

# Study of The Digital Transformation Adoption in The Insurance Sector of Nepal

Pramod Niraula<sup>1</sup> and Dr. Sandeep Kautish<sup>2</sup>

<sup>1</sup>Research Scholar, BEF Campus

<sup>2</sup>Dean Academics, LBEF Campus

## ABSTRACT

Digitization has an intense impact on the behavior and culture of the society, on the business process of the service industry and financial structure and growth of the nation. The main challenge is adoption of appropriate digital transformation, in order to generate better possibilities to create innovative business models, procedures, systems and software that gears up for higher competitive advantage, better efficiency and increase in revenue. The aim of this study was to explore the digitization status of insurance industry of Nepal along with the obstacles faced by them to go digital.

This research was carried out in the form of questionnaires. Two set of questionnaires were administrated; one prepared for the customers of insurance companies to obtain the current digital adoption status of the Nepalese insurance industry and next for employees of insurance companies of Nepal to obtain the obstacles for insurance companies on going digital.

The analysis of the responses from insurance customers shows that the implementation of ICT on the insurance sphere of Nepal is below the average, the facilities like SMS notification for premium transactions, policy and claim information, online premium payment and claim intimation were found to be implemented just above the average but the implementation of facilities like online policy buying, viewing policy/claim information, claim payments directly to the bank account of the claimant which are basic insurance activities were found below the average. While, about 82% of the respondents from group of insurance customer had shown willingness on using digital platform to buy policies. This shows that insurance companies of Nepal still had to do lot on digitization to stand at the level of customer's expectation.

Further, the responses of insurance employee shows the obstacles for insurance companies of Nepal to go digital is high. Marking for all the examined obstacles were found above the average marking. The employees had marked inappropriate regulation as the highest obstacle followed by rigid organization chart, security reservation and product complexity to offer online whereas customer intention to use online platform as lowest degree, though above the average. This suggest that the role of regulatory body has a greatest impact on Nepalese insurance companies to go digital.

From the analysis of the result we could suggest that the insurance regulatory body of Nepal should facilitates the digital transformation in insurance companies and also Nepalese insurance companies should adopt appropriate digital medium to interact with its customers, to streamline the large customer base willing to get insurance services online. This could result on extended penetration of insurance industry and could have progressive impact on national economy in long run.

Keywords: insurance, digitization, ICT

## I. INTRODUCTION

### Background of the Study

Digital Transformation is the use of technology to build new plans of action, procedures, programming and frameworks that outcomes in progressively gainful income, more competitive advantage, and higher efficiency. Organizations accomplish this by changing procedures and plans of action, enabling workforce efficiency and development, and customizing client experiences.

Digitalization transforms the business mechanism which results in challenges as well as opportunities for management. It influences business arrangements and strategies positioning as well as it effects entire dimensions of an organization (all activities, tasks, processes) along with the supply chain of the goods and services. Business pioneers should always move their associations to guarantee this change can open profitability gains and significant competitive advantage all while conveying excellent client experience.

Digital business transformation is seen as a set of 7 elements: business model, organizational structure, digital skills of employees, digitization of business processes, IT infrastructure, digitization of products / services, digital channels for interaction with clients (Kane, et al., 2015).

For instance, in Nepal, the insurance is tariffed. It means that the product and its price are ruled by the Beema Samiti. It also means that the marketing architecture to sell such product is also controlled. An insurer is not allowed to provide extra commission or suggest any promotion unless the regulator has approved it. In Nepal, the total marketing cost (business promotion, acquisition cost, commission) cannot exceed a 25% of the price to pay. As such, all insurers sell the same products at the same price. Since, product innovation becomes unnecessary as differentiation base of innovation is not allowed. Hence, prioritizing on easing delivery channels for customer reach would add competitive advantage to insurance companies of Nepal.

The implementation of proper digital channels to allow customers surf and accept insurance policies will not only benefit the customers but also the insurance company get an opportunity to expand its area and business as well. Since, insurance is a long term risk mitigation measures and may not have instant impact, people may ignore the service if its availability is difficult. But the risk minimized doing/being insured has long impact on individual life in term of financial security.

### **Problem Statement**

Customers today are time-strapped and impatient. Today's younger buyers mostly have been brought up in a culture where goods and services can be explored, found, bought and downloaded just in a minutes. The answer lies in automated. When compared with the insurance industry operated in developed country, without doubt the insurance industry in Nepal is underdeveloped. But no appropriate research works are carried out to evaluate the current digital adoption, factors hindering technological enhancement and customer's expectation of technology driven services in insurance industry of Nepal.

### **Aim of the Research**

The aim of this study is to evaluate the current digital strategies adopted and factors hindering technological enhancement of insurance industry of Nepal. Also, it tends to explore the customer's attitude and expectation of technology driven services from insurance industry of Nepal.

### **Objective of the Research**

The objectives of the research are highlighted below:

- To explore the status quo of technology adoption in Insurance industry of Nepal
- To explore the challenges of Insurance industry of Nepal to go digital
- To provide/suggest a roadmap for successful implementation of ICT in Insurance companies in Nepal

### **Research Question**

The research questions were categorized into two sections; one for insurance employee and next for the customers.

#### **Questions to Employee of Insurance Companies**

1. What are the obstacles faced by insurance companies of Nepal to go digital?

**Questions to Customers of Insurance Companies**

1. What is the status of technology adoption in Insurance companies of Nepal?

**Scope of the Research**

The scope of the research was to explore the status of digitization and customer expectation from insurance industry Nepal. The scope is also to look at obstacles for insurance sector of Nepal to go digital.

**Significance of the Research**

The research aimed to uncover the difficulties faced by customers and insurance industry in Nepal regarding the adoption of digital technologies. The outcome of the research will be beneficial for insurance industry to make necessary digital transformation, which could attract larger customer base resulting in improved profitability.

**II. LITERATURE REVIEW**

Digitalization is defined as the "ability to turn existing products or services into digital variants, using Information and Communication Technology (ICT), and thus offer advantages over tangible product" (Henriette, et al., 2015). It has been recognized as one of the key driver that is transforming society as well as the business process today and in the future. (Tihinen & Kaariainen, 2016).

In spite of the fact that innovation and digital transformation is a mainstream purpose of discourse today, the thoughts of computerized services, products, and delivery channel were recognized during the 1990s and 2000s (Auriga, 2016). For instance, in the retail business, mass media advertising promoting efforts were viewed as significant advanced channels with which to arrive at clients during the 1990s and 2000s, despite the fact that purchases were still essentially made inside physical stores, regularly with money. From 2000 to 2015, the ascent of shrewd gadgets and internet based life stages prompted an extraordinary ocean change in the strategies clients used to deal with organizations, and furthermore the desires clients had concerning response times and multi-channel accessibility (Schallmo & Williams, 2018).

Digitalization isn't tied in with transforming existing procedures into advanced forms, yet reexamining current tasks from new points of view empowered by computerized innovation. The transformation can be new possible outcomes to do things all the more viably or reasonably, yet they can also be disturbing to a company's present tasks, as digitalization on a very basic level change an organization's business openings (Parviainen, et al., 2017).

At the point when used in a productive areas, digitalization are well on the way to improve the expectation for everyday comforts of individuals, by influencing diverse business and service areas particularly the insurance industry (Sapa, et al., 2014).

While digitalization has already significantly changed various industries, the ICT transformation in insurance sector has initiated late and yet on the way of full fledged implementation (Martin, 2017).

Digitalization is transforming insurance business as well as the way of delivering the insurance services. Use of mobile devices, chat-bots, Big Data, artificial intelligence (AI), the internet of things (IoT), and robots have an great impact on the service delivery process of insurance industry: from the product design, underwriting risks, policy pricing, their advertising and sales, claim processing and existing customer interaction and management (IAIS, 2018).

Technological advancements are affecting the majority of the stages of the insurance workflow, to a great extent, because of the digitalization of information and procedures. The product design and innovation stage is straightforwardly influenced by the more remarkable accessibility of client information, empowering the improvement of increasingly customized products and services adjusted to the necessities and requests of

purchasers. This is for example the instance of new on-demand / just-in-time insurance products, where buyers are offered the likelihood to buy customized insurance arrangements just for the period without being obliged to buy in to longer term plans (EIOPA, 2017).

Innovations using emerging technologies are crucial factors that transform financial industry and this has resulted in achievement of immense efficiency, even though the transformation can be observed with doubt and uncertainty in initial stage of implementation. The insurance industry is no exemption to such enhancement, with conceivable outcomes of new strategies for service delivery along with great introductions for information gathering and fraud detection that can prompt improved risk identification and prevention methods (OECD, 2017).

The research conducted by Salatin and Yadollahi shows that the implementation of ICT in insurance industry helps to increase business capacity, risk analysis capability, business area and improves speed and nature of services. Further, digitization helps to remodel business procedure in order to deliver best insurance services and enabling easy communication between customer and insurance industry, since digitization assists customers to obtain insurance services using safe delivery channel without any direct physical interaction with the insurance intermediaries (Salatin, et al., 2014).

The study of preference of online portal usage for insurance activities by insurance agents in India, shows that the quality, availability, reliability, user friendliness and prompt information catering of the developed communication platform plays a great role on its effective usage (Umamaheswari & Chandrasekaran, 2015). This shows that stakeholders of insurance industry are seeking the digitization along with the quality.

The study of insurance sector of Kenya by Witherspoon shows that ICT adoption is very crucial for the performance of insurance sector and the variables like client satisfaction, staff performance, product development and operational activities of insurance companies were significantly influenced by the adoption (Witherspoon, 2015).

### **III. METHODOLOGY**

This chapter contains research methodology used for achieving the objectives. In this section, it is discussed about the data and study area, research design used, population and sample of the study, data collection tools and data analysis procedure.

#### **Population and sample**

A population is characterized as a whole gathering of individuals or articles having common observable characteristics. It denotes to the whole gathering of individuals, things or items of interest that the analyst wishes to explore and from which the example will be drawn and contemplated. It is commonly a huge gathering of people or items that is the principle focal point of a logical question. In any case, because of the enormous sizes of populations, analysts frequently can't test each person in the population since it is excessively costly and tedious (Mugenda, 2008).

Since most of insurance companies functioning in Nepal have their head offices in Kathmandu, the capital was taken as the sample for the study. A total of 267 personnel were selected for the study among them 127 were insurance customers, while 140 were insurance employees.

#### **Research Design**

"A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combined relevance to the research purpose with economic in procedure" (Kothari, 2006). Research design is the plan, arrangement and strategy of examination conceived so as to achieve answer to research question and to control discrepancies.

This research is a qualitative that is the descriptive result on the status and obstacles of the digital adoption in insurance industry of Nepal were be obtained.

### **Data Collection Method or Tool**

This research is entirely based on the primary data which was collected through questionnaires.

Questionnaires were prepared in such way that the detail information related to the digitization status of insurance industry along with the expectations of their customers in term of digital services and the obstacles for insurance companies to go digital were obtained. To assure data reliability, only trustworthy insurance customers and employees were sampled, and the sampling was done personally. A time frame of three weeks was provided to the respondents for answering the questionnaires, and this was done to ensure respondents have sufficient time to study, understand, and answer appropriately to the questions submitted to them.

### **Study Population**

Fourteen insurance companies were surveyed. For each insurance company, ten employees were surveyed. Further, customers of almost 20 insurance companies were surveyed in random basis, some through insurance companies' outlets, some through personal relation and few through recommendations. The total sample size for insurance employee and customers were therefore 140 and 127 respectively.

### **Data Analysis Tools and Techniques**

Data analysis is the process of examining, cleaning, transforming, and demonstrating information with the objective of finding valuable information, suggesting conclusions, and supporting basic leadership. Data analysis has various aspects and methodologies, incorporating diverse techniques under a variety of names, in various business, science, and sociology spaces (Kothari, 2006). The study used quantitative method to determine the relationship from the data obtained. This model of analysis examined the simultaneous effects of the independent variables on a dependent variable.

"The analysis of data consists of organizing, tabulating, and performing statistical analysis" (Wolff, 2015).

In this study, various descriptive and cross table analysis were done, according to the pattern of data available, using SPSS (The Statistical Package for the Social Sciences) software to achieve the stated objectives of the research.

## **IV. FINDINGS AND ANALYSIS**

This chapter contains the results obtained from data processing and analysis in the study. The objectives of the research was to find the digitalization status of insurance companies of Nepal and the challenges to go digital, hence two set of questionnaires were arranged for survey, one for insurance customers and next for insurance employees of Nepal.

Out of the 127 set of questionnaires distributed to insurance customers, only 88 were appropriately completed and returned, among which 39 were filled offline and 49 were received through online medium, this is a response rate of about 69%. Further, Out of the 140 set of questionnaires distributed to insurance employees, only 91 were properly completed and returned, where 43 were filled offline and 48 were received through online medium, this is a response rate of about 65%.

The collected data was analyzed and interpreted in line with the objective of the research using SPSS (The Statistical Package for the Social Sciences) analysis tool. The first section of this chapter is devoted to describe the responses received from the insurance customers of Nepal and the next section contains the analysis of response received from insurance employee of Nepal.

Preference while selecting Insurance Company

Table 1: Preference while selecting Insurance Company

**Descriptive Statistics**

| Priority to buy Insurance | N  | Minimum | Maximum | Sum | Mean | Std. Deviation |
|---------------------------|----|---------|---------|-----|------|----------------|
| Premium Amount            | 88 | 1       | 7       | 311 | 3.53 | 1.875          |
| Personal Relationship     | 88 | 1       | 7       | 324 | 3.68 | 2.126          |
| Internet Services         | 88 | 1       | 7       | 328 | 3.73 | 2.077          |
| Technology Friendliness   | 88 | 1       | 7       | 332 | 3.77 | 1.922          |
| Claim processing          | 88 | 1       | 7       | 371 | 4.22 | 1.956          |
| Company's Branding        | 88 | 1       | 7       | 383 | 4.35 | 1.971          |
| Branch Network            | 88 | 1       | 7       | 415 | 4.72 | 1.850          |
| Valid N (list wise)       | 88 |         |         |     |      |                |

The table above shows the priority that the insurance customer would give while selecting an insurance company. The questionnaires were set such that the respondent mark the option from 1 to 7 based on the priority order. Where one indicates the highest priority and seven the lowest priority.

The respondents marked the "Premium Amount" as the highest priority which is indicated by lowest mean 3.53. Whereas, the lowest priority is given to the branch network of the insurance company. "Internet Service" and "Technology Friendliness" falls on 3<sup>rd</sup> and 4<sup>th</sup> priority respectively which are just below the "Premium Amount" and "Personal Relationship".

*Level of Benefits obtained from Insurance Companies of Nepal*

Table 2: Level of Benefits obtained from Insurance Companies of Nepal

**Descriptive Statistics**

| The | To what extent are the following benefits obtained from Insurance companies of Nepal? | N  | Minimum | Maximum | Sum | Mean | Std. Deviation |
|-----|---|----|---------|---------|-----|------|----------------|
|     | Online buying/renewing policy.  | 88 | 1       | 5       | 215 | 2.44 | 1.092          |
|     | Digital services compared to other financial industry.                                | 88 | 1       | 5       | 217 | 2.47 | .982           |
|     | Payment of claim directly to customer's bank account.                                 | 88 | 1       | 5       | 229 | 2.60 | 1.130          |
|     | Platform to view the status of policy, claim online.                                  | 88 | 1       | 5       | 235 | 2.67 | .880           |
|     | Services and product delivery through Mobile Application.                             | 88 | 1       | 5       | 262 | 2.98 | 1.005          |
|     | Online premium payment.   | 88 | 1       | 5       | 267 | 3.03 | 1.108          |
|     | Filing claim online.  | 88 | 1       | 5       | 288 | 3.27 | 1.248          |
|     | SMS notification for premium transaction, Policy renewal, Claim status                | 88 | 1       | 5       | 341 | 3.88 | .980           |

table above shows the level of ICT benefits received by customers from the insurance companies of Nepal. The respondent were asked eight different questions regarding the benefits obtained from insurance companies of Nepal where five options were provided, namely: Very Much (5), Much (4), So-So (3), Low (2), Very Low (1).

As per the mark set to each option, the average falls on 3. The above descriptive analysis table shows that average marking of five questionnaires falls below the set average whereas only three questionnaires lie above the set average. Among the questionnaires, marking for "SMS notification for premium transaction, Policy renewal, Claim status" is found highest where the average lies at 3.88 which suggest "Much" SMS alert benefit is obtained. Further, the benefits like online premium payments and online claim intimation are also found implemented above the average where the marking is 3.03 and 3.27 respectively.

Whereas the lowest average marking 2.44 is found for "buy/renew policy online". Further, the digital services provided by insurance companies of Nepal compared with other financial industry is also found poor where only 2.47 score is obtained. Though the premium payment is digitalized in some extend but the facilities like claim amount payment directly to bank account, platform for viewing the status of policies and claims online is still found under average score.

Based on the examined questionnaires, the digitalization status of Nepalese insurance sector is found below the average.

Table 3: SMS notification for premium transaction, Policy renewal, Claim status

**SMS notification for premium transaction, Policy renewal, Claim status**

|               | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------|-----------|---------|---------------|--------------------|
| Very Low      | 1         | 1.1     | 1.1           | 1.1                |
| Low           | 7         | 8.0     | 8.0           | 9.1                |
| So-So         | 21        | 23.9    | 23.9          | 33.0               |
| Valid<br>Much | 32        | 36.4    | 36.4          | 69.3               |
| Very Much     | 27        | 30.7    | 30.7          | 100.0              |
| Total         | 88        | 100.0   | 100.0         |                    |

The table above shows the insurance customer's response for "SMS alert facility for premium transaction, renewal alert and claim status" which is found on the top of the benefit list has following reaction; twenty seven respondents (30.7%) marked the benefits is received "Very Much", thirty two respondents (36.4%) marked "Much", twenty one respondents (23.9%) marked "So-So" while only seven and one respondents (8% & 1.1%) marked "Low" and "Very Low" respectively. This shows the alert services provided by insurance companies is satisfactory.

Table 4: Online buying/renewing policy  
**Online buying/renewing policy.**

|               | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------|-----------|---------|---------------|--------------------|
| Very Low      | 22        | 25.0    | 25.0          | 25.0               |
| Low           | 23        | 26.1    | 26.1          | 51.1               |
| So-So         | 26        | 29.5    | 29.5          | 80.7               |
| Valid<br>Much | 16        | 18.2    | 18.2          | 98.9               |
| Very Much     | 1         | 1.1     | 1.1           | 100.0              |
| Total         | 88        | 100.0   | 100.0         |                    |

Whereas, the response for "Online buying/renewing policy" which is found on the bottom of the benefit list has following response; twenty two respondents (25%) marked the benefits is received "Very Low", twenty three respondents (26.1%) marked "Low", twenty six respondents (29.5%) marked "So-So" while only sixteen



and one respondents (18.2% & 1.1%) marked "Much" and "Very Much" respectively. This shows the Nepalese insurance companies are still lagging to provide digital platform for buying and renewing policies.

*Cross Table (Chi-Square Test) Gender and Prefer to buy Policy Online*

Table 5: Cross tabulation between Gender and preference to buy/get information of insurance policies online

**Gender \* Do you prefer to buy/get information of insurance policies online? Crosstabulation**

|        |                 | Do you prefer to buy/get information of insurance policies online? |       | Total  |        |
|--------|-----------------|--|-------|--------|--------|
|        |                 | No   | Yes   |        |        |
| Gender | Male            | Count  | 11    | 50     | 61     |
|        |                 | % within Gender  | 18.0% | 82.0%  | 100.0% |
|        | Female          | Count  | 5     | 22     | 27     |
|        |                 | % within Gender  | 18.5% | 81.5%  | 100.0% |
| Total  | Count           | 16   | 72    | 88     |        |
|        | % within Gender | 18.2%  | 81.8% | 100.0% |        |

The table above shows 82% of male and 81.5% of female were interested on using online platform for insurance activities.

Table 6: Chi-Square tests between gender and preference to buy/get information of insurance policies online  
**Chi-Square Tests**

|                                    | Value             | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|-------------------|----|-----------------------|----------------------|----------------------|
| Pearson Chi-Square                 | .003 <sup>a</sup> | 1  | .957                  |                      |                      |
| Continuity Correction <sup>b</sup> | .000              | 1  | 1.000                 |                      |                      |
| Likelihood Ratio                   | .003              | 1  | .957                  |                      |                      |
| Fisher's Exact Test                |                   |    |                       | 1.000                | .587                 |
| Linear-by-Linear Association       | .003              | 1  | .957                  |                      |                      |
| N of Valid Cases                   | 88                |    |                       |                      |                      |

In the above table the P-value is 0.957 which is greater than 0.005. This result indicates that there is no evidence that gender and preference of insurance policies online are related to one another.

Cross Table (Chi-Square Test) Make use of online services and Prefer to buy Policy Online

Table 7: Cross tabulation between make use of online services and prefer to buy policy online  
**Do you make use of online services for any financial services or other activities? \* Do you prefer to buy/get information of insurance policies online? Crosstabulation**

|                             |     | Prefer to buy/get information of insurance policies online? |   | Total  |
|-----------------------------|-----|---|---|--|
|                             |     | No  | Yes   |  |
| Make use of online services | No  | Count<br>8  | Count<br>10                                   | Count<br>18                                    |
|                             |     | % within make use of online services<br>44.4%               | % within make use of online services<br>55.6% | % within make use of online services<br>100.0% |
| Total                       | Yes | Count<br>8  | Count<br>62                                   | Count<br>70                                    |
|                             |     | % within make use of online services<br>11.4%               | % within make use of online services<br>88.6% | % within make use of online services<br>100.0% |
| Total                       |     | Count<br>16   | Count<br>72                                   | Count<br>88                                    |
|                             |     | % within make use of online services<br>18.2%               | % within make use of online services<br>81.8% | % within make use of online services<br>100.0% |

The table above shows that about 56% of respondents who do not make use of any online services had shown willingness to use online platform to perform insurance activities while about 44% of them were found not interested. Whereas, about 89% of current online services users were found interested on using online platform for insurance activities while only about 11% of them are found uninterested.

Table 8: Chi-Square Tests between Make use of online services and Prefer to buy Policy Online  
**Chi-Square Tests**

|                                    | Value               | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|---------------------|----|-----------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 10.492 <sup>a</sup> | 1  | .001                  |                      |                      |
| Continuity Correction <sup>b</sup> | 8.390               | 1  | .004                  |                      |                      |
| Likelihood Ratio                   | 8.964               | 1  | .003                  |                      |                      |
| Fisher's Exact Test                |                     |    |                       | .003                 | .003                 |
| Linear-by-Linear Association       | 10.372              | 1  | .001                  |                      |                      |
| N of Valid Cases                   | 88                  |    |                       |                      |                      |

Since the P-value (0.001) is less than the significance level (0.05), hence, we conclude that there is a relationship between online service users and prefer to buy policy online. Customers who are currently using online medium for financial and other activities are more interested on using online platform for insurance activities compared to non-online users.

**Employee Data Analysis**

*ICT for the Insurance Company*

**Table 9: ICT for the Insurance Company  
For your company, Information and Communication Technology (ICT) is a/an**

|                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------------|-----------|---------|---------------|--------------------|
| Valid Opportunity | 34        | 37.4    | 37.4          | 37.4               |
| Need              | 33        | 36.3    | 36.3          | 73.6               |
| Challenges        | 17        | 18.7    | 18.7          | 92.3               |
| Ambiguous         | 6         | 6.6     | 6.6           | 98.9               |
| Threat            | 1         | 1.1     | 1.1           | 100.0              |
| Total             | 91        | 100.0   | 100.0         |                    |

For most insurance employees ICT is an opportunity and need for their company. Thirty four respondents (37%) marked the ICT as opportunity and 33 respondents (36%) marked ICT as need for their organization, while seventeen respondents (18%) marked ICT as challenges, six respondents (6%) marked as ambiguous and only single respondent marked ICT as threat.

*Importance of ICT for organization*

**Table 10: Importance of ICT for organization**

**How important is the implementation of ICT systems to your company?**

|                 | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------|-----------|---------|---------------|--------------------|
| Valid Very Much | 50        | 54.9    | 54.9          | 54.9               |
| Much            | 34        | 37.4    | 37.4          | 92.3               |
| So-So           | 5         | 5.5     | 5.5           | 97.8               |
| Low             | 2         | 2.2     | 2.2           | 100.0              |
| Total           | 91        | 100.0   | 100.0         |                    |

For most insurance employees ICTs is found very important and highly considered in the organizational work flow. Fifty respondents (54%) ranked the importance "Very Much", while another thirty four (37%) ranked "Much". No dissent was recorded for "Very Low", while 5 and 2 respondents ranked "So-So" and "Low" respectively.

*Level of ICT Adoption*

Table 11: Level of ICT Adoption in insurance Companies of Nepal  
**Totally to what extent has your Company include the use of ICT?**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Very Much   | 16        | 17.6    | 17.6          | 17.6               |
| Much        | 45        | 49.5    | 49.5          | 67.0               |
| Valid So-So | 24        | 26.4    | 26.4          | 93.4               |
| Low         | 6         | 6.6     | 6.6           | 100.0              |
| Total       | 91        | 100.0   | 100.0         |                    |

On the assertion for the level of ICT adoption in insurance company, 16 respondents representing 17% marked "Very Much", forty five (49%) marked "Much", twenty four (24%) marked "So-So", and six respondent (6.6%) marked "Low".

*Obstacles of Insurance Companies of Nepal*

Table 12: Obstacles of Insurance Companies of Nepal

**Descriptive Statistics**

| To what degree does each of the following obstacles hinder the insurance sector going digital? | N  | Mean | Std. Deviation |
|--|----|------|----------------|
| Customers Intention to buy online  | 91 | 3.27 | 1.096          |
| Banks and Tele communications  | 91 | 3.30 | 1.027          |
| Internet usage and its users   | 91 | 3.45 | .820           |
| Scarcity of skilled manpower   | 91 | 3.55 | 1.067          |
| Internal conflicts and negative response from agents, intermediaries, brokers etc.             | 91 | 3.57 | 1.326          |
| Expensive & Complicated technologies of e-commerce   | 91 | 3.73 | 1.023          |
| Product complication and low-interest products   | 91 | 3.84 | 1.036          |
| Traditional attitudes and views of the companies   | 91 | 3.84 | 1.138          |

|   |    |      |       |
|---|----|------|-------|
| Non-Conformity of recent products and services to online offers                 | 91 | 3.87 | .921  |
| Security Reservations   | 91 | 4.02 | 1.000 |
| Rigid organizational chart and resistance to transformation                     | 91 | 4.02 | 1.085 |
| Appropriate regulation (e.g. Beema Samiti guidelines regarding digitalization ) | 91 | 4.13 | .872  |

The table above shows responses of insurance companies employee regarding the level of obstacles that Nepalese insurance companies are facing to go digital. The respondents were asked twelve different questions regarding the obstacles where five options were provided, namely: Very Much (5), Much (4), So-So (3), Low (2), Very Low (1).

As per the mark set to each option, the average falls on 3. The above descriptive analysis table shows that average marking of all the questionnaires falls above the set average that is obstacle degree for all the questions is marked above 3.

Among the questionnaires, marking for "Appropriate regulation" is found highest where the score lies at 4.13 which suggest the role of regulatory body has a greatest obstacle for Nepalese insurance companies to go digital. Whereas the lowest average marking 3.27 is found for "intention to buy online". This shows that the customer intension is at lowest degree of obstacle for insurance company to go digital in comparison to the response received for other questionnaires.

Table 13: To what degree does Customers Intention to buy online hinder the insurance sector going digital

To what degree does Customers Intention to buy online hinder the insurance sector going digital

|           | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Very Low  | 7         | 7.7     | 7.7           | 7.7                |
| Low       | 12        | 13.2    | 13.2          | 20.9               |
| So-So     | 33        | 36.3    | 36.3          | 57.1               |
| Much      | 27        | 29.7    | 29.7          | 86.8               |
| Very Much | 12        | 13.2    | 13.2          | 100.0              |
| Total     | 91        | 100.0   | 100.0         |                    |

The response for " Customers Intention to buy online " which is found on the bottom of the obstacle list for insurance companies on Nepal to go digital has following response; seven respondents (7.7%) marked the obstacle as "Very Low", twelve respondents (13.2%) marked "Low", thirty three respondents (36.3%) marked "So-So" while twenty seven and twelve respondents (29.7% & 13.2%) marked "Much" and "Very Much" respectively. This shows that as per the insurance employee's perception though the customer's intention is at the bottom of obstacle list but not at the level for favoring the digitization of insurance activities.

Table 14: Level of obstacles for insurance sector of Nepal to go digital due to appropriate regulation

**Obstacle due to Appropriate regulation (e.g. Beema Samiti guidelines regarding digitalization) for the insurance sector going digital.**

|           | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Very Low  | 2         | 2.2     | 2.2           | 2.2                |
| Low       | 2         | 2.2     | 2.2           | 4.4                |
| So-So     | 11        | 12.1    | 12.1          | 16.5               |
| Much      | 43        | 47.3    | 47.3          | 63.7               |
| Very Much | 33        | 36.3    | 36.3          | 100.0              |
| Total     | 91        | 100.0   | 100.0         |                    |

Whereas, the response for "Appropriate regulation" which is found on the top of the obstacle list has following response; thirty three respondents (36.3%) marked the obstacle as "Very Much", forty three respondents (47.3%) marked "Much", and eleven respondents (12.1%) marked "So-So" while only two respondents (2.2%) marked "Low" and "Very Low". This shows that due to the absence of appropriate regulation for digitizing insurance activities, insurance companies of Nepal are unable to make prompt action to take insurance digital.

Based on the examined questionnaires and response of employee of insurance companies of Nepal, the obstacles for Nepalese insurance company to go digital is found high.

*ANOVA analysis for designation wise feel of obstacles to go digital*

Table 15: Designation wise feel of obstacles to go digital

|                  | N  | Mean    | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|------------------|----|---------|----------------|------------|----------------------------------|-------------|
|                  |    |         |                |            | Lower Bound                      | Upper Bound |
| Assistant Level  | 35 | 42.9714 | 10.01612       | 1.69303    | 39.5308                          | 46.4121     |
| Officer Level    | 23 | 43.3478 | 5.54001        | 1.15517    | 40.9521                          | 45.7435     |
| Managerial Level | 27 | 46.9259 | 5.16591        | .99418     | 44.8824                          | 48.9695     |
| Executive Level  | 6  | 48.1667 | 4.44597        | 1.81506    | 43.5009                          | 52.8324     |
| Total            | 91 | 44.5824 | 7.62316        | .79912     | 42.9948                          | 46.1700     |

The table above shows the mean of obstacles marking of respondent with respect to their organizational position level. Since, the average marking given for degree of obstacles by assistant level is 42.97, officer level

is 43.34, and managerial level is 46.92 while the highest 48.16 is marked by executive levels. This shows that the sensation of degree of obstacle is higher while the position goes higher. Though the average of all lies above the So-So.

Table 16: ANOVA analysis between employee's designation and obstacle degree  
**ANOVA**

Obstacles of Insurance Company of Nepal to go Digital

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 351.258        | 3  | 117.086     | 2.088 | .108 |
| Within Groups  | 4878.874       | 87 | 56.079      |       |      |
| Total          | 5230.132       | 90 |             |       |      |

Though the score for obstacle is found rising while moving to higher position, but the p-value for F statistics (0.108) is greater than 0.05 indicating that there is no significant difference in feel of obstacle due to designation of the employee.

*ANOVA analysis for experience wise feel of obstacles to go digital*

Table 17: Experience wise feel of obstacles to go digital

|            | N  | Mean    | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|------------|----|---------|----------------|------------|----------------------------------|-------------|
|            |    |         |                |            | Lower Bound                      | Upper Bound |
| Below 1    | 8  | 41.7500 | 11.51086       | 4.06971    | 32.1267                          | 51.3733     |
| 1-5        | 39 | 45.6154 | 8.51196        | 1.36300    | 42.8561                          | 48.3746     |
| 6-10       | 26 | 45.0385 | 6.25128        | 1.22598    | 42.5135                          | 47.5634     |
| 11 or Over | 18 | 42.9444 | 4.92857        | 1.16168    | 40.4935                          | 45.3954     |
| Total      | 91 | 44.5824 | 7.62316        | .79912     | 42.9948                          | 46.1700     |

There is low score for obstacles from the respondents having lower as well as higher years of work experience but higher score for those having experience of medium (1 to 10 years). The average score is highest among the respondents having 1-5 years and lowest for those having experience below 1 year.

Table 18: ANOVA analysis between employee's work experience and obstacle degree  
ANOVA

Obstacles of Insurance Company of Nepal to go Digital

|                | Sum of Squares | Df | Mean Square | F    | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | 159.495        | 3  | 53.165      | .912 | .439 |
| Within Groups  | 5070.637       | 87 | 58.283      |      |      |
| Total          | 5230.132       | 90 |             |      |      |

Though the obstacle degree is varying with the years of work experience, but the p-value for F statistics (0.43) is greater than 0.05 which indicates that there is no significant difference on average scores for obstacles due to years of work experience.

## V. CONCLUSION

Over the past decade, we saw most industries transforming themselves through the venue of online tools. We observe that the insurance industry did not see the same pace and remain not prompt to change as fast (Kucheriavy, 2018). At present, product and marketing remain bogged by price sensitivity and technical or underwriting matters. Insurance organizations remain focus around necessary compliance and risk assessment (Kucheriavy, 2018).

The implementation of proper digital channels to allow customers surf and accept insurance policies will not only benefit the customers but also the insurance company get an opportunity to expand its area and business as well. Since, insurance is a long term risk mitigation measures and may not have instant impact, people may ignore the service if its availability is difficult. But the risk minimized doing/being insured has long impact on individual life in term of financial security.

So, for availability of prompt insurance services the serviced offered by insurance companies must be digitalized. Customer should have such platform where all the services from the underwriting to claim are available in their finger touch. Also, using proper technology for assessing the risk associated with any insured property, insurance company could get advantage of calculating best premium amount. Further, the big data analysis of the available digitized services helps insurance company to analysis the market trend and develop product accordingly.

The answers to the research questions in accordance to the objectives of the study are presented below.

### Recommendations

Insurance companies need to spotlight on customer focused insurance and financial services and this calls for innovation and a customer focused product delivery through development of innovative and ICT enabled delivery channel.

As mentioned previously, almost of the current customers, about 82% of the respondents, are found willing to perform insurance activities like; buy, renew policies online, but the level of implementation of online policy buying services by the insurance companies of Nepal is found low. This shows Nepalese insurance customers expects that insurance companies of Nepal provide online platforms, where everybody can find products and related information's, and perform online transactions, like purchase policy, renew policy, file claims and access to other insurance related personal information.

Since, a development that meets a rising need is substantially more liable to be accepted and have a more extended life than one that efforts to generate a new need, or obviously, one that meets a past or declining need. Further, for insurance companies to grow, the institutions must meet the challenges that are truly



customer centric and this willingness of the customers would be a profitable area of investment for insurance companies of Nepal. This requires significant investment in technology and IT skills. Since, establishing a digital platform for insurance activities will require low expenses compared to operating outlets. Nepalese insurance companies need to implement appropriate platform to ease customer to buy/renew policy and other insurance activities online.

Further, the employees of insurance companies had marked the absence of appropriate regulation, to monitor and facilitate the digitization of insurance services in Nepal, as high obstacle for insurance companies to go digital. While other financial industries have overwhelmingly grasped the ICT to gain competitive advantage, the insurance sector has been behind to completely adopt ICT. The time has come that insurance regulatory body; Beema Samiti need to enforce necessary policies to facilitate the digitization of insurance sector of Nepal and level up the usage of ICT for insurance services to mark themselves on the level other financial sectors like banking of Nepal.

In addition, the understanding of insurance customers and employees is found contradict since 82% of customers had shown interest on using digital services but the insurance employees had marked the intention of customer to buy policy online as obstacles for insurance companies on going digital with degree above the average. This shows the lacking of proper research on recognizing customer expectation and the changing customer's behavior by insurance companies. A depth research need to be carried by insurance companies of Nepal to figure out the customer's needs/expectations periodically.

## REFERENCES

2. Auriga, 2016. *Digital Transformation: History, Present, and Future Trends*. Retrieved. [Online] Available at: <https://auriga.com/blog/2016/digital-transformation-history-present-and-future-trends/> [Accessed 1 12 2018].
3. EIOPA, 2017. *How technology and data are reshaping the insurance landscape*. s.l., European Insurance and Occupational Pensions Authority.
4. Henriette, E., Mondher, F. & Boughzala, I., 2015. *The Shape of Digital Transformation: A Systematic Literature Review,* in *Ninth Mediterranean Conference on Information Systems (MCIS)*,. Samos, Greece, s.n.
5. IAIS, 2018. Issues Paper on Increasing Digitalisation in Insurance and its Potential Impact on Consumer Outcomes. *International Association of Insurance Supervisor*.
6. Kane, G. et al., 2015. *Strategy, Not Technology, Drives Digital Transformation*. s.l.: MIT Sloan Management Review and Deloitte University Press.
7. Kothari, C., 2006. *Research methodology, methods and techniques*. New Delhi:: Vikash Publication House Pvt. Ltd..
8. Kucheriavy, A., 2018. *How Customer-Centric Design Is Improving The Insurance Industry*. [Online] Available at: <https://www.forbes.com/sites/forbestechcouncil/2018/04/17/how-customer-centric-design-is-improving-the-insurance-industry/#51dde74f5077> [Accessed 01 08 2019].
9. Martin, L., 2017. The Impact of Digitalization on the Insurance Value Chain and the Insurability of Risks. *Geneva Papers on Risk and Insurance - Issues and Practice*, 43(3).
10. Mugenda, A., 2008. *Social Science Research: Theory and Principles*. Nairobi: Acts Press.

11. OECD, 2017. *Technology and innovation in the insurance sector*. s.l., Organisation for Economic Co-operation and Development.
12. Parviainen, P., Kaarianen, J., Tihinen, M. & Teppola, S., 2017. Tackling the digitalization challenge: how to benefit from digitalization in practice. *International Journal of Information Systems and Project Management*, 5(1), pp. 63-77.
13. Salatin, P., Yadollahi, F. & Eslambolchi, S., 2014. The Effect Of ICT On Insurance Industry In Selected Countries. *Research Journal Of Economics, Business And ICT* , 9(1).
14. Sapa, S. G., Phunde, S. B. & Godbole, M. R., 2014. Impacts of ICT Application on the Insurance Sector (E-Insurance). *IBMRD's Journal of Management and Research*, 3(1), pp. 311-320.
15. Schallmo, D. R. A. & Williams, C. A., 2018. *Guiding the Successful Digitalization of Your Business Model*. s.l.:s.n.
16. Tihinen, M. & Kaariainen, J., 2016. The Industrial Internet in Finland: on route to success?. *VTT TECHNOLOGY* 278.
17. Umamaheswari, V. & Chandrasekaran, U., 2015. Online Channel Usage Intent By Insurance Agents of India In An Emerging Market Context. *ICTACT Journal on Management Studies*, 1(1).
18. Witherspoon, D. J., 2015. *The Influence Of ICT Adoption On Performance Of Micro Insurance Business In Kenya*. s.l.:s.n.
19. Wolff, H. & P. P., 2015. *Social Science Research & Thesis Writing*. Kathmandu: Buddha Academy & Distributor.