

A STUDY ON IMPACT OF BUSINESS INTELLIGENCE ON INSURANCE INDUSTRY

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Abstract : In an Indian economy insurance industry is playing a vital role by encouraging people to make investment and that leads to savings. There are more number of insurance companies in a country; each and every company tries to lead the market by gaining competitive advantage. Business intelligence is a new technology of an integrated solution for insurer with which the business requirement is the key factor that drives technology innovation. This research paper study the concept of business intelligence and try to know the impact of it on Indian insurance industry by considering benefits of the same.

Index Terms - Business intelligence, competitive advantage, data warehouse, insurance, technology.

I. INTRODUCTION

Insurance companies have to store and analyze a massive amount of data. To collect and analyze the data about policy holders, insurers usually use customer relationship management systems and enterprise resource planning technologies. The problem with using these different systems and technologies is that it's very difficult to make the data actionable. Insurance companies first have to upload the data to one location so that actuaries, financial reporters, claims adjusters and other authorized staff have access to it. Then they have to process and analyze the data properly in order to draw the right conclusions from it. With the help of new and advanced technology like business intelligence insurers can centralize their business activities will leads to reduce cost and ultimately decreases the price of product and services. Business intelligence is a concept of using information technology as a tool for achieving the competitiveness of businesses, the perception of risk that occurs in the environment within the firm and the possibility of action. It involves the integration of traditional business functions with information technology communication and capabilities that are provided. The intent of business intelligence is the integrated and coordinated application of business information in order to comprehensively products, service, profits and the long term health and growth of a company.

II. LITERATURE REVIEW

1. Gregory Richards, William Yeoh, Alain Yee Loong Chong and Ales Popovic (2019) modeled a corporate performance management framework based on the integrated model of IT business value and on information processing theory. The study shows that the more effective the CPM related planning and analytic practices. Both business intelligence and business analytics contribute to corporate management practices, the information needs are different based on the level of uncertainty versus ambiguity characteristic of the management practices.
2. Mihaela Muntean (2018) opinioned that sustainability as an integrated part of the corporate business implies the integration of the new approach at all levels like business model, performance management system, business intelligence project and data model. The paper represents the contribution in the modeling data for supporting further business intelligence approaches in corporate sustainability initiatives.
3. Jufri Darma (2017) in the study aimed to examine the effect of clarity of business vision on quality of business intelligence systems and its impact on quality of decision making at quality of decision making at

financial institutions in North Sumatra, Indonesia. The study found the fact that, the quality of business intelligence systems have a significant impact on the quality of decision making.

4. Vikas Khurana and Dr Amol C Gojie (2016) focused on study to determine the impact of business intelligence tool on quality of decision making and organizational growth in information technology organizations. The study found that business intelligence tool information has significant influence on organizational growth. There is significant difference in the quality of decision making after business intelligence tool implementation and significant improvement in the organizational growth after business intelligence tool implementation.
5. Dr S J Manjunth and Mohammad Nasrollahniya (2014) made an attempt to investigate the importance of business intelligence on organization's competitive advantage. The study analyzed the relationship among information technology infrastructure, organizational agility and competitive advantages with business intelligence. The result found that after implementation of business intelligence insurer performance improved day by day and decision making relatively changed from intuition to use of it but it is still in the infancy stage.

II.2. Research gap

The purpose of the study is to focus on the impact of business intelligence to know the benefits of it to make effective decision making in an Indian insurance industry to gain competitive advantage from the point of view of insurer.

III. RESEARCH METHODOLOGY

3.1 Significance of the study

The study covers few important benefits of business intelligence to study the impact of it on an insurance industry.

3.2 Scope of the study

As business intelligence is the advanced concept of information technology for achieving the competitiveness of businesses with effective decision making to get organizational growth by the Indian insurance companies.

3.3 Objective of the study

The main objective of this paper is to study the benefits of business intelligence to know the impact of it on insurance industry.

3.4 Research type

Conceptual paper

3.5 Sources of data

For the study the data has been collected from secondary sources.

IV. BUSINESS INTELLIGENCE

Business intelligence is a managerial concept which refers to a set of programs and technologies that provide capabilities of gathering, analyzing and accessing data of organization's process. In a simple sense we can understand it as the process of collection, treatment, analysis and use of strategic information for a company. It is all about information that is important for a company. Effective business intelligence system allows data collection from all departments with in the company their analysis, preparation of the necessary reports and addressing those users who are most needed. This application accelerates the process of making business decisions with respect to the quality of data located in one central place known as data warehouse. It helps the organizations which having comprehensive knowledge about business affecting factors such as standards in

selling, production and internal organization's processes. The ultimate goal of business intelligence systems in any organization is to help to make optimal decisions as soon as possible and in all organization's levels.

Business intelligence system integrates information and knowledge about customers, suppliers, competition and overall operations. It improves the strategic and operational planning control, business indicators, analysis and optimization of business operations, ensuring the successful targeting customers and tracking competitive activity and predicting future trends.

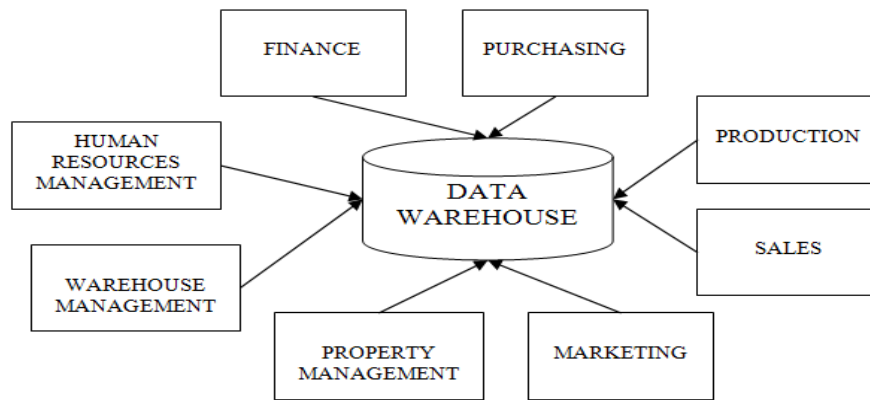


Fig 4.1: Business Intelligence (Source: Katarzyna Rostek, Warswa University of Technology)

The concepts related to business intelligence classified into three groups like managerial with focus on excellence in decision making, technical with focus on tools supporting business intelligence and enabler with focus on value added capabilities in support of shared information. The focus was at first on managerial approach, later shift to technical and ultimately enabler approach.

V. BUSINESS INTELLIGENCE AND INSURANCE INDUSTRY

Business intelligence in the insurance industry is also becoming more advanced and accessible to gather the benefits of this evolving technology. Insurance companies that use business intelligence services and tools have many advantages to overcome the problems like better data storage options, more accurate data analytics and reports, reliable predictive modeling. Business intelligence solutions provide the decision makers from all business segments of insurance with the ability to manage and exploit information resources, in order to solve the problems and make timely and high-quality decisions. Business intelligence covers many areas of the insurance and among the most important are customer relationship management, performance management, risk management, asset and liability management and compliance. The impact of business intelligence can be study with the help of discussing the following advantages with which insurance companies to achieve competitive advantage within the industry.

5.1 Fraud recognition

In insurance companies one of the major critical issues is fraud recognition. The ability to spot inconsistencies helps insurance companies identify to suspicious cases and avoid costly pay outs for fraudulent claims. The insurance companies lose revenue due to fraud; they often raise insurance premium and rates to regain costs, which results in a negative customer experience. Business intelligence software helps to solve this problem by offering the ability to recognize fraud in all its forms, from inflating actual claims to falsifying information on application forms. Effective fraud prevention requires early detection and business intelligence uses predictive analytics which helps to identify fraudulent claims earlier in the claims cycle. By presenting the information via easy-to-understand visualizations, end users can identify patterns that point to fraudulent activity and set up automated alerts based on these patterns.

5.2 Data storage

Business Intelligence in the insurance industry boosts data storage. Insurance companies have to store and analyze a massive amount of data. For instance, company collects information claims history, reimbursements.

These are all the data that the insurance company needs to consider before and after enrolling the customer in a plan. Business intelligence in the insurance industry streamlines the data storage process in the following ways. First insurer can set up an efficient data warehouse information technology firms that specialize in business intelligence create a data warehouse that keeps all information in an optimized cloud platform. Data warehouse virtualization tools keep data stored securely on a remote server. Then insurer can choose who has access to different data sets. Business intelligence portals limit access to different types of data based on the authorization level of the user. Claims adjusters only have access to their assigned claims and financial reporters only have access to the financial data they need to make strategic decisions. At the end insurer's data is more secure. They can choose to backup important sets of data on the server. They would not lose any data due to poor organization or server failure.

5.3 Claims management

For most customers, claim represents must needed compensation for what could be a shocking and disturbing event. An efficient claims process is essential to the success of any insurance company because on the one hand side it increases customer satisfaction and minimizes loss to an insurance company on the another side. An optimized claims process empower agents to resolve open claims as much as faster, which encourages to dedicate their attention to a larger number of customers. So that by integrating business intelligence software with customer relationship management systems, insurance providers can also give their claims handlers access to detailed customer profiles related to policy information, policy reports, loss, frequency and severity. This mobilizing application helps to benefit that adjusters can access claims information anywhere, which helps insurers to review customers' prior claims and other essential information and to deliver more expedient service, as well as a highly personalized customer experience.

5.4 Identify profitable opportunities

Every insurance company can gain competitive advantage from the benefits of business intelligence. Insurance company to maximize their earnings, executives needs to be able to view all parts of the business from a centralized location and in a convenient format. Employees can easily convert their business knowledge by using the business intelligence to solve many business issues like increase response rates from direct mail, e-mail, sms, telephone and marketing campaigns delivered by internet. Insurance company can use business intelligence software to monitor market trends to make more strategic business decisions and to monitor the performance of various agencies, products within their own catalog and to determine where spending a little extra time and at the end it leads to increase profit.

5.5 Sales and distribution

Competitors can be a huge obstacle on the insurance company's way to success. Their objectives are the same objectives of other companies and that is to maximize profits and customer satisfaction. Insurance companies introduce more number of products and sales teams to make fast and accurate recommendations about the products and to reach goals they need to monitor the performance of each sales representative, product and territory to determine whether they are meeting expectations. In a modern day sales representatives need information at their fingertips. For this business intelligence solutions offer real-time access that is readily available and generate detailed visualizations, depicting individual product, agency performance, sales presentations and training videos. It helps to quote analysis, buying patterns and demographics, with these sales managers and representatives can easily determine the areas of the business which are performing well and which ones need attention as well as identify potential growth opportunities.

5.6 Accurate reports

Insurance companies use business intelligence to generate accurate reports. It means it simplifies the report generation process. Insurance companies have to generate a wide range of reports like financial reports, operational reports, management reports and insurance reports. Financial reports that track internal expenditure and profits generated from premiums, operational reports that track staff workflows and productivity, management reports that visualize data and enable managers to make high level decisions and insurance reports that track and analyze claims. To create all the reports company need to make exploratory data analysis,

predictive modeling, statistical analysis and other complex calculations, to present the data in visual form to understand the findings by staff and investors. It will consume more time and leads to hire a data scientists or statistician. With the implementation of business intelligence services, company can generate all of these reports without having any data expert onsite and that software performs these complex calculations when you supply the data. An insurer can make it easy to upload new data into the storage system and create accurate reports within minutes.

5.7 Predictive modeling

Business intelligence tools not only make easier to store the data and to generate reports but also helps to make predictive analysis to get exciting benefits by the insurers. It reduce equipment downtime by applying predictive maintenance. To predict customer behavior and incidents of fraud insurance companies have to use past insurance claims with machine learning algorithms. Predictive models are superior to the actuarial models because actuarial models collect demographic data and access risk based on board demographic patterns. To make the best predictions insurance companies have to collect the data regularly. Insurance companies use business intelligence tool for underwriting risk, financial projection and product profitability models.

5.8 Customer management

Insurance companies cannot exist without their customers who are considered the most critical aspect to a company's success. The insurance industry is continuously progressing and insurance companies that fail to keep up with the changes risk lower profit margins and destroy market share. Therefore, customer management is more important than ever. Advantage of business intelligence is to enhance customer relationship is its rooting in personalization. An insurance company can understand and respond to the needs, preference and behavior of each customer with the help of personalization of relations between insurance company and customers. Insurer can hold and utilize the data to deliver highly relevant and personalized offers and services, thus form a deeper connection with their target customers. On the other side insurers can create smarter marketing campaigns, adapt more quickly to consumer feedback and create new products based on consumer preferences and interactions.

VI. Conclusion

In the insurance industry proper data storage and organization is absolutely essential. Advanced business intelligence tools can help the company to keep data safe and make it easier to draw meaningful conclusions from it. Insurance industry is leading the charge in analytics innovation and business intelligence adoption. Because the true value of innovation in the arm of decision maker which access to critical information when and where they need it. Insurance companies spend more on new technology and see return in increased efficiency, visibility and streamlined management processes.

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