradually deregulated the financial services sector through a series of banking and insurance directives with a view to creating a single European market in financial services. The implementation of European Union's (EU) third directives introduced in July 1994 has changed the face of European insurance market from a tightly regulated to competitive regime. The EU directives deregulated insurance market, which was earlier carried out by each insurer's home country. However, the impact of deregulation is likely to vary across different member countries. An overview of some of the studies done to see consequences of the deregulated and liberalized European insurance market to its member countries such as Austria, Germany, Italy, Portugal, and UK are reviewed here.

Fenn Paul, Dev Vencappa, Stephen Diacon, Paul Klumpes and Chris O'Brien (2008) estimated the cost and profit efficiency of major European countries in the wake of insurance liberalization. Their study was based on 14 major European countries from the period 1995-

2001 and used stochastic frontier methodology to model the efficiency of the companies during the deregulation period. The results suggested that most of the European insurers were operating under conditions of decreasing costs (increasing return to scale) and that company size and market share were factors that significantly determine X efficiency with respect to cost as well as profits. Cost efficiency was found relatively higher for smaller companies. Profit efficiency by contrast was found increasing with size for firms in all insurance sectors. Therefore they concluded that larger firms, and those with high market shares, tend to have more cost inefficiency but less profit inefficiency.

A similar work by **Sterzynski Maciej, L. L.M** (2003) studied the impact of liberalization and deregulation processes in European Community which was enabled to create a Single Insurance market (SIM) under the Third Generation of Insurance Directives. For the period 1995 to 2000, they found out that there was general reduction in number of companies while a serious increase in gross premium growth was observed. During the period, 70 percent of non life insurance was concentrated only in five Member States such as: Germany France, the Netherlands, Spain and UK .Moreover, up to 67.8% of all life insurers were concentrated in UK, Germany, the Netherlands Denmark and France. Another major change observed during the period was dominance of life insurers over non life insurers.

A study by **Mahlberg Bernherd and Thomas Url** (2003) measured the effects of liberalization on technical efficiency and productivity development of the Austrian insurance industry. They used Data Envelopment Analysis (DEA) to seven year's individual firm level data (from 1992-1999). They found out signs for single market effects in terms of reduction in the dispersion of DEA efficiency scores over time and the more homogeneous productivity development in the last years of their sample. There was development of efficiency in the insurance business over time. **Ennsfellner Karl C, Danielle Lewis and Randy I. Anderson** (2004) examined the production efficiency in the Austrian insurance industry using Bayesian stochastic frontier to obtain aggregate and firm specific estimates of production efficiency across insurer types and time. The objective of their study was to determine whether the changes in market structure and regulatory environment have had an influence on the production performance of the Austrian insurance companies. Austria became a member of European Union in 1995, so to study the effect of single market; they test the hypothesis that Austrian insurance industry has not been affected by the efficiency building program. The period of their study was from 1994 to 1999. The study provides strong evidence that the process of deregulation had positive effects on the production efficiency of the Austrian insurers.

The German insurance market which was one of the most regulated markets in the Europe was liberalized in the mid 1990's. Since then there have been changes in the regulation and supervision of German life insurance towards a very detailed but less intrusive regulation centering on the supervision of insurance firms and preventing insurers' insolvency. There are also quite a few studies on the development and determinants of efficiency and productivity in Germany during deregulation and thereafter. Those who studied the extent to which the European directive and subsequent liberalization's aim has been achieved in German Insurance market include Hussels and Ward (2004), Mahlberg and Url (2007), Luhnen Michael (2008), Gamarra Lucinda Trigo (2008). **Hussels and Ward** (2004) analyzed the

German life insurance industry over the period of 1991 to 2002 and assessed the cost efficiency and TFP with the help of data envelopment analysis of balanced panel data of 31. They found an overall average growth in efficiency and productivity. **Mahlberg and Url** (2007) examined the development of the German insurance industry for the years 1991-2001, using DEA and Malmquist analysis. They found that the total factor productivity (TFP) increased during the observation period, although the liberalization process did not lead to converging efficiency scores. **Luhnen Michael** (2008) provided a comprehensive analysis of efficiency and productivity in the German property-liability insurance industry using data envelopment analysis (DEA) for the period 1995–2006. **Gamarra Lucinda Trigo** (2008) used data from 1995-2002 and frontier efficiency methodology in the study. The study analyzed if the aims of liberalization process have been achieved in the German life insurance market. She found the evidence that the industry experienced a positive TFP growth but technical cost efficiency did not increase during the observed period and concluded that the effect of liberalization have only been partially achieved in German life insurance market.

Another study by **Hussels and Ward** (2006) examined the impact of deregulation in German and UK life insurance markets from the period 1991 to 2002 using 31 and 76 life insurance companies from German and UK respectively. They studied cost efficiency and further decomposed it into technical, Allocative and scale efficiency. They attempted to study the impact of insurance market deregulation by comparing German life insurance market and the U K market before and after the point of deregulation. Their result suggested that German insurance firms showed better in cost efficiency than that of UK before and after deregulation in the inter industry analysis. While in intra industry analysis, UK intra industry efficiency is higher than that of Germany. However, the analysis showed lack of evidence linking deregulation to improving efficiency levels or development of total factor productivity.

The major structural change in Portugal insurance market started in 1984 with its opening to private enterprise. In 1986, Portugal became a member of European Union and therefore adjusted towards freer market condition. **Barros Pedro. P. and Luis M.B. Cabral** (1991) evaluated the impact of entry on market competitiveness, in particular on the level of domestic social surplus. They presented a model which was subject to entry by foreign firms and derived test for the marginal as well as the global effect of foreign entry on domestic welfare. Applying the tests, they found the negative global effect of entry in Portuguese life insurance in 1989.However the marginal effect of entry was likely to be positive implying that additional foreign entry would increase the domestic welfare.

The Italian Insurance market has undergone significant deregulation in 1990, when banks were first permitted to own controlling interests in insurers, and since 1992, when implementation of European economic unity began. **Cummins, J. D., Turchetti, G., Weiss, M. A.,** (1996) studied an analysis of technical efficiency and productivity growth in the Italian insurance industry. The analysis made use of data based on a sample of 94 Italian life and non-life insurance companies over the period 1985- 1993. For the study, Input-oriented Data envelopment analysis was used to estimate production frontiers for each year of the sample period. While, Productivity growth was measured using Malmquist indices, which were also decomposed into technical efficiency change and technical change. The results indicated that technical efficiency in the

Italian insurance industry ranged from 70 to 78 percent during the sample period. There was almost no efficiency change over the sample period. However, productivity declined significantly over the sample period, with a cumulative decline of about 25 percent.

Cummins, Rubio-Misas, and Zi (2004) used the DEA method in examining the effect of organizational structure on efficiency by analyzing stock and mutual Spanish insurers from 1989 to 1997. A further study by **Cummins David and Maria Rubio-Misas** (2006) provided new information on the effects of deregulation and consolidation in financial services market by analyzing the insurance industry. In that they analyzed the causes and effect of consolidation using modern frontier efficiency analysis to estimate cost, technical and allocative efficiency as well as Malmquist analysis to measure the total factor productivity changes. The period of their study was from 1989 to 98. The paper aimed at analyzing scale economies and efficiency in the Spanish insurance industry to determine whether or not the deregulation has had intended effects. They measured efficiency by estimating ''best practice' production function and cost frontiers for each year of the sample period, using data envelopment analysis (DEA), a non parametric technique. They also measured the total factor productivity growth using the Malmquist index approach, an extension of the data envelopment approach, because productivity should have improved over the sample period if deregulation has had intended effects. The sample data of their analysis included firms specializing in life insurance and non-life insurance as well as diversified firms offering both types of insurance. For output measurement a modified version of the value added approach was adopted and five outputs viz. non life insurance losses incurred, life insurance losses incurred, reinsurance reserves, reserves for primary insurance contracts and invested assets were used while four inputs namely labor, business services, debt capital, and equity capital were taken. The result of the study showed that the deregulation has led to dramatic changes in the Spanish insurance industry such as decline in the number of firms, increase in the average size of firms and also the unit prices declined significantly in both life and non life insurance. There was significant growth in the TFP over the sample period. However the number of firms operating with increasing return to scale has reduced while the number of firms operating with decreasing return to scale has increased.

USA:

There is no significant deregulation as such taken place in US in the past 20 years. However, bank deregulation in the US in 1980s, has significantly affected insurance industry also. Bank were permitted to offer specific types of insurance including life insurance and annuities which were earlier been excluded from the insurance market. **Cummins, Tennyson, and Weiss** (1999) also used the DEA method to examine the efficiency of insurers and its relationship with the mergers and acquisition. They estimated Cost and Revenue efficiency over the period 1988 to 1995.They found out that acquired firms achieve greater efficiency gains than firms that have not been involved in merger and acquisition, and concluded that overall, mergers and acquisitions in the life insurance industry have had a beneficial effect on efficiency. **Chidambaram N.K, Thomas A. Pugel and Anthony Saunders** (1997) studied the performance of U.S property liability insurance industry for the years 1984 through 1993.The main focus of the study was on the differences in performance across lines of insurance. Intensity of competition can influence the performance of an industry. So they tried to draw the impact of such an intensity of competition on insurance prices nationally across different property liability insurance lines. As such they examined the role of variables representing differences in competition intensity across lines of business. They adopted an industrial organization approach, focusing on the economic loss ratio as a measure of pricing performance. Of the various determinants of the variation in economic loss ratio across different lines, the four determinants considered are concentration ratio, direct/ agency ratio, investment ratio, standard deviation of the economic loss ratio and it was calculated for each line using data over the ten year sample period. The result of the study showed that the concentration ratio of the line and the share of direct writers in the line were found to be significant determinant of performance.

China:

The monopoly of People's Insurance Company of China (PICC) was lifted with the establishment of three new Chinese insurance companies in 1986, 1988 and 1991 respectively. American Insurance Assurance won regulatory approval in 1992 to set up a branch in Shanghai, marking the first step to officially signal the opening of Chinese market to foreign insurers. The establishment of the insurance law of the People's Republic of china in 1995 also made provision for companies to underwrite either property insurance or life insurance, not both at the same time. In addition, the China Insurance Regulatory Commission (CIRC) was established in 1998 and undertook the supervisory control of all the insurance companies. With pressure from the international Insurance community, the CIRC encouraged China's government to issue licenses to new domestic and foreign insurers. Finally, China's transformation continued with their membership in the WTO becoming official on December 11, 2001. **Whalley John** (2003) in his paper documented and assessed the policy changes in China's three service categories (Banking, Insurance and Telecoms) since its commitment to World Trade Organization (WTO). In case of insurance he expressed rather easy route compare to Banking to achieve the commitment to implementation of WTO. This may be because, foreign entry to the Chinese insurance market was both already possible and allowed, but foreigners seemingly did not take up new entry opportunities quickly. He expressed that whether the effects of liberalization will be beneficial or harmful for China was ambiguous. **Leverty Tyler, Yijia Lin and Hao Zhou** (2004) conducted an in depth analysis of the efficiency and productivity of the Chinese Insurance Industry after the state monopoly was dissolved allowing foreign owned insurers. They estimated total technical efficiency, purely technical efficiency and scale efficiency using DEA. Also they utilized the Malmquist approach to measure evolution of productivity and efficiency of Insurers over time. The dataset covered was 1995 to 2002 for property casualty insurers and 1992to 2002 for the life insurers. They observed growth in the annual average productivity over the sample period for property-casualty (PC) insurers as well as life insurance market. Also, they found out that regulatory restrictions on foreign insurer, product diversity and geographical dispersion inhibit foreign property casualty firm's efficiency. The gain in productivity in insurance industry is mostly accumulated by Chinese domestic insurance companies. Overall their results shows increase in social welfare following liberalization of the insurance market. **Yang Mingliang** (2006) in his study of the Chinese insurance market particularly property insurance used DEA analysis to estimate the efficiency. Malmquist Index Approach was used to measure the efficiency change and technical change. He used data from the yearbook of China insurance from 2000-2005. Their finding showed that the Chinese property-liability insurance market was experiencing a decreasing efficiency during 2000 to 2004 and there was also a negative growth in total factor productivity during the period. **Wei Huang** (2007) evaluated the profit and cost efficiency of China's insurance firms for the period 1999 to 2004. He used Stochastic Frontier Approach (SFA),a parametric technique and showed that insurance industry reported inferior cost efficiency and profit efficiency during the period. The state-owned companies were less cost efficient than non-state-owned insurance companies though they had the advantage of profit efficiency. He also investigated the relationship between efficiency scores and specific features of China's insurance companies and identified the determinants of efficiency scores. For that, the efficiency value calculated was used in the regression analysis to find possible factors. Then the significant level of each coefficient and values were processed to determine the real factors and their function. He found out that the corporate governance structure, organizational forms, business mode, asset size and product diversification are among the main factors affecting efficiency. **Chen Bingzhen, Powers M .R and Qui Joshep** (2009) studied the structure and characteristics of the Chinese life insurance industry, with special focus on the impact of the regulatory changes and the entry of foreign life insurers. They used DEA to find efficiency and malmquist Index for productivity of insurers using data from 2001-2006. Their study concluded that domestic life insurers generally have better efficiency performance. And in case of productivity, one half of the insurers taken showed an increase in Malmquist Index across years.

Japan:

In Japan, the "Big Bang" financial reforms of the late 1990's aimed to make the Tokyo financial market comparable in the scale and in the variety and sophistication of financial products to markets in London, New York and continental Europe. The first drastic changes in Japan's insurance industry was the introduction of life insurance business lawin 1996. The law aimed at promotion of deregulation and liberalization, maintenance of sound management, and carrying out fair business operation. The new law enabled life and non-life insurance companies to enter each other's sector through subsidiaries. **Fukuyama H. and William L.Weber** (2001) examined the efficiency and productivity growth of non life insurance companies in Japan during the period 1983-94. They estimated output technical efficiency using three Efficiency measures namely Farrell, Russell and Zieschang measures. The three efficiency measures were used to construct the Malmquist index of productivity growth which can be decomposed into an index of efficiency change and an index of technological change. A sample of 17 Japanese non life insurance companies was used to empirically examine whether there were significant differences in measured productivity change for the three measures above. Farrel, Zieschang based measures indicated no significant increase or decrease in productivity while Russell based Malmquist index showed significant productivity growth. It was found out that Farrel, Russell and Zieschang based decomposition of Malmquist index all exhibited a significant positive correlation. **Fukuyama** (1997) examined the efficiency and productivity in Japanese life insurance industry using the data from 1988 to 1991.He concluded that efficiency and productivity performance differed from time to time across two ownership type viz. mutual insurance companies and stock companies under different economic conditions. Therefore clear difference in efficiency and productivity between the two ownership types could not be established. **Yoshihiro Asai, Yanase Noriyoshi, Tomimura Kei and Ozeki Junya**(2007) studied the efficiency and productivity of life insurance industry in Japan after mid 1990s. They employed DEA and Malmquist Index to calculate the efficiency and productivity of life insurance companies in Japan over a period of 9 years from 1996 to 2004. Their result showed no change in the efficiency of life insurance companies in Japan but productivity of insurance companies in Japan increased during the sample period. The productivity of stock companies dramatically increased while productivity of mutual companies decreased during the sample period. **Souma Toshiyuki and Yoshiro Tsutsui** (2005) examined the change in the level of competition in the Japanese life insurance industry over the period of 17 years from 1986 to 2002. Utilizing the regression equations they established that there has been a change in the degree of competition during that period. Their results suggested that competition has become stronger since 1995 but the competition in the recent years was more lax than the pre war period and so indicated potential for more competition.

Other Countries:

Oetzel J.M. and S.G. Banerjee (2008) explored the relationship between market liberalization and insurance firm performance in emerging markets and developing countries to specifically determine whether or not market liberalization has a positive impact on insurance firm performance. They also studied whether there were performance differences between foreign and local insurance firms. A sample of 383 companies located in 31 EMDCs (Emerging Markets and Developing

Countries) was tasted using moderated time series cross section regression analysis for the time period 1998 to 2003. Their result suggested that market liberalization indeed have significant direct effect on firm profitability for all insurers operating in the host country. Local and foreign firms showed no significant difference in profitability between them.

Korea and Philippines undertook modest deregulation and liberalization efforts. **Boonyasai, Grace and Skipper** (2004) examined the impact of liberalization and deregulation on four life insurance markets viz. Korea Philippines, Taiwan and Thailand .The data collected were from the late 1970s or 1980s, depending on data availability for each country. For Korea, the life insurance company population varied from 6 to 33 during the study period from 1980 to 1997. Philippine life insurers ranged in number of firms from 24 to 33 during the study period, 1987 to 1997.The number of Taiwanese life insurance companies varied from 8 to 31 during the study period, 1983 to 1997. Finally, the number of Thai life insurers varied from 11 to 13 during the study period, 1978 to 1996.Using DEA to measure cost efficiency they found that liberalization and deregulation of Korean and Philippine life insurance industry have stimulated increase and improvement in productivity. However for Taiwanese and Thai Life insurance firms, liberalization has had little effects on increases and improvements in productivity. Their results suggest that liberalization should be closely followed by deregulation or otherwise a restrictive regulatory environment will reduce the welfare gain.

Taiwan has been opening its financial market to foreign countries since 1986. It took few changes in national regulation accompanied by relaxation of market restriction. **Jeng Vivian and Gene C. Lai** (2008) examined the impact of deregulation and liberalization on efficiency of Taiwanese life insurance industry from 1981-2004 using DEA. The efficiency performances as well as changes in efficiency and productivity over time were also calculated using Malmquist index approach. Their results showed that the deregulation and liberalization did not have major adverse impact on the technical, cost and revenue efficiency performances of the existing domestic firms in the long run. **Liu (1994) and Chang (1998)** also studied the efficiency change in Taiwan's life insurance industry. In the case of Liu, the efficiency change from the year 1986 to 1993 was considered and examined the technical efficiency of life insurers using DEA. By further decomposing technical efficiency into scale efficiency and pure technical efficiency, he found that the efficiency performances of foreign insurers were usually poor in the first 2 years, but the inefficiency was mostly due to low-scale efficiency scores. After reaching constant return-to-scale in 2 years, foreign insurers tend to largely improve their technical efficiency performances. Chang (1998) used the X- efficiency analysis to examine the efficiency change of existing domestic firms from the year 1975 to 1996. His results showed that the X-inefficiency of domestic firms on average decreased after the deregulation and liberalization. Therefore, he claims that the market competition after the deregulation and liberalization has improved the efficiency performances of existing domestic firms.

Konan Denise Eby and Keith E. Maskus(2006) analyzed the impact of services liberalization in terms of welfare, output and factor prices in Tunisia using a computable general equilibrium (CGE) model to compare it with the goods- trade liberalization. They found out that reducing services barriers generated larger welfare gain and low adjustment costs compare to trade liberalization. Services liberalization increased economic activity in all sectors and raised the real returns to both capital and labor.

India:

Following deregulation of Indian insurance industry, concerns were expressed to look into the scenario of the industry as well as likely changes to be followed. **Ranade Ajit and Rajeev Ahuja** (1999) in their study identified the emerging strategic issues in light of liberalization and private sector entry into insurance. They justified the need for private sector entry on the basis of enhancing the efficiency of operations, achieving a greater density and penetration of life- insurance in the country, and for a greater mobilization of long term savings for long gestation infrastructure projects. They pointed out that LIC, with its 40 years of experience and wide reach, was in an advantageous position. They also pointed out the need to handle strategic issues carefully. Accordingly LIC should adapt to liberalized scenario such as changing demography and demand for pensions, demand for a wider variety of products, and having greater freedom in its investments. **Ranade Ajit and Rajeev Ahuja** (2000) in another study looked into the regulatory issues of insurance sector in India. In the Indian insurance market, the regulator must assure new entrants of a level playing field vis-a-vis hitherto monopoly incumbents. They were of the view that the regulator must focus initially on financial soundness and prior experience of entrants, tariff and contract standardization, and serving weaker section of the society. Another primary objective of regulation has to be protection of customer's interest as in most countries with longer tradition of a competitive insurance industry. **Pant Niranjan** (1999) addressed the need for a more cogent legislation than the Insurance Regulation Development Bill 1999. He viewed that liberalization of the insurance sector in India will see the increasing involvement of the large and powerful insurance companies of the world in the Indian insurance industry. It was therefore essential to have the support of a stronger regulation to turn this involvement into a positive factor for the growth of the Indian insurance sector in particular and the Indian economy in general. **Pant Niranjan** (2000) in another paper discussed the development agendas for insurance regulation in India. For him, the task of IRDA is to establish and promote fair competition in such a way that sustainable growth in the national insurance market is also achieved. Also the availability and affordability of insurance service for the weaker sections should be one of the important agenda for social development. He also mentioned that the regulator need to establish priority areas for financial management, accounting and reporting issues in insurance keeping in mind the two foremost financial issues viz. security and solvency. **Rao Tripati** (1999) studied the pattern and growth of life insurance business in India since its nationalization in 1956. His analysis focused specifically in the growth of new business, business in force, income and outgo (financial outflow) of life fund i.e. institutional savings and business by different zones of LIC. These indicators were compared with the related macro variables. He found out that in the decade beginning 1983-84, there was a significant growth in new business both in terms of policies and sum assured. The business in force showed an increasing trend since the early 1980's. The analysis of the zonal business revealed that business was greater in the more urbanized zones. The income and outgo analysis has revealed that even with lower sum assured and increased rural business, the LIC has succeeded in converting a growing income into life insurance fund. In spite of all this, life business continued to be low in terms of coverage and contribution to national income and saving. He concluded that there was large potential for future development in life business in India. **Rao Tripati** (2000) in his paper maintained that the issue of privatization and foreign participation must be approached cautiously with a 'step-by-step approach', and should be preceded by microeconomic institutional and legal reforms. According to him, the macroeconomic implications of privatization and foreign participation in the insurance sector, especially the life insurance sector, are far-reaching. The life insurance industry was coterminous with the Life Insurance Corporation (LIC) of India and was dominant in two aspects: pooling and redistributing risks across millions of policyholders and performing financial intermediation. **Ahuja Rajeev** (2004) appraised the development record of Indian insurance industry in the wake of first four years of liberalization. He however pointed out four areas in which the insurance regulator needs to quickly move forward namely pensions and health insurance, phasing off tariff, strengthening of self regulation and reviewing of capital requirement. According to him the success of the competition in financial sector ultimately depends on the efficiency of regulation. So, constant reviewing and fine tuning of the rules by regulator was also suggested to keep pace with the development in the markets. **Rajendran and Natarajan** (2009) found out the remarkable improvements that the acceptance and adaptation of Liberalization Privatization and Globalization has brought about in the Indian Life Insurance Industry specifically to LIC of India. They first compared the overall performance of LIC of India between pre and post LPG era and secondly examined the current status, volume of competitions and challenges faced by LIC of India. The growth of LIC was compared in terms performance indicators such as annual business,

business in force, group business in force and life fund between the period 1957 and 2007.For this they have taken the secondary data from the annual reports of LIC of India. They used method of least squares for the data analysis and linear trend in future growth of insurance was predicted. Their analysis concluded that LPG was incorporating a positive influence on the performance of LIC of India showing that the business in India, business outside India as well as the total business of LIC of India was always in increasing trends. **Sen Subir and S Madheswaran** (2006) in their paper tried to analyze the structure of the post liberalization period of the Indian insurance industry. The econometric analysis was carried out to select the best measure of concentration from a set of eight concentration ratios of largest firms and Herfindahl index. The analysis suggested that even after five years, domination of the public entities was witnessed in both life as well as non life insurance but private sector firms were gradually coming up in terms of profits. **Rastogi Shilpa and Runa Sarkar** (2007) in their study identified the causes and the objectives with which the sector was reformed in 2000 and concluded that the hybrid model of privatization with regulation adopted by the Government has yielded positive results and the sector has started to look up. **Sinha Ram Pratap and Biswajit Chatterjee** (2009) calculated the cost efficiency of 14 life insurance companies in India for the period 2002-03 to 2006-07.They estimated the cost efficiency using DEA method and found out an upward trend in the last three years i.e. between 2002-03 and 2004-05. The efficiency in the last two years however was in the reversed trend.

Anand Mohit in his study tried to bring out the impact of Joint Venture Companies on Innovation and Growth in Indian Insurance Industry. His concepts of innovation were in terms of product and process. **Mitra Debabrata Ghosh Amlan** (2010) studied the relationship between life insurance sector reforms in India and the development of life business in post reform period using data from 1990-91 to 2007-08. They constructed an index to measure the reforms and then used VAR-VECM model to find out the long run relationship. The Granger causality test suggested that life insurance sector reforms improved the overall development of life insurance in the recent years in India. The VEC Granger causality test showed that the relationship between the insurance sector reforms and development of life insurance sector in India was bi-directional.

Gosalia Chirag (2008) assessed the financial performance of the Indian non -life insurance industry from the year 2003 to 2007. Various financial ratios including claim ratio and combined ratio were used to analyze the financial ratio using secondary data available with IRDA's official gazettes and journals. He also assessed whether the existing insurers were compliance with IRDA regulations specifically the Solvency margins and Rural and social sector obligations. The study revealed that public insurers were dominating over private because of their existing base and none of the private insurers were highly profitable. However private insurers were growing aggressively posing for a strong competition with high level of penetration and profitability in the long run. **Sinha Ram Pratap** (2010) in his study compared the efficiency of 15 Indian life insurance companies using revenue maximizing approach. Using data from the period 2005-06 to 2008-09, he found that LIC of India was the only efficient insurer throughout the years while it was closely followed by Sahara. **Shukla Sneha S.** (2010) analyzed the structure of Indian life insurance industry and competition among the insurance companies. She observed that liberalization gave a positive push towards growth of insurance sector as well as the economy and changed the structure of the industry. To understand the impact of the changes and analyze the state of competition, Concentration Index and Herfindahl-Hirschman Index (HHI) of concentration was used. The major findings show a concentration decline and increased competition in the life insurance industry.

All these studies, mostly the relating to foreign countries examined impact of liberalizations in terms of efficiency and productivity and hence do not provide comprehensive picture of overall impact and other benefits resulting from reforms. In case of India, most of the studies available analyzed Indian industry scenario in varying aspects such as emerging strategic and regulatory issues in light of liberalization, appraisal of industry development, structure, innovation etc. However Indian insurance is in the starting point of a long journey of liberalization and therefore the result may not be sufficient time for a complete overhaul of the industry, and many trends may only be indicative. More literature in these regard is impending at this stage. This thesis attempts to contribute to field of insurance sector research by examining the changing industry scenario in terms of concentration, efficiency and productivity and other benefits of insurance reforms.