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Aims and Scope

IJRIME provides an outlet for research which advances our understanding of technology and management, in all its varied aspects. It publishes articles that deal with the theory and practice of technology and management, especially those which demonstrate how concepts and ideas about technology and management can be put into practice. IJRIME includes papers that are interdisciplinary in nature as well as those within the major disciplines, including: accounting and finance, marketing, operations management, human resource management, management strategy, information technology, business economics, computer science. The goal of International journal of Research in IT, Management & Engineering is to disseminate the latest thinking and research about technology and management to academics and practitioners all over the world. It aims to include papers from both developed and undeveloped countries. Preference is thus given to papers which adopt an International persepective or dealwith international issues related to management.

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Changing face of Mushroom Cultivation Training at ICAR-Directorate of Mushroom Research Solan

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The method employed to provide Mushroom Cultivation Training to the farmers, entrepreneurs and other persons has undergone a sea change if we go back to the year 1998. During that time, slides were made on transparencies using marker pens (Fig. 1). The transparencies were then put in inverted position over a projector, which projected the contents on the screen. Some faculty also used white board markers (Fig. 2) for showing some formulas etc to the trainees. The trainees didn't get any copy of the material shown over the projector. Also, there were no smart cameras through which trainees could take photographs. Making transparencies was a tedious job. In the event of any corrections, whole slide had to be all over again or make corrections with a white marker pen.

Transparency projector (Fig.1)

White Board Marker (Fig.2)

After this came the slide projectors where slides were make of the negatives (Fig. 3&4) of the photpgraphs taken and they were put up in a straight or a circular path of the slide projector as shown in fig 3 and fig 4. This methods somewhat improved the quality of the slides as earlier the photos had to be got photocopied onto the transparencies and now photographs of the crop could be clicked and shown directly to the trainees.

Slide projector (i) (Fig.3)

Slide projector (ii) (Fig.4)

Next came the power point presentations which was a part of the MS Word package. First time when MS Word was purchased, it consisted of around 25 3.5" slides and had to be installed into the computer. It included Word, Excel, power point and Access. Data in any form (histograms, bar charts, pie charts etc.) could be presented to the trainees. Smart panels could be used for writing something on the board and then saving it for future use or taking a print out of the same. In addition to the slides, recorded audio and videos could also be played for the benefit of the trainees. Then came the internet and the ultimate revolution in which slides, videos, audios could be presented to the participants through a computer and a projector. If internet facility is available, live videos related to mushroom cultivation can be played on the computer and shown to the participants.

Smart Panel (Fig.5)

Video Conferencing (Fig.6)

Now video conferencing softwares are available, like, Zoom, Webex, Google Meet which allow up to one thousand persons to join and take part in any virtual meeting, conference, seminar or training. In this corona affected times, all interviews, meetings, conferences, seminars, trainings are being conducted online.

Training could be taken on laptops, ipads, mobiles etc. which has given great flexibility to the trainers as well as trainees.

REGISTRATION AND POST TRAINING SUPPORT

The registration process for the training has also developed a sea change. While in the initial days, registration was done through writing letters and sending demand drafts for the training fees, then registration was done through email and now registration is done through google forms available on the website and fees is paid through netbanking, ATM Card or SBI collect link available on the website.

Same is true for the post training support to the mushroom farmers. Initially the farmers used to telephone, or bring compost/spawn samples for testing. But now, with the social media available, farmers can video call, show their crop for any problem testing, send photographs and get instant solution through the social media platforms available, viz. WhatsApp, Instagram, Telegram, Twitter etc.

CONCLUSION

It can be seen that conduction of trainings has undergone great changes from the era of giving presentations through transparencies to using computers and making powerpoint presentations and now giving training presentations through video conferencing softwares like zoom, webex, and google meet etc. While it has given flexibility to the presenters to present their information in various formats, it has also increased the ease of learning for the trainees.

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Study of Impact of Pandemic on Consumer Behavior and Need Prioritization with Reference to Retail Sector

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ABSTRACT

The entire world come under lockdown orders and consumers around the world started to avoid human contact, retailers are scrambling to adapt. They recognize the global response to the pandemic will have a significant impact on their business. They realize the situation is changing daily. And they have faced many problems like consumer perception towards goods with the changing priorities. This paper aims at what are the impact of pandemic on consumer behavior and their priorities with reference to the retail industry in India.

Keywords : retail, consumer behavior, prioritization

INTRODUCTION :

The entire world is facing an extraordinary crisis. The pandemic has sent shockwaves throughout global communities, dislocated international supply chains and generated steep selloffs in financial markets. It has nowadays become clear that the high street will take on a very different form once the pandemic is over. Frailer players will, unfortunately, cease to exist, leaving behind smaller but more resilient sectors that have acted fast.

It is important for the company to measure the consumer behaviour for the growth and increase market share. The COVID-19 crises have severe influences on the purchase behaviour and consumption patterns of people, and their well-being, therefore the sociology of consumption has devoted attentions in the time of Crises. For this purpose, the data of 50 customers on various dimensions were gathered using questionnaire and analysed.

The extent to which the supply manages to acclimate the demands and change in consumer behaviour is key to the prosperity of a business or, in the current context, to the continuance of the business. Currently, the primary goal of any company is to identify how the perception and attitude of a consumer towards risk causes noteworthy changes in its purchasing behaviour.

The current social and economic crisis caused by COVID 19 pandemic has surprised the world. The fear and concern caused by this are visibly worrying social behaviour in general, and purchasing behaviour in particular. It was so sudden and unpredictable that the forecasting was difficult. This pandemic has bought humanity to the brink of a key challenge, that of dealing with human reaction. Although, compared to 100 years ago, we achieved another level of technological progression, when it comes to behaviour, the reaction of the public has not radically changed.

When the pandemic broke out, several predictions had been made about the probable losses in the global economy. Though, the real impact of COVID 19 will be challenging to quantify until now. What is certain, however, is that we will be dealing with ultimate changes in consumer behaviour and, even

more, these changes will be long-lasting. Consumer behaviour changes fundamentally once an economic crisis initiates, and it becomes much more rational, more economical, but also extra demanding and expecting.

The consumer will not rapidly spend their money unless they are sure that they are paying for what is expected. They will avoid acquisitions that are not matching real needs. The economic and social consequences of a crisis, viz. unemployment, inflation, rising commodity prices and declining purchasing power, lead to noteworthy changes in purchasing and consumption behaviour of the consumer.

In the time of crisis, consciousness of consumer towards the value of money increases which pushes the consumer to make compromises in term of money, brand, quality and personal comfort. The environment of crisis deeply impacts decision-making process of the consumer, and it is mainly influenced by the change in the economic state of the consumer, who may face the risk of losing their job or lessening in their salary. In the recession period, consumer behaviour becomes much more economical, depending on a inadequate income to meet unlimited needs. The consumer will also engage in a broader process of information search for better substitutes because of the risk of making a wrong decision is much more significant during this period.

Pandemic

Pandemics are for the most part disease eruptions that become widespread as a result of the spread of human-to-human infection. There have been many noteworthy disease outbreaks and pandemics recorded in history, including Spanish Flu, Hong Kong Flu, SARS, H7N9, Ebola, Zika (WHO, 2011b). The term ―pandemic‖ has not been defined by many medical texts, but there are some important features of a pandemic, including wide geographic extension, disease movement, novelty, severity, high attack rates and explosiveness, minimal population immunity, infectiousness and contagiousness, which help us to understand the concept better, if we examine similarities and differences among them. The pandemic related disasters have been associated with enormous negative impacts on health, economy, society and security of national and global communities. As well, they have triggered significant political and social disruption.

The internationally accepted definition of a pandemic as it appears in the Dictionary of Epidemiology is straightforward and well-known: ―an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people‖ (Harris, 2000). The classical definition, however, includes nothing about population immunity, virology or disease severity. By On the basis of this dictionary definition, pandemics can be said to occur annually in each of the temperate southern and northern hemispheres, given that the definition of the term is so wide. Seasonal epidemics cross international boundaries and affect a large number of people. HoweverThis said, seasonal epidemics are not considered pandemics.

Modern definitions include ―extensive epidemic‖, ―epidemic […] over a very wide area and usually affecting a large proportion of the population‖, and ―distributed or occurring widely throughout a region, country, continent or globally‖, among others (Morens et al., 2009). In the case of influenza, biologists also require that pandemic strains undergo key genomic mutations, known as antigenic shift. For WHO to pronounce a level six pandemic alert there has to be sustained transmission in at least two

regions at the same time. WHO‘s standard definition of pandemic influenza refers to a situation in which a new and highly pathogenic viral subtype, one to which no one (or few) in the human population has immunological resistance and which is easily transmissible between humans, establishes a foothold in the human population, at which point it rapidly spreads worldwide (WHO, 2011a).

Retail Sector

Retailing in India is one of the pillars of its economy and accounts for about 10 percent of its GDP. The Indian retail market is estimated to be US$ 600 billion and one of the top five retail markets in the world by economic value. India is one of the fastest growing retail markets in the world, with 1.2 billion people.

As of 2003, India's retailing industry was essentially owner manned small shops. In 2010, larger format convenience stores and supermarkets accounted for about 4 percent of the industry, and these were present only in large urban centers. India's retail and logistics industry employs about 40 million Indians (3.3% of Indian population).

Until 2011, Indian central government denied foreign direct investment (FDI) in multi-brand retail, forbidding foreign groups from any ownership in supermarkets, convenience stores or any retail outlets. Even single-brand retail was limited to 51% ownership and a bureaucratic process.

In November 2011, India's central government announced retail reforms for both multi-brand stores and single-brand stores. These market reforms paved the way for retail innovation and competition with multi-brand retailers such as Walmart, Carrefour and Tesco, as well single brand majors such as IKEA, Nike, and Apple.[6] The announcement sparked intense activism, both in opposition and in support of the reforms. In December 2011, under pressure from the opposition, Indian government placed the retail reforms on hold till it reaches a consensus. In January 2012, India approved reforms for single-brand stores welcoming anyone in the world to innovate in Indian retail market with 100% ownership, but imposed the requirement that the single brand retailer source 30 percent of its goods from India. Indian government continues the hold on retail reforms for multi-brand stores.

In June 2012, IKEA announced it had applied for permission to invest $1.9 billion in India and set up 25 retail stores.[9] An analyst from Fitch Group stated that the 30 percent requirement was likely to significantly delay if not prevent most single brand majors from Europe, USA and Japan from opening stores and creating associated jobs in India. On 14 September 2012, the government of India announced the opening of FDI in multi-brand retail, subject to approvals by individual states. This decision was welcomed by economists[who?] and the markets, but caused protests and an upheaval in India's central government's political coalition structure. On 20 September 2012, the Government of India formally notified the FDI reforms for single and multi brand retail, thereby making it effective under Indian law.

On 7 December 2012, the Federal Government of India allowed 51% FDI in multi-brand retail in India. The government managed to get the approval of multi-brand retail in the parliament despite heavy uproar from the opposition (the NDA and leftist parties.

INDIAN RETAIL INDUSTRY :

Indian retail industry is one of the fastest growing in the world. Retail industry is expected to reach Rs. 76.87 lakh crore (US$ 1.1 trillion) by 2020. India ranked 63 in the World Bank's Doing Business 2020 publication. India ranked 73 in the United Nations Conference on Trade and Development's Business-to-Consumer (B2C) E-commerce Index 2019. India's direct selling industry recorded sales of US$ 2.47 billion in 2019, improving its rank to 15 from 19 a year before. Consumer spending in India increased to US$ 245.16 billion in the third quarter of 2020 from US$ 192.94 billion in the second quarter of 2020 India is the fifth largest and preferred retail destination globally. The country is among the highest in the world in terms of per capita retail store availability. India's retail sector is experiencing exponential growth with retail development taking place not just in major cities and metros, but also in tier II and III cities. Healthy economic growth, changing demographic profile, increasing disposable income, urbanisation, changing consumer tastes and preferences are some of the factors driving growth in the organised retail market in India.

Indian online grocery market is estimated to exceed sales of about Rs. 22,500 crore (US$ 3.19 billion) in 2020, witnessing a significant jump of 76% over the previous year. India's population is taking to online retail big way. India's E-commerce business will reach US$ 99 billion by 2024, growing at a CAGR of 27% over 2019. Online penetration of retail is expected to reach 10.7% by 2024 versus 4.7% in 2019.

After an unprecedented decline of 19% in the January-March 2020 quarter, the FMCG industry displayed signs of recovery in the July-September 2020 quarter with a y-o-y growth of 1.6%.

The growth witnessed in the fast-moving consumer goods (FMCG) sector was also a reflection of positivity recorded in the overall macroeconomic scenario amid opening of the economy and easing of lockdown restrictions. India is expected to become the world's third-largest consumer economy, reaching Rs. 27.95 lakh crore (US$ 400 billion) in consumption by 2025. ^Increasing participation from foreign and private players has given a boost to Indian retail industry. India's price competitiveness attracts large retail players to use it as a sourcing base. Global retailers such as Walmart, GAP, Tesco and JC Penney are increasing their sourcing from India and are moving from third-party buying offices to establishing their own wholly owned/wholly managed sourcing and buying offices in India.

The Government of India has introduced reforms to attract Foreign Direct Investment (FDI) in retail industry. The Government has approved 51% FDI in multi-brand retail and 100% FDI in single-brand retail under the automatic route, which is expected to give a boost to Ease of Doing Business and Make in India schemes, with plans to allow 100% FDI in E-commerce. Cumulative FDI inflow in retail stood at US$ 2.17 billion between April 2000 to June 2020. India's retail sector attracted US$ 970 million from various private equity (PE) funds in 2019.

According to the Ground Zero Series findings of the consulting firm RedSeer, the retail sector is expected to recover ~80% of pre-Covid revenue (amounting to US$ 780 billion) by end-2020. India will become a favourable market for fashion retailers on the back of a large young adult consumer base, increasing disposable income and relaxed FDI norms. During the online festive sale in October 2020, the Indian e-commerce firms—Flipkart, Amazon, Myntra and Snapdeal—together sold goods worth US$ 3.1 billion.

Effect of Pandemic on Retail Sector

Infectious disease outbreaks can easily cross borders to threaten economic and regional stability, as has been demonstrated by the HIV, H1N1, H5N1, and SARS epidemics and pandemics (Verikios, Sullivan, Stojanovski, Giesecke, & Woo, 2015). Beyond the debilitating, sometimes fatal, consequences for those directly affected, pandemics have a range of negative social, economic and political consequences (Davies, 2013a). As an example, ―The impact of pandemic influenza ie. H1N1 in 2009 was not just on mortality, but also on health-care systems, animal health, agriculture, education, transport, tourism and the financial sector. In short, a pandemic event threatens all aspects of the economic and social fabric‖ (Drake, Chalabi, & Coker, 2012). For another example, the SARS in 2003 and the Ebola pandemics, in 2013 and 2015 respectively, disrupted the economies and social order in China and West Africa as well as causing death and illness. Ebola and other pandemics have reduced the life quality of families and communities, and Ebola has disrupted essential services such as education, transport, and tourism, reduced the West African economies and isolated populations, which had impacts beyond Africa too due to the global effort of containing the outbreak.

Health effects :Pandemics have infected millions of people, causing wide-spread serious illness in a large population and thousands of deaths. For example, in 14th century, the _Black Death' plague killed the half population of Europe (A. G. P. Ross, Ross, Olveda, &Yuesheng, 2014). In the 20th century, there were three major pandemic: 1) Spanish flu in 1919-1920, which caused 20-40 million deaths (Taubenberger&Morens, 2009); 2) Asian flu in 1957-1958 which caused about 2 million deaths, 3) Hong Kong flu in 1968-1969 which caused 1 million deaths (Landis, 2007; Wildoner, 2016). Infectious disease disasters, including pandemics and emerging infectious disease outbreaks, have the potential to cause high morbidity and mortality in the world, and in fact they may acount for a quarter to a third of global mortality (Verikios et al., 2015). In developing countries, both pandemics and infectious diseases have the potential to kill claim many peopllivese, and the likelihood of deaths is within the range of 5 to 10 percent (Kern, 2016). During the SARS outbreak in 2003, there were more than 8000 infected individuals, with over 700 deaths (almost 9%)worldwide in just 6 months (Wong & Leung, 2007). Influenza is one of the most serious pandemic diseases. Influenza outbreaks can result in considerable morbidity and mortality. Influenza pandemics are characterised by a high incidence and fatality rate with 250,000–500,000 people deaths each year, rapid and wide-spread transmission (WHO 2004). Recent influenza pandemics have killed significant numbers of people worldwide, and contributed to an estimated 8,870–18,300 deaths in 2009– 2010 (Prager, Wei, & Rose, 2016). For example, May 2009 saw the emergence from Mexico of a new H1N1 virus capable of human-to-human transmission (Verikios et al., 2015). WHO reported 182,166 laboratory confirmed cases of influenza A/H1N1, with 1799 deaths in 178 countries up to August 13, 2009 (Rewar et al., 2015). In the U.S.A, ―The US Centers for Disease Control and Prevention (CDC) estimates that the peak H1N1 season (April 2009 to April 2010) in the United States resulted in 43–89 million cases, 195–403 thousand hospitalizations, and 8,870– 18,300 deaths‖ (Bhandari, Hartley, Lindsley, Fisher, & Palmer, 2013).

Over the past several years, the threat of a human influenza pandemic has greatly increased. For example, H5N1 has repeatedly managed to infect humans in several Asian and European countries (Fangriya, 2015). There had been 387 confirmed cases of human H5N1 infection across 15 countries since from late 2003 to late 2008, including 245 deaths, with an average case-fatality rate of around 63% globally. (Enemark, 2009). The H5N1 could easily become another major pandemic. With the

emergence of the zoonotic influenza A (H7N9) virus in China, there have also been renewed concerns about the potential for a pandemic to arise from an avian influenza strain. The outbreak of H7N9 viruses has caused more than 600 human infections, with nearly 30% mortality (Su & He, 2015), and the H7N9 virus is considered to have pandemic potential (Tanner, TOTH, &Gundlapalli, 2015). Other major treats in recent times have been pandemics of Dengue and Ebola. The incidence of the severe and fatal form of the Dengue has increased dramatically in developing countries. The 2015–2016 dengue epidemics were the worst in the history of Latin America. The first cases were recorded in Brazil in May 2015 and caused more than 1.5 million cases up to December 2015. At least 34 countries were involved in March 2016 (Troncoso, 2016). The Ebola outbreak in West Africa was an unprecedented public health emergency of international concern. In October 2015, WHO reported that there were 28,581 Ebola Virus Disease (EVD) confirmed, probable and suspected cases, with 11,299 deaths in West African countries (Liberia, Guinea, Sierra Leone). The estimated case fatality proportion was 40% (Nabarro&Wannous, 2016). More than 11,000 people died in nine countries as the response to the Ebola zoonotic _spillover' was delayed .

THE ECONOMIC IMPACTS :

Pandemic influenza represents a serious threat not only to the population of the world, but also to its economy. The impact of economic loss can result in instability of the economy. The impact is through direct costs, long term burden, and indirect costs. The direct costs of dealing with the disease outbreak can be very high. For example, the Ebola outbreak has seriously undermined the economics throughout West Africa. The Ebola outbreak in Sierra Leone in 2015 cost USD 6 billion in direct costs (hospitals, staff, medication), and the direct costs alone amount to 3 years of funding for WHO, and are well over 20 times the cost of WHO's emergency response cuts in its 2014–15 budget (Gostin& Friedman, 2015). It has been calculated that there was an economic loss of USD 1.6 billion for the three countries compared with the economic growth in the previous year 2014 (Kern, 2016). The Global Health Risk Framework for the Future (GHRF) Commission estimates that every year on average infectious disease outbreaks cost the world about USD 60 billion in direct costs (Maurice, 2016). The long term burden is also severe. One of the main burdens is from the loss of earnings of those who have died. Prager, Wei et al (2016) have estimated that economic losses from a pandemic influenza in the USA would be USD 90 – 220 billion, and of that, 80% would come from the value of expected future lifetime earnings of those who would die (Prager et al., 2016). McKibben and Sidorenko (2006) estimated that the economic cost of an influenza pandemic range from USD 374 billion for a mild pandemic to USD 7.3 trillion for a severe pandemic (MacKellarSource:, 2007). The mathematical models indicate that a future influenza pandemic could have total costs USD 71-166 (Rebmann, 2010).

—Recent years have seen at least six large-scale outbreaks—hantavirus pulmonary syndrome, severe acute respiratory syndrome, H5N1 influenza, H1N1 influenza, Middle East respiratory syndrome, and Ebola virus disease, which cost the world more than $2 billion, according to World Bank calculations‖.

Social impacts :

The social impacts of pandemics were severe, include travel was strictly limited, and schools closing, markets and sporting were closed. All these are a likely reality should a pandemic with true potential for high morbidity and mortality emerge. Population mobility is also a key factor. Movement was difficult and the travel including visiting families, carrying goods to markets were restricted by military check points. The closure of airports and cancellation of flights affected many people's travel, livelihood, and

family life. With the rapid development in worldwide aviation over the last two decades, the risk of global pandemics has escalated with increased passenger traffic. With modern and efficient air travel, SARS, which originated from southern China was rapidly transmitted to more than 30 countries in early 2003 (Wong & Leung, 2007). Closing the airports harmed the economy of the affected regions.

Security impacts :

A security threat of pandemic influenza as is not a recent phenomenon. Global security is threated from pandemics, in terms of lives and economic stability (Maurice, 2016). Pandemics are no longer simply the domain of public health and clinical medicine, but are a social issue, a development issue, and a global security issue (Castillo-Chavez et al., 2015). The commission on a Global Health Risk Framework for the Future (GHRF) published a book at the beginning of 2016 under the title: ―The Neglected Dimension of Global Security – A Framework to Counter Infectious Diseases Crises‖. A key statement sounds like that: ―Pandemics cause destruction to human lives and livelihoods much as do wars, financial crises. Pandemic prevention and response, therefore, should be treated as an essential tenet of both national and global security – not just as a matter of health‖ (Kern, 2016). Bioterrorism including biological weapons and bioterrorist attacks, are frequently come from the _naturally occurring‘ emerging and reemerging infectious disease outbreaks, as the practice and punishment of security has changed markedly over the past two decades, which the _threats‘ range from the more traditional (largely military) security.

CONCLUSION

Under the pressure of the risk of illness engendered by COVID 19 pandemic, the majority of the population has radically changed their lifestyle. As a result of lockdown in most countries, a large population of the consumer isconcerned with towards the online environment, because it is considered to have a much lesser risk of COVID 19 in terms of direct contact. Consumer‘s loyalty to a specific brand has also fluctuated with the tendency of storing products. The panic that appears in a first stage was later substituted by the need to adapt to the new normality. There have been numerous significant pandemics recorded in human history, and the pandemic related crises have caused massive negative impacts on health, economies, and even national security in the world. However the term ―pandemic‖ has a long history, it is still not been defined by many medical texts, and the conception is still changing. But there are some key features of a pandemic, including wide geographic extension, disease movement, novelty, severity, high attack rates and explosiveness, minimal population immunity, infectiousness and contagiousness, which help us to understand what pandemics are.

The negative impacts of pandemic are serious. Pandemics have infected millions of people, causing wide-spread serious illness in a large population and thousands of deaths. It represents a solemn threat not onlyto the population of the world, but also to its economy. The impact of economic loss can result in unpredictability of the economy, which is through direct costs, long term burden, and indirect costs. The social impacts of pandemics were severe, include travel was strictly partial, and schools closing, markets and sporting were closed. All these are a likely reality should apandemic withaccurate potentialfor high morbidity and mortality emerge.

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Standard and Actual Costing using ERP Software for Manufacturing Companies

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ABSTRACT

Most of the global manufacturing companies face challenges for tracking of actual costs against standard cost calculated in the system based on the usages and pricing of source materials. Different processes or techniques are used across manufacturing plants of a global company to get actual costs and variances at end of the month. To harmonize as one global process across all the plants in a company requires implementing Enterprise resource planning (ERP) systems like SAP, Oracle and JD edwards. Actual costing is big aspiration for most of the manufacturing companies as it provides actual cost breakdown in manufacturing a finished product and normally not successful in several ERP implementations. In this article I will be explaining about product costing with in SAP that allows to provide actual costs and variances at month end. For any successful ERP implementation master data maintenance is critical component to perform any transaction like producing, selling and purchasing of finished goods. This article covers important aspects of functional and technical requirements of tracking actual costs in a global company and is broadly classified as 1. Master data, 2. Production process, 3. Integration of Finance with production, 4. Analyzing variances and settlement, 5. Calculating Actual costs, 6. Reporting.

Key Words: SAP S/4 HANA, Oracle, ERP, JD Edwards, Manufacturing, FICO, Product Costing, Material Ledger, Process order, Production order, Variances, Actual costing, Standard Costing.

INTRODUCTION

Production process begins when there is need for a new product in a company can be used for a sale to end customer or as a semifinsihed product to produce a new product. Production set up not only serve plant production and it is the foundation for finance in providing actual product cost calculation, timely month-end financial figures, calculation of yield and stock valuation. It also serves as a foundation for supply chain and quality teams in providing accurate stock visibility, ATP for finished and co-products, MRP for ingredients, inventory optimization and supply chain network planning in global planning tools, batch traceability and in certain cases limit inspections by inheriting results. Supply chain group creates new product without updating anything related to quality control or finance. For the finance piece, the accounting and costing data are two important parts of a product that need to be updated. The majority of the information are pulled in from the product costing like BOM (Bill of Materials) and recipe/routing and tied in to the Finished product, which is how the system pulls the costing information when a product is produced during the period.

MASTER DATA

Bill of Materials (BOM) is important step in product costing process which includes raw materials, ingredients and any packaging necessary for producing and shipping of the product. It is also primary input for the base quantity of the product, which is used to calculate amount of items needed based on the amount of the product produced which is linked to product master data. Recipe or routing is another

main driver of product costing which utilizes activities, cost components, work centers and cost centers in order to cost all other items that are not included in the Bill of Materials. Activities are nothing but a unit that classifies the work being done with in a cost center and example are labor hours, machine or maintenance hours. The individual activities are grouped into cost components, which are then grouped into work centers and cost centers in order to provide a full costing view. Cost components used in normal manufacturing companies are Raw materials, Ingredients, packaging, chemicals, labor, maintenance, depreciation and other overheads. These different categories of cost components would fall into the different work centers or cost centers with in the product costing structure.

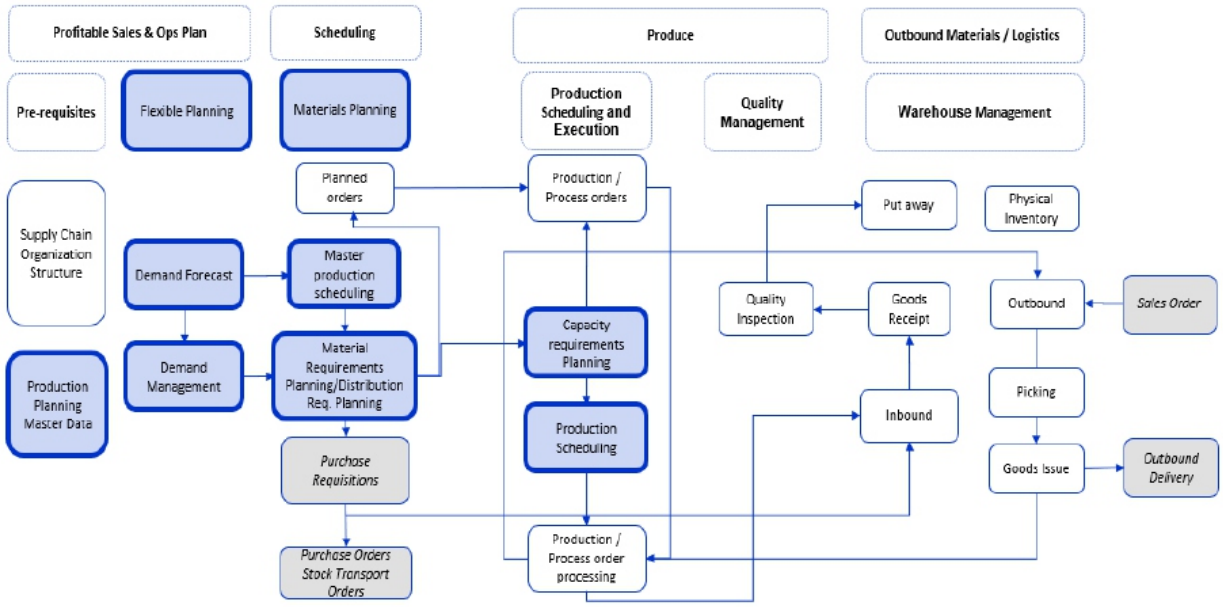
Recipe also tied to product master through production version and then all be tied together through product cost collector which is used to group all of the costs for a product. Next step is to execute cost estimate for the product and this is where system runs the costing using the base quantity to determine the total standard cost for the product. This total standard cost can be seen in a variety of ways, including in total or split between the various cost components. At month end, material ledger is used to determine actual costs for externally procured and inhouse products and also used to valuate inventories of raw materials, semi-finished and finished products.

PRODUCTION PROCESS

Production orders acts as a cost collectors and being posted with standard cost (materials, activities) during the month. Month end closing exercise like physical inventory, actual activity, cost settlement, material ledger settlement will calculate actual product cost. During ERP implementation first decision production team should make is which type of production type is used and it dependent upon complexity of business and in general there are three different types which are discrete production order, process order and repetitive production types. Discrete production types are used in discrete manufacturing industries like automobiles, engines and electronics, semiconductors. Master data used in discrete manufacturing are Bill of Materials (BOM), work center, cost center and routing. Process order type are used in process manufacturing industries like Food, pharmaceutical, chemicals and fertilizers. Master data used in process industries are Bill of Materials (BOM), master recipe, resource and cost center. Repetitive production type are used in repetitive manufacturing industries like consumer goods.

Process order types used in process manufacturing industries is complicated process which is batch managed and master-Receipe production of finished goods. After execution of MRP run, production order or process order is converted from planned order which automatically creates reservations for material components. Purchase orders are created by purchasing department for externally procured materials and capacity requirements planning are created at resources or work center at which order is executed. In process industries typically includes four processes : Process planning, process management, process order execution and order closing. Process planning steps include order request, process order creation, availability check, resources/line scheduling, resource selection, batch determination and material quantity calculation. Process management steps include process order release, printing of process orders, forward control recipe, and maintain PI sheet. Process order execution steps include process message for different destinations, material staging or material withdrawals, order confirmations, in-process quality inspections and goods receipt. Order closing steps include variance calculation, order settlement, batch record and archive/delete process order for effective system performance in reporting. Below figure depicts high level production process from Sales & Operations planning, production, quality management, sales order, outbound delivery and

billing to end customer. In below figure which are highlighted in blue are true plant production steps and other steps are either input or output of production process in manufacturing industries.



Integration of Finance with production

Process order act as cost collector and requires preliminary costing which utilizes bill of materials (BOM), routing or recipe to determine the planned costs and results in creation of standard cost estimates of all products used in production process. First step in manufacturing process to create a process order or production order to produce a finished good from bill of materials and routing. Goods issue document is posted which means issuing a raw materials or semi-finished goods which are required to produce a finished product. In this goods issue document inventory is reduced and posts to balance sheet GL account and other side of entry post to a profit and loss consumption account. Once production is completed finished goods taken back to inventory and all production costs goes back to inventory account. Work in progress (WIP) is calculated for incomplete production at month end where legal entity is responsible to move WIP costs to an temporary WIP balance sheet and Profit and loss accounts depending upon the status of production or process order. Once production is completed and finished product is recorded in the inventory account which is followed by cancellation of WIP postings.

Analyzing Variances and Order Settlement

Different types of variances categories are there in production which includes scrap variances, input price variances, input quantity variances, lot size variances, output price variances. Production variances is difference between net actual costs debits compared to target costs posted to production order. Settlement of orders transfer variances to Finance, costing based profitability analysis and zero out production order by posting credits which is last step in period end closing of production orders.

Calculating Actual Costs

Material ledger is subledger to capture all transactions related to material from different areas in a legal entity like sales, purchasing and production. During the month, valuation of all the products with standard price and material ledger records all transactions and then at the end of the month actual costing run determines actual cost also knows as periodic unit price by taking in to account of cumulative

inventory value (standard cost), including any price variances dividing by cumulative inventory. Different steps are involved in actual costing which includes selection which materials are relevant for actual costing, determines what portion of the variances need to transfer to next level of production through actual BOM enabling variances to be rolled up all the way to the finished product and also consider material and cost center/process variances, also determines portion of variances corresponding to internal consumption (next level of production) and Sales (cost of goods sold) and enable the revaluation of consumption allowing better cost of analysis. At the end of the period, actual price is calculated for each material and plant combination.

CONCLUSION

It's vital for Business to have actual costs at the end of period for companies to track variances between standard and actual and also used for management to make informed decisions which product line is profitable. Several ERP systems are used to implement in large manufacturing companies to achieve actual costs but SAP S/4 HANA system is an in-memory database system and also provides necessary functions to calculate actual costs for each material and plant at the end of the month without managing complicated calculations in excel. SAP has inbuild capabilities to integrate production, sales and purchasing with finance and controlling modules so that transactions integrate seamlessly from material perspective which is used to calculate actual cost from material ledger. Actual cost or periodic unit price is used to re-valuate all customer invoices with actual costs after month end so that all billing documents can be compared with standard and actual costs to achieve customer profitability.

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Study of Impact of Pandemic on Consumer Behavior and Need Prioritization with Reference to Retail Sector

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ABSTRACT

The entire world come under lockdown orders and consumers around the world started to avoid human contact, retailers are scrambling to adapt. They recognize the global response to the pandemic will have a significant impact on their business. They realize the situation is changing daily. And they have faced many problems like consumer perception towards goods with the changing priorities. This paper aims at what are the impact of pandemic on consumer behavior and their priorities with reference to the retail industry in India.

Keywords : retail, consumer behavior, prioritization

INTRODUCTION :

The entire world is facing an extraordinary crisis. The pandemic has sent shockwaves throughout global communities, dislocated international supply chains and generated steep selloffs in financial markets. It has nowadays become clear that the high street will take on a very different form once the pandemic is over. Frailer players will, unfortunately, cease to exist, leaving behind smaller but more resilient sectors that have acted fast.

It is important for the company to measure the consumer behaviour for the growth and increase market share. The COVID-19 crises have severe influences on the purchase behaviour and consumption patterns of people, and their well-being, therefore the sociology of consumption has devoted attentions in the time of Crises. For this purpose, the data of 50 customers on various dimensions were gathered using questionnaire and analysed.

The extent to which the supply manages to acclimate the demands and change in consumer behaviour is key to the prosperity of a business or, in the current context, to the continuance of the business. Currently, the primary goal of any company is to identify how the perception and attitude of a consumer towards risk causes noteworthy changes in its purchasing behaviour. The current social and economic crisis caused by COVID 19 pandemic has surprised the world. The fear and concern caused by this are visibly worrying social behaviour in general, and purchasing behaviour in particular. It was so sudden and unpredictable that the forecasting was difficult. This pandemic has bought humanity to the brink of a key challenge, that of dealing with human reaction. Although, compared to 100 years ago, we achieved another level of technological progression, when it comes to behaviour, the reaction of the public has not radically changed.

When the pandemic broke out, several predictions had been made about the probable losses in the global economy. Though, the real impact of COVID 19 will be challenging to quantify until now. What is certain, however, is that we will be dealing with ultimate changes in consumer behaviour and, even

more, these changes will be long-lasting. Consumer behaviour changes fundamentally once an economic crisis initiates, and it becomes much more rational, more economical, but also extra demanding and expecting.

The consumer will not rapidly spend their money unless they are sure that they are paying for what is expected. They will avoid acquisitions that are not matching real needs. The economic and social consequences of a crisis, viz. unemployment, inflation, rising commodity prices and declining purchasing power, lead to noteworthy changes in purchasing and consumption behaviour of the consumer.

In the time of crisis, consciousness of consumer towards the value of money increases which pushes the consumer to make compromises in term of money, brand, quality and personal comfort. The environment of crisis deeply impacts decision-making process of the consumer, and it is mainly influenced by the change in the economic state of the consumer, who may face the risk of losing their job or lessening in their salary. In the recession period, consumer behaviour becomes much more economical, depending on a inadequate income to meet unlimited needs. The consumer will also engage in a broader process of information search for better substitutes because of the risk of making a wrong decision is much more significant during this period.

Pandemic

Pandemics are for the most part disease eruptions that become widespread as a result of the spread of human-to-human infection. There have been many noteworthy disease outbreaks and pandemics recorded in history, including Spanish Flu, Hong Kong Flu, SARS, H7N9, Ebola, Zika (WHO, 2011b). The term ―pandemic‖ has not been defined by many medical texts, but there are some important features of a pandemic, including wide geographic extension, disease movement, novelty, severity, high attack rates and explosiveness, minimal population immunity, infectiousness and contagiousness, which help us to understand the concept better, if we examine similarities and differences among them. The pandemic related disasters have been associated with enormous negative impacts on health, economy, society and security of national and global communities. As well, they have triggered significant political and social disruption.

The internationally accepted definition of a pandemic as it appears in the Dictionary of Epidemiology is straightforward and well-known: ―an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people‖ (Harris, 2000). The classical definition, however, includes nothing about population immunity, virology or disease severity. By On the basis of this dictionary definition, pandemics can be said to occur annually in each of the temperate southern and northern hemispheres, given that the definition of the term is so wide. Seasonal epidemics cross international boundaries and affect a large number of people. HoweverThis said, seasonal epidemics are not considered pandemics. Modern definitions include ―extensive epidemic‖, ―epidemic […] over a very wide area and usually affecting a large proportion of the population‖, and ―distributed or occurring widely throughout a region, country, continent or globally‖, among others (Morens et al., 2009). In the case of influenza, biologists also require that pandemic strains undergo key genomic mutations, known as antigenic shift. For WHO to pronounce a level six pandemic alert there has to be sustained transmission in at least two regions at the same time. WHO‘s standard definition of andemic influenza refers to a situation in which a new and highly pathogenic viral subtype, one to which

no one (or few) in the human population has immunological resistance and which is easily transmissible between humans, establishes a foothold in the human population, at which point it rapidly spreads worldwide (WHO, 2011a).

RETAIL SECTOR

Retailing in India is one of the pillars of its economy and accounts for about 10 percent of its GDP. The Indian retail market is estimated to be US$ 600 billion and one of the top five retail markets in the world by economic value. India is one of the fastest growing retail markets in the world, with 1.2 billion people.

As of 2003, India's retailing industry was essentially owner manned small shops. In 2010, larger format convenience stores and supermarkets accounted for about 4 percent of the industry, and these were present only in large urban centers. India's retail and logistics industry employs about 40 million Indians (3.3% of Indian population).

Until 2011, Indian central government denied foreign direct investment (FDI) in multi-brand retail, forbidding foreign groups from any ownership in supermarkets, convenience stores or any retail outlets. Even single-brand retail was limited to 51% ownership and a bureaucratic process.

In November 2011, India's central government announced retail reforms for both multi-brand stores and single-brand stores. These market reforms paved the way for retail innovation and competition with multi-brand retailers such as Walmart, Carrefour and Tesco, as well single brand majors such as IKEA, Nike, and Apple.[6] The announcement sparked intense activism, both in opposition and in support of the reforms. In December 2011, under pressure from the opposition, Indian government placed the retail reforms on hold till it reaches a consensus. In January 2012, India approved reforms for single-brand stores welcoming anyone in the world to innovate in Indian retail market with 100% ownership, but imposed the requirement that the single brand retailer source 30 percent of its goods from India. Indian government continues the hold on retail reforms for multi-brand stores.

In June 2012, IKEA announced it had applied for permission to invest $1.9 billion in India and set up 25 retail stores.[9] An analyst from Fitch Group stated that the 30 percent requirement was likely to significantly delay if not prevent most single brand majors from Europe, USA and Japan from opening stores and creating associated jobs in India.

On 14 September 2012, the government of India announced the opening of FDI in multi-brand retail, subject to approvals by individual states. This decision was welcomed by economists[who?] and the markets, but caused protests and an upheaval in India's central government's political coalition structure. On 20 September 2012, the Government of India formally notified the FDI reforms for single and multi brand retail, thereby making it effective under Indian law.

On 7 December 2012, the Federal Government of India allowed 51% FDI in multi-brand retail in India. The government managed to get the approval of multi-brand retail in the parliament despite heavy uproar from the opposition (the NDA and leftist parties.

INDIAN RETAIL INDUSTRY :

Indian retail industry is one of the fastest growing in the world. Retail industry is expected to reach Rs. 76.87 lakh crore (US$ 1.1 trillion) by 2020. India ranked 63 in the World Bank's Doing Business 2020 publication. India ranked 73 in the United Nations Conference on Trade and Development's Business-to-Consumer (B2C) E-commerce Index 2019. India's direct selling industry recorded sales of US$ 2.47 billion in 2019, improving its rank to 15 from 19 a year before. Consumer spending in India increased to US$ 245.16 billion in the third quarter of 2020 from US$ 192.94 billion in the second quarter of 2020 India is the fifth largest and preferred retail destination globally. The country is among the highest in the world in terms of per capita retail store availability. India's retail sector is experiencing exponential growth with retail development taking place not just in major cities and metros, but also in tier II and III cities. Healthy economic growth, changing demographic profile, increasing disposable income, urbanisation, changing consumer tastes and preferences are some of the factors driving growth in the organised retail market in India.

Indian online grocery market is estimated to exceed sales of about Rs. 22,500 crore (US$ 3.19 billion) in 2020, witnessing a significant jump of 76% over the previous year. India's population is taking to online retail big way. India's E-commerce business will reach US$ 99 billion by 2024, growing at a CAGR of 27% over 2019. Online penetration of retail is expected to reach 10.7% by 2024 versus 4.7% in 2019.

After an unprecedented decline of 19% in the January-March 2020 quarter, the FMCG industry displayed signs of recovery in the July-September 2020 quarter with a y-o-y growth of 1.6%. The growth witnessed in the fast-moving consumer goods (FMCG) sector was also a reflection of positivity recorded in the overall macroeconomic scenario amid opening of the economy and easing of lockdown restrictions. India is expected to become the world's third-largest consumer economy, reaching Rs. 27.95 lakh crore (US$ 400 billion) in consumption by 2025. ^Increasing participation from foreign and private players has given a boost to Indian retail industry. India's price competitiveness attracts large retail players to use it as a sourcing base. Global retailers such as Walmart, GAP, Tesco and JC Penney are increasing their sourcing from India and are moving from third-party buying offices to establishing their own wholly owned/wholly managed sourcing and buying offices in India.

The Government of India has introduced reforms to attract Foreign Direct Investment (FDI) in retail industry. The Government has approved 51% FDI in multi-brand retail and 100% FDI in single-brand retail under the automatic route, which is expected to give a boost to Ease of Doing Business and Make in India schemes, with plans to allow 100% FDI in E-commerce. Cumulative FDI inflow in retail stood at US$ 2.17 billion between April 2000 to June 2020. India's retail sector attracted US$ 970 million from various private equity (PE) funds in 2019. According to the Ground Zero Series findings of the consulting firm RedSeer, the retail sector is expected to recover ~80% of pre-Covid revenue (amounting to US$ 780 billion) by end-2020. India will become a favourable market for fashion retailers on the back of a large young adult consumer base, increasing disposable income and relaxed FDI norms. During the online festive sale in October 2020, the Indian e-commerce firms—Flipkart, Amazon, Myntra and Snapdeal—together sold goods worth US$ 3.1 billion.

EFFECT OF PANDEMIC ON RETAIL SECTOR

Infectious disease outbreaks can easily cross borders to threaten economic and regional stability, as has been demonstrated by the HIV, H1N1, H5N1, and SARS epidemics and pandemics (Verikios, Sullivan,

Stojanovski, Giesecke, & Woo, 2015). Beyond the debilitating, sometimes fatal, consequences for those directly affected, pandemics have a range of negative social, economic and political consequences (Davies, 2013a). As an example, ―The impact of pandemic influenza ie. H1N1 in 2009 was not just on mortality, but also on health-care systems, animal health, agriculture, education, transport, tourism and the financial sector. In short, a pandemic event threatens all aspects of the economic and social fabric‖ (Drake, Chalabi, & Coker, 2012). For another example, the SARS in 2003 and the Ebola pandemics, in 2013 and 2015 respectively, disrupted the economies and social order in China and West Africa as well as causing death and illness. Ebola and other pandemics have reduced the life quality of families and communities, and Ebola has disrupted essential services such as education, transport, and tourism, reduced the West African economies and isolated populations, which had impacts beyond Africa too due to the global effort of containing the outbreak.

Health effects : Pandemics have infected millions of people, causing wide-spread serious illness in a large population and thousands of deaths. For example, in 14th century, the _Black Death' plague killed the half population of Europe (A. G. P. Ross, Ross, Olveda, &Yuesheng, 2014). In the 20th century, there were three major pandemic: 1) Spanish flu in 1919-1920, which caused 20-40 million deaths (Taubenberger&Morens, 2009); 2) Asian flu in 1957-1958 which caused about 2 million deaths, 3) Hong Kong flu in 1968-1969 which caused 1 million deaths (Landis, 2007; Wildoner, 2016). Infectious disease disasters, including pandemics and emerging infectious disease outbreaks, have the potential to cause high morbidity and mortality in the world, and in fact they may acount for a quarter to a third of global mortality (Verikios et al., 2015). In developing countries, both pandemics and infectious diseases have the potential to kill claim many peopllivese, and the likelihood of deaths is within the range of 5 to 10 percent (Kern, 2016). During the SARS outbreak in 2003, there were more than 8000 infected individuals, with over 700 deaths (almost 9%)worldwide in just 6 months (Wong & Leung, 2007).

Influenza is one of the most serious pandemic diseases. Influenza outbreaks can result in considerable morbidity and mortality. Influenza pandemics are characterised by a high incidence and fatality rate with 250,000–500,000 people deaths each year, rapid and wide-spread transmission (WHO 2004). Recent influenza pandemics have killed significant numbers of people worldwide, and contributed to an estimated 8,870–18,300 deaths in 2009– 2010 (Prager, Wei, & Rose, 2016). For example, May 2009 saw the emergence from Mexico of a new H1N1 virus capable of human-to-human transmission (Verikios et al., 2015). WHO reported 182,166 laboratory confirmed cases of influenza A/H1N1, with 1799 deaths in 178 countries up to August 13, 2009 (Rewar et al., 2015). In the U.S.A, ―The US Centers for Disease Control and Prevention (CDC) estimates that the peak H1N1 season (April 2009 to April 2010) in the United States resulted in 43–89 million cases, 195–403 thousand hospitalizations, and 8,870– 18,300 deaths‖ (Bhandari, Hartley, Lindsley, Fisher, & Palmer, 2013).

Over the past several years, the threat of a human influenza pandemic has greatly increased. For example, H5N1 has repeatedly managed to infect humans in several Asian and European countries (Fangriya, 2015). There had been 387 confirmed cases of human H5N1 infection across 15 countries since from late 2003 to late 2008, including 245 deaths, with an average case-fatality rate of around 63% globally. (Enemark, 2009). The H5N1 could easily become another major pandemic. With the emergence of the zoonotic influenza A (H7N9) virus in China, there have also been renewed concerns about the potential for a pandemic to arise from an avian influenza strain. The outbreak of H7N9 viruses has caused more than 600 human infections, with nearly 30% mortality (Su & He, 2015), and the H7N9

virus is considered to have pandemic potential (Tanner, TOTH, &Gundlapalli, 2015). Other major treats in recent times have been pandemics of Dengue and Ebola. The incidence of the severe and fatal form of the Dengue has increased dramatically in developing countries. The 2015–2016 dengue epidemics were the worst in the history of Latin America. The first cases were recorded in Brazil in May 2015 and caused more than 1.5 million cases up to December 2015. At least 34 countries were involved in March 2016 (Troncoso, 2016). The Ebola outbreak in West Africa was an unprecedented public health emergency of international concern. In October 2015, WHO reported that there were 28,581 Ebola Virus Disease (EVD) confirmed, probable and suspected cases, with 11,299 deaths in West African countries (Liberia, Guinea, Sierra Leone). The estimated case fatality proportion was 40% (Nabarro&Wannous, 2016). More than 11,000 people died in nine countries as the response to the Ebola zoonotic _spillover‘ was delayed .

THE ECONOMIC IMPACTS :

Pandemic influenza represents a serious threat not only to the population of the world, but also to its economy. The impact of economic loss can result in instability of the economy. The impact is through direct costs, long term burden, and indirect costs. The direct costs of dealing with the disease outbreak can be very high. For example, the Ebola outbreak has seriously undermined the economics throughout West Africa. The Ebola outbreak in Sierra Leone in 2015 cost USD 6 billion in direct costs (hospitals, staff, medication), and the direct costs alone amount to 3 years of funding for WHO, and are well over 20 times the cost of WHO‘s emergency response cuts in its 2014–15 budget (Gostin& Friedman, 2015). It has been calculated that there was an economic loss of USD 1.6 billion for the three countries compared with the economic growth in the previous year 2014 (Kern, 2016). The Global Health Risk Framework for the Future (GHRF) Commission estimates that every year on average infectious disease outbreaks cost the world about USD 60 billion in direct costs (Maurice, 2016). The long term burden is also severe. One of the main burdens is from the loss of earnings of those who have died. Prager, Wei et al (2016) have estimated that economic losses from a pandemic influenza in the USA would be USD 90 – 220 billion, and of that, 80% would come from the value of expected future lifetime earnings of those who would die (Prager et al., 2016). McKibben and Sidorenko (2006) estimated that the economic cost of an influenza pandemic range from USD 374 billion for a mild pandemic to USD 7.3 trillion for a severe pandemic (MacKellarSource:, 2007). The mathematical models indicate that a future influenza pandemic could have total costs USD 71-166 (Rebmann, 2010).

—Recent years have seen at least six large-scale outbreaks—hantavirus pulmonary syndrome, severe acute respiratory syndrome, H5N1 influenza, H1N1 influenza, Middle East respiratory syndrome, and Ebola virus disease, which cost the world more than $2 billion, according to World Bank calculations‖.

SOCIAL IMPACTS :

The social impacts of pandemics were severe, include travel was strictly limited, and schools closing, markets and sporting were closed. All these are a likely reality should a pandemic with true potential for high morbidity and mortality emerge. Population mobility is also a key factor.

Movement was difficult and the travel including visiting families, carrying goods to markets were restricted by military check points. The closure of airports and cancellation of flights affected many people‘s travel, livelihood, and family life. With the rapid development in worldwide aviation over the last two decades, the risk of global pandemics has escalated with increased passenger traffic. With

modern and efficient air travel, SARS, which originated from southern China was rapidly transmitted to more than 30 countries in early 2003 (Wong & Leung, 2007). Closing the airports harmed the economy of the affected regions.

SECURITY IMPACTS :

A security threat of pandemic influenza as is not a recent phenomenon. Global security is threated from pandemics, in terms of lives and economic stability (Maurice, 2016). Pandemics are no longer simply the domain of public health and clinical medicine, but are a social issue, a development issue, and a global security issue (Castillo-Chavez et al., 2015). The commission on a Global Health Risk Framework for the Future (GHRF) published a book at the beginning of 2016 under the title: ―The Neglected Dimension of Global Security – A Framework to Counter Infectious Diseases Crises‖. A key statement sounds like that: ―Pandemics cause destruction to human lives and livelihoods much as do wars, financial crises. Pandemic prevention and response, therefore, should be treated as an essential tenet of both national and global security – not just as a matter of health‖ (Kern, 2016). Bioterrorism including biological weapons and bioterrorist attacks, are frequently come from the _naturally occurring‘ emerging and reemerging infectious disease outbreaks, as the practice and punishment of security has changed markedly over the past two decades, which the _threats‘ range from the more traditional (largely military) security.

CONCLUSION

Under the pressure of the risk of illness engendered by COVID 19 pandemic, the majority of the population has radically changed their lifestyle. As a result of lockdown in most countries, a large population of the consumer isconcerned with towards the online environment, because it is considered to have a much lesser risk of COVID 19 in terms of direct contact. Consumer‘s loyalty to a specific brand has also fluctuated with the tendency of storing products. The panic that appears in a first stage was later substituted by the need to adapt to the new normality.

There have been numerous significant pandemics recorded in human history, and the pandemic related crises have caused massive negative impacts on health, economies, and even national security in the world. However the term ―pandemic‖ has a long history, it is still not been defined by many medical texts, and the conception is still changing. But there are some key features of a pandemic, including wide geographic extension, disease movement, novelty, severity, high attack rates and explosiveness, minimal population immunity, infectiousness and contagiousness, which help us to understand what pandemics are.

The negative impacts of pandemic are serious. Pandemics have infected millions of people, causing wide-spread serious illness in a large population and thousands of deaths. It represents a solemn threat not onlyto the population of the world, but also to its economy. The impact of economic loss can result in unpredictability of the economy, which is through direct costs, long term burden, and indirect costs. The social impacts of pandemics were severe, include travel was strictly partial, and schools closing, markets and sporting were closed. All these are a likely reality should apandemic withaccurate potentialfor high morbidity and mortality emerge.

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"A study on Products of Non-life Insurance Companies in India -Incurred Claims Ratio: Non-Life Insurers"

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ABSTRACT

Actually there are two mainly sectors in insurance in India that is life and non life. Non Life Insurance is considered as general insurance too. Here in this study researcher include the study of various non life insurance of few companies. The business of life insurance in India started in the year 1818 with the establishment of the Oriental Life Insurance Company in Calcutta. Various phases and important milestone have been described in the history of insurance sector.This study includes various products of non life insurance like health, marine, vehicles and fire. This conduct data analysis and interpretation of five years. Researcher selected various statistical tools for the study. Various research papers to be reviewed by researcher for the study. In these study benefits of insurance also presented with principles of insurance. As we know that insurance work on the basic principle of ut most good faith.in this paper researcher gone through the study of incurred claim ratio for non life insurers.

Key Words: Non Life Insurance, Products, Claims

INTRODUCTION

Life insurance is a contract that offers financial compensation in case of death or disability. Some life insurance policies even offer financial compensation after retirement or a certain period of time. Life insurance, thus, helps you to secure your family's financial security even in your absence. You either make a lump-sum payment while purchasing a life insurance policy or make periodic payments to the insurer. These are known as premiums. In exchange, your insurer promises to pay an assured sum to your family in the event of death, disability or at a set time. The history of general insurance dates back to the Industrial Revolution in the west and the consequent growth of sea-facing trade and commerce in the 17th century. It came to India as a legacy of British occupation. Insurance Company Ltd., in the year 1850 was set up in Calcutta by the British. In 1907, the Indian Mercantile Insurance Ltd was set up. This was the first company to transact all classes of general insurance business.1957 saw the formation of the General Insurance Council, a wing of the Insurance Association of India. The General Insurance Council framed a code of conduct for ensuring fair conduct and sound business practices. In 1968, the Insurance Act was amended to regulate investments and set minimum solvency margins. The Tariff Advisory Committee was also set up then. And the committee felt to provide greater autonomy to insurance companies in order to improve. IRDA is the regulatory top most authority of insurance companies in India headed by the chairman who is the controller of insurance. And other members of IRDA are appointed by central government. Insurance is classified into two broad categories i.e. life insurance and non-life insurance. Life insurance provides protection to health and life of a person, while non-life insurance provides protection against travel, fire, motor, marine etc. where individual has to pay premium regularly and insurance company assures to pay lump sum amount on the occurrence of an unanticipated event.

Role of insurance in financial institution is to:

- To accept risk from people
- To collect small amount of premium
- To cover life of people from insurance
- To settle claim arising from losses
- To follow principle of Indian contract act

General Insurance Products:

- Health insurance covers hospitalization, medical bill, operation treatment, maternity cover, and its premium also saves tax.
- Fire insurance compensates for the damages caused to a property and goods due to fire. It also covers damages caused to third party property due to fire. There are various types of fire insurance like valued policy, floating policy, comprehensive policy and specific policy.
- Motor insurance is for car or bike which covers the loss due to accidents, damage, theft, fire or natural calamities.
- Marine insurance covers loss or damage of ships, cargo, terminals and transport of cargo by which property is transferred. while marine insurance is of two types:
- Ocean marine insurance
- Inland marine insurance

IMPORTANCE OF STUDY

1. It covers the study of Non Life Insurance products.
2. It include the performance of all private and public players in last five years of Non Life Insurance in India.
3. The study will benefited for entrepreneurs to take relevant decision for their further dealing.
4. It is important to insurance sectors in India.

LITERATURE REVIEW

1. Article titled "analysis of various contribution channels in life insurance industry in India" by Aditya Nath Jha in the year 2014 analyzed that before privatization only individual insurance agent were allowed to sale life insurance that nowadays distribution channel has been expanded.
2. Title "analysis of financial stability of Indian non-life insurance companies" by basher ahmadJoo in the year 2013 reports that world war after liberalization insurance sector has undergone significant transformation and after the entry of many new players has resulted into heavy loss for Indian public and private insurers. and further study briefly describes about relationship between various factors and solvency of non-life insurance by using multiple regression analysis and shown that claim ratio and firm size have greater impact on solvency position of insurance companies.
3. Article Journal of financial management "comparison of performance of public and private general insurance companies" by shreedevi and manimegalai in the year 2013 was conducted should the growth rate was 55.36% in 2004-05 and the highest growth rate of 61.24% was calculate in the year 2006-07, which downward to 24.67% in 2010-11.

4. " A study on customer attitude towards general insurance" by kavitha, latha and jamuna published in insurance journal in the year 2012 a study conducted with ample of its respondents to find out influencing factor of policy holder and helped to find out various customer which are having expectation from the general insurance companies.
5. "A study on SWOT analysis i.e. strength, weakness, opportunities, and threats for banc-assurance by G. karunanithi in the year 2012 study showed that bankasurance is a distribution model for insurance products, bankasurance is a combination of bank insurance and bank is a vehicle selling different products like loan , insurance, money transfer, PPF, shares and debentures, deposits etc.
6. Research paper on general insurance was presented by emem Joseph in the year 2011, "on the study of competitive analysis of insurance companies and commercial bank investment portfolio and their contribution to economic growth." Data was calculated based on secondly finding was those is positive but no significant relationship between government securities, stock of fund, real estate and economic growth in Nigeria and shares that investment portfolio of commercial bank do contribute to economic growth in Nigeria.

OBJECTIVES OF THE STUDY

- **Research Objective**
  - o To know about the financial performance ofnon-life insurance companies in India.
  - o To know the performance of Non Life Insurance with context of Commission

Expenses: Non-Life Insurers

- **Common Objective**
  - o To know about different products offered by private sector's non-life insurance companies

RESEARCH PROBLEM

"A study on products on non-life insurance companies in India- Commission Expenses: Non- Life Insurers"

Problem

The scope of the study will be able to reveal the different products of non-life insurance private companies, its underwritten premium, commission expenses, incurred claim ratio, net retained premium on Indian business, total investment of non-life insurers. This study will reveal about gross direct premium income in India, company shares in Indian market.

RESEARCH METHODOLOGY

TYPES OF RESEARCH	Comparative
SOURCE OF DATA	Secondary
POPULATION OF THE STUDY	Life Insurance
THE PERIOD OF THE STUDY	5 years (2014-15 to 2018-19)
STATISTICAL TOOLS & TECHNIQUES	One-way ANOVA, T-test, chi-square, mean, SD, Cov.
DATA COLLECTION METHOD	Secondary

Hypothesis:

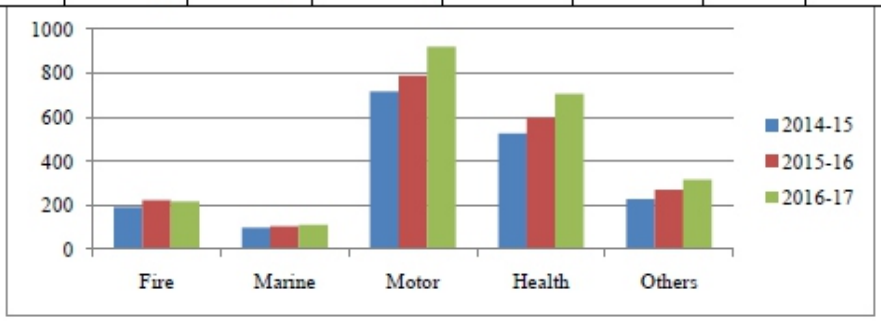
H0: There is no significant difference in the study on products on non-life insurance companies in India-Commission Expenses: Non-Life Insurers

H1: There is significant difference in the study on products on non-life insurance companies in India-Commission Expenses: Non-Life Insurers

DATA ANALYSIS AND INTERPRETATION

Table-1.1 Commission Expenses: Non-Life Insurers (In Cr.)

Products	2014-15	2015-16	2016-17	2017-18	2018-19	Mean	S.d	Covariance
Fire	192.14	223.91	216	430.57	559.93	324.51	162.8556853	4190.43214
Marine	99.16	104.35	110.69	143.49	175.72	126.682	32.40045169	25440.7823
Motor	716.53	789.16	919.64	2070.15	2945.87	1488.27	983.7250112	205633.341
Health	526.02	597.05	704.85	931.19	1173.49	786.52	265.0963549	57534.1405
Others	226.87	268.74	315.24	370.68	955.65	427.436	300.0959665	4970515.99
Total premium	1760.72	1983.21	2306.02	3946.08	5810.66			
Mean	352.144	396.642	453.284	789.216	1162.13			
S.d	258.991206	285.42233	344.058	771.639	1067.72			
Covariance	59096.00215	78449.81847	199437.2564	645162.511	204742.409			



Interpretation

The lowest commission expenses of all the products like FIRE, MARINE, MOTOR, HEALTH and OTHERS were 192.14, 99.16, 716.53, 526.02, 226.87 in the year 2014-15. From the above figure we can say that is commission expenses of all the products were lower in the year 2014- 15. The highest mean from all the products was of MOTOR 1488.27. The lowest standard deviation was of MARINE 32.400. And the highest covariance was of OTHERS 4970515.99.

ANOVA: Two-Factor Without Replication

SUMMARY	*Count*	*Sum*	*Average*	*Variance*
Row 1	5	1622.55	324.51	26521.97
Row 2	5	633.41	126.682	1049.789
Row 3	5	7441.35	1488.27	967714.9
Row 4	5	3932.6	786.52	70276.08
Row 5	5	2137.18	427.436	90057.59
Column 1	5	1760.72	352.144	67076.44
Column 2	5	1983.21	396.642	81465.91
Column 3	5	2266.42	453.284	118376
Column 4	5	3946.08	789.216	595427.5
Column 5	5	5810.66	1162.132	1140035

ANOVA:

Source of Variation	*SS*	*d.f.*	*MS*	*F*	*P-value*	*F critical*
Rows	5744044	4	1436011	10.14186	0.000276	3.006917
Columns	2357002	4	589250.4	4.161594	0.016907	3.006917
Error	2265480	16	141592.5			
Total	10366526	24				

Decision:

Fcal =10.14186 and Ftab =3.006917

Therefore, Fcal>Ftab.

Hence, H0 is rejected.

Hence, H1 is accepted.

Therefore, we can say that there is a significant difference in the (commission expenses) of the various products of non-life insurance companies in India.

Limitation of the Study

- Researcher has selected only 5 products of general insurance out of around 13 products offered by different general insurance companies in India.
- Another limitation of this study is that only private sector's general insurance companies are taken for research purpose.

FINDINGS , SUGGESTION & CONCLUSION

- **Findings**
  - o Commission expenses of motor insurance were highest in the year 2018-2019.
  - o Incurred claim ratio of motor insurance is also high among all the products.
  - o Net retained premium of motor insurance is highest till the years.

- **Suggestion**
  - o Public sector should increase efficiency in their performance as compared to private sector so that claim ratios by clients are automatically reduced.
  - o Dividend payment to the investors by public sectors companies should be increased year by year because data shows that it is decreasing every year.

Following is the conclusion of the study:

Insurance is now a day's very necessary for everyone to have it because it gives assurity of money at the time of occurrence of an uncertainty. There are various schemes offered by various insurance companies as per the need of clients. And also offers insurance for various property and assets. Many people also take insurance as an investment tool too. From the study we can conclude that private sectors general insurance company's performance in the various products is effective as compared to public sectors general insurance companies. But the expenses related to transaction of insurance are highest of private sector as compared to public sector. So due to high charges taken by private companies its profit too increases. Grievance settlement process of public sector is effective as compared to private sector.

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