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Global Journal of Risk and Insurance

Aims and Scope

The Global Journal of Risk and Insurance publishes rigorous, original research in insurance and risk management. This includes the following areas of specialization:

1. Industrial organization of insurance markets;
2. Management of risks in the private and public sectors;
3. Insurance finance, financial pricing, financial management;
4. Economics of employee benefits, pension plans, and social insurance;
5. Utility theory and demand for insurance;
6. Asymmetric information, moral hazard, and adverse selection;
7. Insurance regulation;

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Critical Analysis of Motivators and Hygiene Factors with Special Reference to Employees of Private and Public Sector Banks in India

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1. DEFINE

1.1. LITERATURE REVIEW

Maslow's (1954) famous theory of Hierarchy of needs drew attention to different types of motivation. This theory distinguishes between higher order and lower order needs. This distinction was dramatically sharpened by Herzberg (1966), whose theory of work motivation is most widely known, applied and discussed. His theory is also called the two-factor theory of motivation, as he discusses two main classes of the deficit and development needs. The study led him to two sets of factors: one set of needs that caused dissatisfaction if they were not met; and the other set, which provided positive satisfaction to the people. Herzberg proposed a two factor theory. He further classified the various needs into, what he called the hygiene factors (those which may prevent dissatisfaction) and motivators (factors which may provide satisfaction).

These can be called extrinsic and intrinsic motivation respectively because as per Herzberg , the former needs are contextual (external or extrinsic) and the latter relate to the content of the job (internal or intrinsic). Based on the review of several Indian studies using Herzberg's methodology, Roy and Raja (1977) tentatively concluded that the evidence regarding the two factor theory of Job Satisfaction and Dissatisfaction, representing two different continual, found support in most studies.

It has been found that motivators and hygiene's have found to influence satisfaction and dissatisfaction in a mixed fashion. While Intrinsic factors (e.g. job content, promotion andgrowth) contribute to dissatisfaction, the extrinsic factors (e.g. security, co-worker relations, and friendliness of superior) contribute to satisfaction. It appears that the Higher Order Need of even the managers are thwarted by organizational practices.

Lawler and Porter (Roy and Raja, 1977) found the higher levels of management assigned greater importance to intrinsic incentives like interesting work and self expression as determinants of Job

Satisfaction. The Lower level groups preferred pay, security, and co- worker, Indian evidence along these lines is also available.

Laxmi Narain, (Roy and Menon, 1977) found that overall need satisfaction increased from lower to higher levels of management. Jaggi (1979) found higher level managers reporting higher order needs than mangers at lower level. Haire et al. (Jaggi, 1979) found Indian managers reporting the lowest degree of fulfilment of esteem and autonomy needs, the second lowest fulfilment of actualization needs in comparison with managers from other countries. However, Pareek and Keshote (1982) did not find any hierarchical differences in a group of Malaysian managers and executive trainees in a Malaysian agriculture bank.

1.2. PROBLEM STATEMENT

What Does One Look for in a Job? (with special reference to Banking Sector in India)

1.3. RESEARCH OBJECTIVES

1. To study the motivational profile of employees specifically belonging to Banking sector.
2. Identifying critical motivators and hygiene factors related to a job as perceived by employees based on factor strength.
3. To identify whether there is a significant difference in motivators perceived by employees of a Public sector bank as compared to employees of a Private sector bank.
4. To identify the extent to which motivational factors differ based on hierarchy of employees.

1.4 SCOPE

Scope	SCOPE 'IN'
Sector	Banking Sector
Respondent Experience	>= 1 Year
Theory	Herzberg's Theory of Motivation
Function	Organizational Behaviour
Location	M.P, Maharashtra, U.P, Delhi
Duration	45 Days Survey

Exhibit 1

2. MEASURE

2.1. IDENTIFYING CRITICAL PARAMETERS / VARIABLES FOR THE STUDY

Parameters/ Factors for the research were identified through a detailed Brain-Storming Session conducted after having reviewed the literature on Herzberg's Two Factor Theory.

2.1.1. Defined variables for the study:

a) Advancement

b) Interesting Work

c) Respect & Recognition

d) Responsibility & Independence

e) Achievement

f) Technically Competent Supervisor

g) Equitable Pay

h) Security

i) Adequate Earnings

j) Fringe Benefits

k) Comfortable working conditions

l) Sound Company Policies & Practices

m) Considerate & Sympathetic Supervisor

n) Restricted Hours of Work.

2.2. PLAN THE DATA COLLECTION

2.2.1. OPERATIONAL DEFINITION

The operational definition is clear and understandable description of what exactly has to be measured?

2.2.1 a) Dis-Satisfiers

Are the features or parameters that the employee takes for granted and will be dissatisfied only when it is absent. For e.g. An employee takes it for granted that a company should provide a healthy & comfortable working conditions. The employee would complain only if the expectations are not met, but would never appreciate the same if it was already provided.

2.2.1 b) Satisfiers

These are the characteristics in the job which when improved correspondingly improves the employee satisfaction. For e.g:- Job Enrichment, Respect & Recognition etc.

2.2.2. SPECIFICATION OF MEASUREMENT SYSTEM

2.2.2 a) Tools for Data Collection

Structured Questionnaire (Ranking- Ordinal Scale)

2.2.2 b) Administration

Its administration was simple. It was Self Administered, and the respondents were asked to rank-order the 14 items depending on their importance to them from 1 (Highest Rank) to 14 (Lowest Rank).

2.2.3. RESEARCH DATA

2.2.3 a) Nature

Continues (Rank-Order)

2.2.3 b) Type

Variable (Ordinal Scale)

2.2.4 STRATIFICATION

2.2.4 a) Sector

Banking Sector

2.2.4 b) Classification

Public Sector

Private Sector

2.2.5 SAMPLING

2.2.5 a) Technique

Simple Random Sampling

2.2.5 b) Response

Considering an aggregated response from all the locations, a total of 360 potential respondents were approached. Out of which 330 responded positively to the survey.

Only 326 responses was considered for the final analysis since 4 respondents had committed a mistake while filling up the questionnaire.

So the response rate for the survey was 90.55 %. Further, Out of a total of 326 Respondents, 186 Belonged to Public Sector Banks and 140 Belonged to Private Sector Banks. Further, Out of a total of

326 Respondents, 62 Belonged to Senior Management Level and 264 Belonged to Middle Management & Administrative Level.

2.3. SURVEY

The following steps were observed/ followed during the survey stage

1) Outlined the Survey Process
2) Scheduled the Survey meeting with respect to Respondent Availability / Project Requirements / Timeline etc.
3) Conducted & Administered the Survey
4) Followed-up on the survey status as decided in Project Charter

3. ANALYZE

3.1. IDENTIFYING TOOLS AND METHODOLOGY FOR DATA ANALYSIS

3.1 a) Sampling Adequacy: KMO and Bartlett's Test.

3.1 b) Validity: An Research Instrument is valid if it measures what it is meant to measure. Here the content validity is measured through Factor Analysis focusing on Two-Factor Solution.

3.1 c) Scoring: The ranks given are added for factors. The Lower the Score, the higher is the value given to the concerned motivational factors. Also the same is validated through measuring the mean values for all the 14 items for the group of respondents.

3.2. IDENTIFYING PATTERN THROUGH DATA ANALYSIS

Exhibit 3.2.1 (a) KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.594277
Bartlett's Test of Sphericity	Approx. Chi- Square	1218.686
	df	91
	Sig.	0

Exhibit 3.2.1 (b) Factor Analysis

Rotated Component Matrix	Factors	
Variables	1	2
Career Advancement Opportunity	0.79	
Interesting & Challenging Work	0.64	
Respect & Recognition	0.56	
Responsibilty & Independence	0.52	
Achievement	0.65	
Competent Supervisor	0.51	
Equitable Pay	0.59	
Job Security		0.70
Adequate Salary		0.70
Fringe Benefits		0.66
Comfortable Working Conditions		0.56
Sound Company Policy & Procedures		0.53
Sympathetic & Considerate Supervisor		0.51
Restricted Hours of Work		0.64

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization

Exhibit 3.2.1 (c) Motivational Profile of All the Respondents

Descriptive Statistics

	N	Mean	Std. Deviation
Career Advancement Opportunity	326	4.73	3.478
Interesting & Challenging Work	326	5.41	3.389
Respect & Recognition	326	5.40	3.278
Responsibilty & Independence	326	6.58	3.269
Doing Something Worthwhile	326	8.18	3.862
Competent Supervisor	326	9.29	3.069
Comparable & Competitive Pay	326	7.87	3.804
Job Security	326	4.58	3.723
Adequate Salary	326	5.63	3.806
Fringe Benefits	326	9.40	3.425
Comfortable Working Conditions	326	8.19	3.547
Sound Company Policy & Procedures	326	8.79	3.457
Sympathetic & Considerate Supervisor	326	10.71	2.983
Restricted Hours of Work	326	9.98	3.764
Valid N (listwise)	326		

Exhibit 3.2.1 (d) Motivational Profile- Sector-wise

Public Sector

Descriptive Statistics[a]

	N	Mean	Std. Deviation
Job Security	186	3.98	3.476
Career Advancement Opportunity	186	5.09	3.506
Respect & Recognition	186	5.41	2.969
Interesting & Challenging Work	186	5.44	3.225
Adequate Salary	186	5.62	3.981
Responsibilty & Independence	186	6.68	3.341
Comfortable Working Conditions	186	7.76	3.712
Comparable & Competitive Pay	186	7.97	3.778
Doing Something Worthwhile	186	8.38	3.885
Sound Company Policy & Procedures	186	8.66	3.455
Competent Supervisor	186	9.40	2.971
Fringe Benefits	186	9.41	3.463
Restricted Hours of Work	186	10.05	3.737
Sympathetic & Considerate Supervisor	186	10.82	2.975
Valid N (listwise)	186		

a. Banking Sector Type = P1

Private Sector

Descriptive Statistics[a]

	N	Mean	Std. Deviation
Career Advancement Opportunity	140	4.24	3.392
Interesting & Challenging Work	140	5.38	3.607
Job Security	140	5.39	3.897
Respect & Recognition	140	5.39	3.659
Adequate Salary	140	5.64	3.575
Responsibilty & Independence	140	6.44	3.179
Comparable & Competitive Pay	140	7.74	3.847
Doing Something Worthwhile	140	7.92	3.831
Comfortable Working Conditions	140	8.75	3.243
Sound Company Policy & Procedures	140	8.97	3.464
Competent Supervisor	140	9.13	3.198
Fringe Benefits	140	9.39	3.386
Restricted Hours of Work	140	9.88	3.811
Sympathetic & Considerate Supervisor	140	10.56	2.999
Valid N (listwise)	140		

a. Banking Sector Type = P2

Exhibit 3.2.1 (e) Motivational Profile Hierarchy Wise

Level: Senior Management

Descriptive Statistics[a]

	N	Mean	Std. Deviation
Career Advancement Opportunity	62	1.35	.630
Interesting & Challenging Work	62	4.77	2.989
Respect & Recognition	62	4.89	3.224
Responsibilty & Independence	62	6.47	3.434
Job Security	62	6.81	3.308
Adequate Salary	62	7.47	3.607
Comparable & Competitive Pay	62	7.61	3.075
Doing Something Worthwhile	62	8.05	4.014
Sound Company Policy & Procedures	62	8.84	3.225
Comfortable Working Conditions	62	8.98	3.331
Competent Supervisor	62	9.03	3.259
Fringe Benefits	62	9.47	2.935
Restricted Hours of Work	62	10.48	3.949
Sympathetic & Considerate Supervisor	62	10.97	2.642
Valid N (listwise)	62		

a. Position = 1

Middle Management & Administration

Descriptive Statistics[a]

	N	Mean	Std. Deviation
Job Security	264	4.06	3.627
Adequate Salary	264	5.20	3.728
Career Advancement Opportunity	264	5.52	3.398
Respect & Recognition	264	5.53	3.285
Interesting & Challenging Work	264	5.56	3.465
Responsibilty & Independence	264	6.60	3.236
Comparable & Competitive Pay	264	7.93	3.958
Comfortable Working Conditions	264	8.00	3.576
Doing Something Worthwhile	264	8.21	3.833
Sound Company Policy & Procedures	264	8.78	3.515
Competent Supervisor	264	9.34	3.026
Fringe Benefits	264	9.39	3.535
Restricted Hours of Work	264	9.86	3.717
Sympathetic & Considerate Supervisor	264	10.65	3.060
Valid N (listwise)	264		

a. Position = 2

3.3. VALIDATION & INTERPRETATION

Exhibit 3.2.1 (a): KMO and Bartlett's Test

The value of KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) is found to be 0.594 which is greater than 0.5. So, factor analysis is an appropriate technique to analyze the data. Furthermore the sample size of respondents can be considered to be a representative of the whole population.

Exhibit 3.2.1 (b): Factor Analysis

Exhibit 3.2.1 (b) represents Factor Analysis of Data collected from respondents using a Two Factor Solution. Out of 14 variables, 7 are included in Factor 1 and 7 are included in factor 2. These two factors can be considered as:

Factor 1: Intrinsic Motivational Factors

Factor 2: Extrinsic Motivational Factors

Sr. No	Intrinsic Motivational Factors	Extrinsic Motivational Factors
1	Career Advancement Opportunity	Security
2	Interesting work	Sound Company Policy
3	Respect & Recognition	Comfortable Working Conditions
4	Responsibility & Independence	Adequate Earnings
5	Achievement	Fringe Benefits
6	Competent Supervisor	Restricted Hours of Work
7	Equitable Pay	Sympathetic & Considerate Supervisor

Exhibit 3.2.1 (b).i

Two Intrinsic Factors (i.e. Career Advancement & Interesting Work) and Three Extrinsic Factors (Security, Adequate Earnings & Fringe Benefits) have significant factor loading. These are general motivational factors. Equitable Pay and Sympathetic Supervisor has a low loading on the respective factors implying a low impact / influence on Motivation.

Exhibit 3.2.1 (c)

This Exhibit represents the overall motivational profile of all respondents. Mean values of all the fourteen items, and extrinsic and intrinsic motivation are given. It can be easily seen the lower the score of mean, higher is the value given to the concerned motivational factor.

For all the 326 Respondents, the Following details are observed:

Mean Value	Score	Factor		Impact on Motivation
Lowest:	4.58	Job Security		High
Highest:	10.71	Sympathetic	Supervisor	Low

Exhibit 3.2.1 (d): Motivational Profile- Sector Wise

This Exhibit represents the motivational profile of respondents belonging to Banking Sector. This Sector is further categorised into:

1) Public Sector- 186 Respondents (Banking Sector Type: P1)
2) Private Sector- 140 Respondents (Banking Sector Type: P2)

Values in both the tables are arranged in ascending order starting from the Lowest Mean Value and ending with the Highest Mean Value.

Lowest value of mean represents a factor which has the highest impact on motivation and the Highest Mean Value represents a factor which has the lowest impact on motivation.

Exhibit 3.2.1 (e): Motivational Profile- Hierarchy Wise

This Exhibit represents the motivational profile of respondents belonging to their specific level of occupation (Position Held). This is segregated into:

1) Senior Management – 62 Respondents (Position Type: 1)
2) Middle Management & Admin- 264 Respondents (Position Type: 2)

Values in both the tables are arranged in ascending order starting from the Lowest Mean Value and ending with the Highest Mean Value. Lowest value of mean represents a factor which has the highest impact on motivation and the Highest Mean Value represents a factor which has the lowest impact on motivation.

3.4. LINKING RESULTS WITH RESEARCH OBJECTIVES (Critical Observations)

3.4.1. RESEARCH OBJECTIVE 1

To study the motivational profile of employees specifically belonging to Banking sector.

3.4.1 a) FINDINGS

Having analysed the data provided by all the 326 respondents, it is inferred that **JOB SECURITY, CAREER ADVANCEMENT OPPORTUNITY** has a very positive impact on Motivation. However it is interesting to note that Job Security is an Extrinsic Motivational Factor. i.e. (Dis-Satisfier) whereas Career Advancement Opportunity is an Intrinsic Motivational Factor (i.e. when this characteristic is improved or included in the Job, it significantly improves the satisfaction level of employee).

SYMPATHETIC & CONSIDERATE SUPERVISOR & **RESTRICTED HOURS OF WORK** seems to have a very low mean score and a poor factor loading on both the factors signifying that this aspect seems to be irrelevant to motivation.

3.4.1. b) REFERENCE: Exhibit 3.2.1 (c)

3.4.2. RESEARCH OBJECTIVE 2

Identifying critical motivators and hygiene factors related to a job as perceived by employees based on factor strength.

3.4.2 a) FINDINGS

The data of all the 326 respondents yields the following results

Intrinsic Motivational Factors which has significant Factor Strength are:

	VARIABLE	FACTOR STRENGTH
a)	**Career Advancement Opportunities**	**0.79**
b)	**Interesting and Challenging Work**	**0.64**

Extrinsic Motivational Factors which has significant Factor Strength are:

VARIABLE	FACTOR STRENGTH
a) Job Security	0.7
b) Adequate Salary	0.7
c) Restricted Hours of Work	0.64

3.4.2 b) REFERENCE: Exhibit 3.2.1 (b)

3.4.3. 3 RESEARCH OBJECTIVE 3

To identify whether there is a significant difference in motivators perceived by employees of a Public sector bank as compared to employees of a Private sector bank.

3.4.3 a) FINDINGS

After having studied and analyzed the data for Public Sector and Private Sector Banks separately, some important observations came to fore. The most important motivational factor as perceived by Public Sector Respondents was **JOB SECURITY**. This could imply that people seeking a **STABLE CAREER / JOB** get attracted towards Public Sector. Whereas the most important motivational factor as perceived by Private Sector Respondents was **CAREER ADVANCEMENT OPPORTUNITY**. This could further imply that people who are **AMBITIOUS** by nature get attracted towards the advancement opportunities & challenging work that a Private provides.

However in stark contrast, both the Public Sector as well as Private Sector respondents ranked **SYMPATHETIC & CONSIDERATE SUPERVISOR** as the least motivating factor they look for in the job signifying that it does not have any impact on motivation.

3.4.3 b) REFERENCE: Exhibit 3.2.1 (e)

3.4.4. RESEARCH OBJECTIVE 4

To identify the extent to which motivational factors differ based on hierarchy of employees.

3.4.4 a) FINDINGS

After having studied and analyzed the data for all the respondents after having segregated them into two categories of:

P1: SENIOR MANAGEMENT

P2: MIDDLE MANAGEMENT & ADMIN,

It was found that, the motivator's and Hygiene's rather influenced satisfaction and dis- satisfaction in a mixed fashion.

From this study, the researcher has found that **HIGHER LEVELS OF MANAGEMENT** have assigned greater importance to **INTRINSIC MOTIVATORS** such as:

a) Career Advancement Opportunities

b) Interesting and Challenging Work

c) Respect & RecognitionThe **LOWER LEVEL OF MANAGEMENT** preferred **EXTRINSIC MOTIVATORS** such as:

a) Job Security

b) Adequate Salary

Further, It can be implied that **HIGHER LEVEL OF MANAGEMENT** is more inclined towards **HIGHER ORDER NEEDS**, whereas **LOWER LEVEL OF MANAGEMENT** is more inclined towards **LOWER ORDER NEEDS** (Basic Needs). This is further consistent with Maslow's Need Hierarchy Theory.

It can be inferred from the above, that there is a significant hierarchical difference in perceived motivational factors in a group of Higher and Lower Level of Management in Banks in India.

3.4.4 b) REFERENCE: Exhibit 3.2.1 (e)

4. IMPLICATIONS & FUTURE SCOPE OF RESEARCH

Such Independent survey can be carried out by Individual Banks across the country to validate the findings. This instrument & data can be further used by banks across different states in India to become more aware of the employees motivational profile. The Organization can further develop Jobs / Profiles and Conditions of Employment around these findings ensuring employee satisfaction.

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Operations Rersearch - An Effective Tool for Strategic Disaster Management Planning: Theoritical Study

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ABSTRACT

Disasters are the unfortunate events which needs special attention and efficient decision making to handle. Operations research is the field of scientific study that deals with effective decisions making and its management. Disasters are defined as the occurrence of a sudden or major misfortune, which disrupts the basic fabric, and normal functioning of a society. These events results from natural processes or other geological processes that have disastrous consequences on human well- being. Disasters are the events whose consequences exceed the capability of public protection and its systems to provide necessary responses in a timely manner. Operations research principles and techniques can be applied in public protection as Public protection is of utmost importance. Operations research that address various Disasters are important tools for planning effective responses to these disasters. Main objective of this paper is to address various disasters and to analyse the operations research tools that can help in effectively manage and response to disasters that disturb the normal functioning of the public. This paper also highlights the operations research approaches that can be used for public protection. Decisions about procurement transport, stockpiling, and maintenance of needed supplies are essential in the emergency management. Major issues at all levels of disaster response decision making, including long-range strategic planning, tactical response planning, and real-time operational planning and support are still unresolved. Therefore operations research can provide useful techniques for effective decision making and management in terms of disasters.

Key-Words: Operations Research, Emergency Management, Decision Making, Natural disasters, quantitative methods etc.

INTRODUCTION

Disasters are the ultimate test of time. In 2011, Centre for Research on the Epidemiology of Disasters (CRED), has recorded 332 disasters from natural hazards in 101 countries, that caused more than 30 770 deaths, and affecting over 244 million people (CRED, 2012). Disasters are severe events that are characterised by a sudden onset and affect a large fraction of the population in the area they appear. They can be natural such as earthquakes, tsunamis, floods, tornadoes, hurricanes and pandemics, or anthropogenic or man-made such as industrial accidents, traffic accidents, terrorist attacks. Specific feature of disasters is to be unpredictable and have a substantial adverse impact on health and property. Therefore, the development of methodologies for the evaluation of the public protection as well as decision making process for management of disasters is of major importance and has drawn the attention of several scientific disciplines especially operations research, the science of decision management.

Operation research (OR) is a scientific area where methods coming, predominantly, from mathematics, computer sciences and economics are employed in decision making processes. The tools developed by

OR are used to assess the consequences of alternative decisions of long or short term nature such as strategic planning or operational decisions. Therefore, OR can be seen as the science of resource allocation in an optimal way. In association with disaster management and theimpact on public protection OR can contribute in the evaluation of operational strategies and actions associated with large scale natural disasters. OR can help in providing guidance on the optimal choice of these strategies and the actions that needs to be taken into consideration.

Within the framework of public protection, operations research is the study of the employment and optimal use of various approaches and decision making techniques for effective management of disasters. In the context of disaster management OR can provide solutions that can be crucial for optimal humanitarian assistance deployment such as supply chains, resource allocation etc. OR can help to provide tools and methods which can be used in disaster epidemiology in the management of emergency public protection programmes. The ultimate goal is to achieve better managed plans & programmes scientifically analyse techniques that can contribute to information sharing and effective decision making.

In this paper operations research approaches are reviewed that have been used at large scale disasters and its management with respect to public protection. Also this paper describes the benefits from the use of operation research tools to the humanitarian assistance arena based on selected examples.

METHODOLOGY ADOPTED FOR SEARCH AND SELECTION OF DATA

The disaster database comprising a period of more than 12 years published from 1st January 2000 to 31st May 2012 was performed for studies. Keeping in view the goal of the work, the search was restricted to certain operations research techniques as mathematical programming and modelling, probability and statistics, simulation, decision theory, optimisation. My focus of work was on natural disasters at large scale like earthquakes, tsunamis, floods, tornadoes, hurricanes etc. Using the terms emergency/disaster response or preparedness for natural disasters 161 articles were screened. 76 potentially relevant articles were retrieved for full text review.

OPERATIONS RESEARCH APPROACHES USED IN NATURAL DISASTER MANAGEMENT.

Large number of methods has been used in disaster management e.g. mathematical programming, heuristic methods, probability theory and statistics, and simulations. In order to analyse situation, data and improve performance of the supply chain, quantitative methods were used in humanitarian logistics. Altay and Green (2006) did a literature survey on the operations research work that has already been

done in the disaster operations area. Based on that review, mathematical programming, and heuristic methods were used most often and Probability theory, simulations and inferential statistics were used second most frequently. In specific cases Decision theory and queuing theory were also used. An analysis of the use of operations research models in transportation of relief goods was presented in an article by De la Torre et al. (2011).

OPERATIONS RESEARCH APPROACHES RELATED TO NATURAL DISASTERS-A PUBLIC PROTECTION PERSPECTIVE

Varying approaches and models are being adopted for decision making about responses to disasters. These models address a variety of decision makers like first responders, hospital officials, planners, public protection officials etc, locals, and use a range of modelling methodologies. Regarding natural disasters the modelling approaches have been rather limited. Decisions about procurement transport, stockpiling, and maintenance of needed supplies, mass vaccination, and treatment are essential in case of disaster management.

NATURAL DISASTERS

Natural disasters can be classified in four major categories.

1. Meteorological Disasters: Storms, hurricanes, cyclones, tornadoes, typhoons, heat waves
2. Hydrological Disasters: Floods, avalanches
3. Climatological Disasters: Droughts, wildfires
4. Geophysical Disasters: Earthquakes, tsunamis, landslides, volcanic eruptions

Meteorological disasters

a) Heat waves

Heat waves belong to one of the major public protection threats since they can affect an enormous number of people. Typical example is the heat wave of the year 2003 in Europe that caused an estimated 70 000 additional deaths in 12 European countries (Robine et al., 2008). According to IPCC, 2012 Projections based on mathematical modelling approaches indicated that heat waves are going to occur more often). Early warning mechanisms are introduced through heat-health action plans introduced by many countries as a consequence of the 2003 heat wave in Europe. They include monitoring of meteorological forecasts and public protection activities to reduce or prevent heat related illness and death.

b) Storms and hurricanes

The health effects of storms and hurricanes include injuries, and mental health issues as well as stress of critical infrastructure facilities such as hospitals, schools, fire services, emergency rooms. Storm and hurricane forecasting tools can contribute to preparedness and save lives.

Hydrological disasters

Floods

Floods can lead to disastrous conditions with consequences for public protection, and damages to personal property. Loss of life and destruction of critical public infrastructure with substantial economic losses is usually the result. With respect to public protection increasing cases of drowning and injuries are expected after flood incidences. Mental health effects associated with emergency situations during flood incidences have been documented in the literature (IASC, 2007). There is increasing risk of water- and vector-borne infectious diseases. Disruption of health systems, facilities and services when they are needed most and another consequence is the damage of essential infrastructure such as food and water supplies. The Intergovernmental Panel on Climate Change (IPCC) published a report on disasters with projections of the increase in the number of people exposed to floods. They calculated that all over the Globe there will be an increase in the number of people exposed to floods. One area of employment of quantitative methods in flood management is the management of microbial contaminations. In large-scale floods in urban environments pathogens can be brought into homes and buildings and contaminate water and food supplies with substantial public protection risks. The risk of microbial contamination under different environmental conditions can be assessed with mathematical modelling approaches as well as epidemiological approaches (Taylor, et al. 2011, Cann et al., 2012).

Geophysical disasters

a) Landslides

Landslides have been least investigated as far as geophysical disasters are concerned. In a study by Das et al. (2011) the authors assessed the vulnerability of elements at risk to landslides such as buildings, persons inside buildings, and traffic, with a stochastic approach. By defining vulnerability as a stochastic consequence of a landslide that quantifies the potential loss in space, time and hence expressed as a probability, they consider a set of objects vulnerable to landslide, e.g., buildings, persons, vehicles at risk. Their vulnerability depends on the location and time with respect to landslide. Statistical approaches such as logistic regression were used to assess vulnerability of static elements such as buildings whereas Poisson modelling was used to assess vulnerability of dynamic elements such as

persons in a building or vehicles on the road. They concluded that vulnerability of elements at risk to landslide varies greatly in space and time. This variation was attributed to the dynamic nature of the elements at risk.

b) Earthquakes

Response of service providers to large-scale disasters such as earthquakes with respect to casualty treatment includes logistics issues such as the movement of casualties from the stricken area to hospitals. Fawcett at al. (2000) present a simulation model wherein various operations like numbers of locations of casualties rescued alive, the scale of pre-hospital care, the post- earthquake hospital capacity and the transport system were taken into consideration. The model predicts the number of casualties that die during that movement and waiting time before treatment. Thus the mathematical model can be used for planning and training. It is well documented that mortality rates increase with proximity to the epicentre of an earthquake and with increasing earthquake magnitude. Seismic intensity has been identified as the primary cause of mortality and injury during earthquakes, mediated by building damage (Aleskerov et al. 2005). Studies about the role of socio-demographic factors on earthquake vulnerability are rare (Badal et al. 2005). In a combined concept using a house hold survey and observational damage assessment, social and environmental determinants for injury and displacement were investigated by Milch et al. (20120) and statistical modelling approaches were used to explore to what extend seismic intensity, distance to rapture, living conditions and educational attainment affect displacement and injury rates (Milch et al. 2010). The results showed that about 55% of the variability in displacement rates could be explained by the above factors. Living conditions were a strong predictor of injury and displacement, indicating a strong association between risk and socio-economic factors.

c) Tsunamis

From the public protection point of view, there has been poor documentation of the health consequences of tsunamis. In order to describe the distribution of mortality among internally displaced persons during two and a half months after the Indian Ocean tsunami 2004 Nishikiori et al. (2006) conducted a cross-sectional household survey with retrospective cohort analysis of mortality in affected areas. Their findings confirm the plausible notion that most casualties occurred on the day of the tsunami and up to three days after. Starting one week after the disaster and for the two and a half months of the duration of the study no deaths were reported. In a second report and using the same epidemiological approach Nishikiori et al. (2006a) tried to identify the risk factors of the mortality during the same tsunami and therefore the vulnerable population groups. The distribution of mortality in 13 evacuation camps for internally displaced persons and associated risk factors were analysed using logistic regression

modelling and generalized estimating equations methods. There was a higher mortality among females and children and elderly compared with adults. Other factors such as being indoors at the time of the tsunami, the house distraction level, and fishing as an occupation were all statistically significant associated with increased mortality.

DISCUSSION

Disasters are always strongly associated with substantial casualties that demand for effective and efficient public protection responses. Quantitative methods including disaster response modelling have become integral part of decision making processes in disaster management. They can help in answering questions such as how should the logistical systems for response to various types of public protection disasters be organised? What is the most efficient and effective way to rapidly dispense services, medications or aid to large numbers of individuals? Despite progress in recent years there have been major unresolved issues at all levels of disaster response decision making that include long-range strategic planning, tactical planning and response, and real-time operational planning & support.

Disaster response models should be designed to address real-world disaster response problems and should be made available for use by those planners who can understand how to use these models and interpret the results. By this way a judicious balance can be maintained between computational complexity and usability. New public protection disaster response modelling approaches should evaluate relevant disaster response outcomes that go beyond those considered in traditional cost-effectiveness analysis and explore critical uncertainties. There are major unresolved issues at all levels of decision making process including long-range strategic planning, tactical response planning, and real-time operational planning and support. Operations research can provide useful techniques for decision management at all these levels. Finally, they should be presented in sufficient detail that their results can be interpreted in a reasonable way. Most of the time planners customise the approaches and models according to their own needs but these approaches need to be used for on- going decision making by these planners. Major emphasis should be given to the design and reporting of such models keeping in views that most of the planners lack necessary expertise. Developing a Modelling response to disasters is highly heterogeneous in terms of methodologies, outcomes evaluated, and quality of presentation. Operations research and other methodologies are essential in effectively disaster preparedness planning and response. These techniques and approaches can help better in terms of protecting public from adverse effects of natural disasters and to have an efficient preparedness planning and response.

CONCLUSIONS

Disaster response quantitative methods such as operations research addressing public protection are important tools for planning effective responses to disasters. Several modelling methods have been applied to analyse public protection and disaster response decisions. These include statistical analyses, Markov models, epidemiological models, supply chain management models, facility location models, and routing and network flow techniques.

The models and approach adopted for public protection differs from other models as they are designed to support on-going planning scenarios. These range from long-term strategic decisions to immediate operational decisions.

Impact of disasters on public and their protections systems have been modelled more intensively since decisions about procurement, transport, stockpiling, and maintenance of needed supplies, prophylaxis, aid and treatment are essential in case of disasters and their effective management.

Operations research methods used in disaster management can help the decision makers involved in public protection on the important issues like magnitude of the event, operational response capabilities, supply chain capacity, and robustness etc. operation research techniques can help to measure effectiveness of decisions and guide the decision making process.

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The Investment Confirmation: A Consequence of Investors' Attitudes Towards Risk

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A B S T R A C T

Capital is considered as the life blood of any economy. One of the important sources of capital formation in an economy is the investment made by the domestic people. The investment decisions are governed by the attitudes of people towards risk which is always dynamic in nature and influenced by many factors. Many researchers have conducted researches to find out the determinants of investors' attitudes but rare research has tried to find out the relationship between the investors' attitude towards risk with the investment confirmation relating to any financial product.

***AIMS:** The study aims to find out the determinant of investors' attitudes towards risk. This study also correlates the attitudes towards risk with the investment confirmation.*

***STUDY DESIGN:** Descriptive research design is adopted in this study. The relevant literature laid down the logic of relating attitude towards risk with investment confirmation.*

***METHODOLOGY:** Mostly the reviews of some empirical studies, review/theoretical research works and case studies are preceding the logical analysis of authors along their past experience to propose a model. The description of determinants of attitude towards risk and its relationship with investment confirmation has provided a logical base for implementation of the model.*

***RESULT:** The model reveals that the factors like fundamentals information, demographic factors, life style characteristics of investors, psychological factors and the risk bearing capacity continuously influence the investors' attitude towards risk. It is suggested that a strong & positive attitude towards risk leads to investment confirmation with more intensity and hence the investors take less time to involve in investment action. On the other hand, if the strength of the attitude is less, then the investment confirmation will be of less intensity, which leads to delayed investment action.*

***CONCLUSION:** Judging the investors' investment decision of may not sufficient to market the financial product, rather the planners or strategists should think one step ahead of decision making, and that is 'investment confirmation for a healthy future. The investment confirmation will be clearer, if it can be judged with regard to attitudes towards risk.*

KEYWORD: Attitudes of investors, risk taking, investment confirmation, determinants of attitude.

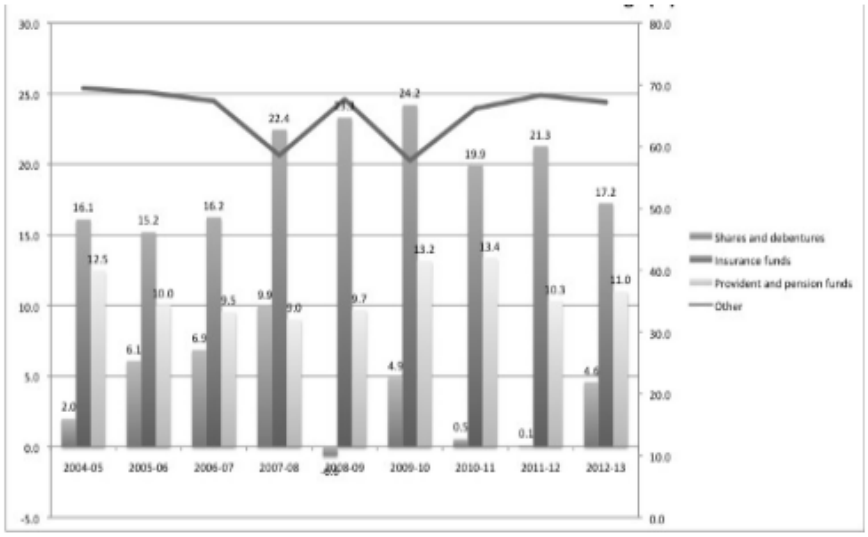
1. INTRODUCTION

In this modern era, money plays an important role in one's life. Starting from a small shop keeper to a billionaire wants to increase its wealth and make the money base secure to meet any financial need in future. It is hard earning money earned by every employed or self-employed person that they want to maximize. A trend has been followed just not by the richer people but also by the small income group to absorb knowledge which floats in the market to maximize their hard-earning money which is surplus in

nature. Apart from knowledge, the behaviour of the investors plays a significant role in the investment patterns, which are guided by many psychological factors and demographic factors.

There are many factors influencing a human behaviour as the behavioural aspects is affected by fundamentals information, demographic factors, life style characteristics of investors, psychological factors and the risk bearing capacity. The fundamental information includes beta (risk factors), past return, EPS, firm size, age of firm, share price, share turnover and market equity ratio. The demographic factors include investors' gender, age, marital status, education, incomes and occupation etc. Life style characteristic includes personal ability, confidence level and dependency level. Psychological factors like desires, goals, prejudice, biases and emotion guiding the investors' decision. The risk bearing capacity includes parameter of safety, liquidity; capital appreciation and risk return coverage. A strong and positive attitude towards investment is a driving force which makes the investors to make the confirmed decision. A strong attitude towards investment, which is guided by the above said influencing factors, creates values in the mind of the investors which helps the investors to take confirmed decision regarding investment. The relevance of the above said factors can be justified by the below mentioned statistics. It has been seen that major part of the household saving is invested in the secured investment sectors like pension and provident schemes. But due lesser rate of return many investors consider the semi secured areas like the insurance sector for their investment. The investors having more risk tolerance attitude invest their funds in the securities market, mainly on shares and debenture. The below graph showed the percentage investment of household saving in different sectors varying with their associated risk.

Figure: 1



Source: Central Statistical Organization, National Accounts Statistics, available at www. Mospi.nic.in

In consistence with the above mentioned logical explanation, it may be noticed from the above graph that there is gradual increase in the investment in the shares and debentures from 2004-08, although considered as the most risky assets due to rise in the index of stock market. But due to global recession in 2008-09 and the Indian Stock market crash, the investment seems to be in a decreasing trend. However, it was shown a rise trend in 2009-10 but again failed to attract the investor due to reoccurrence of global recession. This shows that many houses hold investor intent to invest in the market securities for more return but are panic by market break down. The investment in semi secured assets like insurance funds are more preferred by the house hold investors. There is around the same percentage of investment in the secured investment and traditional investment like the provident funds and pension funds.

2. PROBLEM STATEMENT

A strong capital based economy can withstand to any adverse condition or future prospect with respect to demand and supply mechanism. The demand for the capital can be solved by taxation system, borrowing from domestic public, foreign borrowing, FDI etc. Domestic direct investment or investment from individual investor plays a crucial role in fulfilling the capital requirement of the economy. The above objectivity is ultimately executed and controlled by human being. The human psychology is complex in nature and it became more complex, if it is the matter of their hard-earning money to be for future perspective. In consistent with this mindset it can be said that most of the psychological factors drive the attitudes of the investors towards risk. So, it is imperative to study the dynamism of the attitudes of investors relating to risk. Now it is a challenge for everyone that whether the knowledge on investors' attitudes towards risk can provide guideline for investment confirmation. In this context, the problem statement refers that, "do the attitudes towards risk affect the investment decision confirmation?

2.1. OBJECTIVES OF THE STUDY

1- To study the determinants of attitudes towards risk of an individual investors investing in securities.

2- To study the logical relationship between the attitudes towards risk and investment confirmation.

3. METHODOLOGY

Descriptive research design prevails in this study. In this study, characteristics of the mediating variable, attitude towards risk are described with respect to the investment confirmation (one-step ahead of the investment decision). To describe these characteristics, five major factors are considered as determinants of attitude towards risk. The logical relationships between the determinants of attitude towards risk and investment confirmation, which are found from available literature, enable the authors to propose a model (figure-2). Some empirical studies, review/theoretical research works and case

studies are reviewed for the above purpose. The proposed model is basically a mediating model, where attitude towards risk is mediating between its determinants and investment confirmation. Thus, the originality of the study is reflected from the concept of 'investment confirmation', suggested to be determined by five major determinants of attitude towards risk, where the 'attitude towards risk' is argued as a mediating variable in the model. Apart from the available literature, some discussions with the small firms who market the financial products like mutual funds and systematic investment plans (SIP) enriched the thought process of authors of this study on the way of proposing the model. Further, the past experience of the 1st author as executive in Stock Holding Corporation of India has provided a meaningful contribution to derive the logical base of the proposed model. Referencing has been done by Mendeley Desktops software.

4. LITERATURE REVIEW

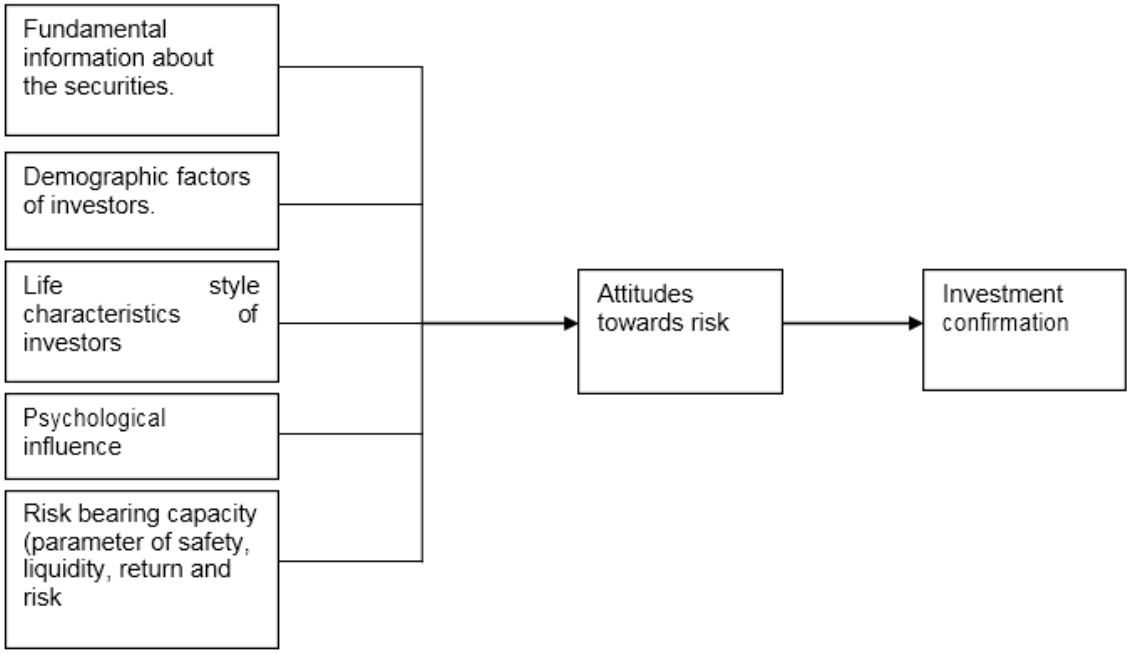
4.1. RESULT AND DISCUSSION

By reviewing the relevant literatures, it may be infered that attitudes towards risk of an investor always changes with the magnitude change in the inluencing factors as they are more dynamic in nature. The higher is the influence, more in the change in attitudes. A positive and strong attitudes leads to high intensity in investment confirmation but a lesser degree of attitude towards risk leads to lesser intensity in investment confirmation as the attitudes are dynamic in nature. The above results logically derived from the below mentioned discussions.

4.2. DETERMINANT OF ATTITUDES TOWARDS RISK AND INVESTMENT CONFIRMATION

Many researchers have addressed the issues of investers' decision making or of investment decision. But till now not much confirmed arguement has been made relating to the investment decision and attitude towards risk of investors, which is proposed here as a important base of investment confirmation. The investment confirmation is assumed here as one step ahead of simple decission making regarding any investment. The proposed model (figure-2) refers the factors of attitudes towards risk taking as the underlaying determinats of investors' attitude. which help the investors to take confirmed decision in making their investments. So, the proposed consequence of attitudes can be the 'investment confirmation'. How the determinats build-up the investors attitude toweards risk and ultimately this type of attitude leads to investment confirmation, is derived from the available literature as follows.

Figure 2: Proposed model-Relation between Attitudes towards risk and investment confirmtion



4.3 FUNDAMENTALS INFORMATION OF SECURITIES AND INVESTORS' ATTITUDE

As it is well established concept that attitude is the learned predisposition. It develops over the years on the past experiences. The investors' attitude can be build-up by having the fundamental information of the securities like beta (risk factors), past return, EPS, firm size, age of firm, share price, share turnover and market equity ratio, return on equity (ROE), price to earning etc. Rightly Dhingra, Bhargava and Chadda (2017) have mentioned that major factors influencing individual behaviour are market situation, information, high profit and high risk, opinion, investment decision and stock familiarity. How the relevant information on some criteria is important for the investors is found out by another study, which explains that investor should have relevant information about the sector of investment and must have the knowledge about the scripts on which they are investing. Further, the information reflects both the corporate news (Sales volume, EPS, dividend declared, future growth, company profile etc.) and the country news like (taxation, industrial policy, foreign related market etc.) are helpful for the investors (Saravanakum, Gunasekaran, and Aarthy, 2011). Jagongo and Mutswenje (2014) explained that firm's position and performance that reflect the economic condition and return on investment respectively, which ultimately affect the investment decision of the investors. The analytical explanation of the above said literatures refer that the investors' attitude that develop over the time period consistently deal with some sort of certainty while going for investment. It was also found in a study that the herd behaviour, internet led access to information and trading, macro-economic factors, performance factors and confidence Level affect the investment strategy of the investor (Bennet, Selvam, Vivek and Shalin, 2012).

4.4 DEMOGRAPHIC FACTORS AND INVESTORS' ATTITUDE

The attitude of human being towards any aspect is reflected with their age, gender, education or qualification they possess, the type of occupation they have and the place of origin. Parimalakanthi and Kumar (2015) found that education of investors is immensely important for the present-day investors. Demographic factors like age, gender, marital status, qualifications, occupation, annual income and geographic location have an impact on the level of risk that investors can take while making the investment decision. With regard to the above research it was found that men invest more and also bear more risk than women. The individuals within the age group 20-40 invest more and the service class people invest more (Purohit, Satija & Saxena, 2014). It was also proved from the above study that the male possess a positive attitudes towards investment in mutual fund than females. In consistent with the above result Singh (2012) reveals that the investors in the age group of 25-35 invest more and bear more risk. Further, the investors with income level more than Rs 300000/- per annum take more risk in investment, and the occupation plays a vital role. The very similar result given by Fatima and Shafi (2016) shows that demographic factor which includes gender, age, marital status and occupation affects the investment behaviour of individual investors. Further, with the increase in age and rise in income level, the risk tolerance attitudes also grow. Murugan (2012), found that the income level, the age level has a great impact towards risk tolerance attitudes. Kaur and Kaushik (2015) explained in his study that socioeconomic characteristics such as age, gender, occupation, income and education of investors had an impact on the awareness about mutual funds, which strengthen the investment confirmation.

4.5 LIFE STYLE CHARACTERISTICS OF INVESTORS AND INVESTORS' ATTITUDE

The life style and personality traits are the deeply built character inside human beings, which affect the attitude of any persons towards the situation which come up front. Life style characteristic includes personal ability, confidence level and dependency level. It also refers the fashion conscious, self-confidence and leadership factor which affect the investment decision making process. Chandra (2008) refers that behavioural factors like greed and fear, cognitive dissonance, heuristics, mental accounting, and anchoring must be taken into account as risk factors while making investment decisions. Panjali and Kasilingam (2015) found that the lifestyle characteristics like perfect planning, innovativeness, task oriented, fashion Conscious, self-confidence, leadership, and well-being, inner directed and risk taking affects the activities, interest and opinion of the investors towards investment. Shanmughama and Ramyab (2012) rightly explained that social factors like the social interaction and media influence the trading frequency and trading behaviour of individual investor. This social interaction and media are the part of life style characteristics of the investor. Ferreira, Freitas, Nunes, and Giovannini (2014) have also found that the perceived environmental security and the perceived operational competence of individual investors affect the investment behaviour and affect the risk-taking ability.

4.6 PSYCHOLOGICAL INFLUENCE AND INVESTORS' ATTITUDE

The psychological factors like the emotions, values, instinct, prejudice, desires of an individual also affect the attitudes towards decision making pattern. It drives the thoughts of investors and influence their attitude towards risk associated with the investment. The loss aversion thinking, believing the crowd to be right, thought stating investment as gamble affects the sentiment of investor leads to defining of its attitudes about investment. Personal beliefs include social and religiously expressive characteristic that determines the attitudes towards risk. The Psychological factors include desires, goals, prejudice, biases and emotion guiding the investors' decision. It also includes driven biases like herd Instinct, important heuristics, self-serving bias, anchoring, loss aversion, calendar effect, gambler's fallacy, market psychology, market sentiment, media effect, rational behaviour and media effect. Thimmarayappa and Sukanya (2015) found that most of the investors commit mistakes as they don't aware about the diversification but also follow the crowd and historical information. It was also found that investment decision is influenced in a large proportion by psychological and emotional factors are called Behavioural finance. Supporting the above discussion, the study by Jayaraman, Vasanti, and Ramaratnam, (2014) reveals that the psychological factors like desires, goals, prejudice, biases, sentiment and emotion drive the investment behaviour. In consistence with the above literature that to change the thinking of investor, it was suggested by Bezzina and Grima (2011) that controlling the psychological factors like greed and risk propensity factors, the decision-making process while investment can be affected.

4.7. RISK BEARING CAPACITY AND INVESTORS' ATTITUDE

Apart from psychological factors and demographic factors the risk tolerance level and risk bearing capacity of the investors affect the investor perception and its attitudes towards risk and investment. The financial risk tolerance and the risk taking behaviour of the investors affect its attitudes towards risk and investment. The risk bearing capacity includes parameter of safety, liquidity; capital appreciation and risk return coverage. Understanding the financial risk behaviour of an individual would be useful for service providers and policy makers who are interested in financial products. Corter and Chen (2005) explained that the persons experienced in the field of investment take more risk. Further found that the persons with more risk tolerance level makes more confirm decision related to investment. (Vohra and Kaur 2012) also found that knowledge about the expectation, attitudes towards risk, personal circumstances affect the investors' behaviour and attitudes which enhance the risk tolerance level relating to the investment. Empirical study conducted by Khan (2017) supported the above discussion by stating that the financial risk tolerance attitudes was developed and enhanced through the level of knowledge acquired by the investors in the field of investment and finance and helps in investment confirmation. It was also found out that the gender factor is also affect the risk bearing capacity as it was

found that male who are single and separated are more risk bearing personnel than female investors. It was seen that the risk bearing capacity is also influenced by the demographic and psychographic variables which affect attitudes of investor towards risk in making the investment decision (Kiran and Rao 2005). Supporting the above arguments, it was found by Riaz and Hunjra (2015) in her research in Pakistan, that the risk perceptions and risk propensity are the most important determinants of risk related behaviour which have a great impact on the risk taking ability leading to confirmation of decision regarding investments.

4.8 ATTITUDES OF INVESTOR TOWARDS RISK AND INVESTMENT CONFIRMATION

Risk is an inherent feature of all investment decisions as there is always a difference of actual and expected return from the financial investment. The risk perception and attitudes towards risk influence the investment decision and hence lead to a particular level of investment confirmation. The attitude towards risk is the way in which an investor behaves towards the risk of financial asset based on their involvement and experience. The attitudes towards risk, which is built by risk perception, may be rational or irrational about chances of occurrence of risk. The investor evaluates the risk and return of an investment decision and this behaviour is affected by the attitudes towards risk and strengthen the intensity of making the investment confirmation. Madhumarthi (1998) found that out three classes of investor based on attitudes towards risk are, risk seekers, risk bearers and risk avoiders. The risk perception influences the conformity to investment decision. It was studied and found that the investors' perception of risk and their attitudes towards risk influence the decision confirmation of investment. In this conjecture, Sindhu KP & Kumar R. (2014) found that the investment decision of investors depends highly (about 95%) upon the risk perception. Thus, more the risk-taking ability leads higher intensity of investment decision, ultimately referred as investment confirmation in the current study. It can also be interpreted as the investment confirmation with varying level corresponds to different degrees of risk taking abilities of the investors, which is reflected in the proposed model.

5. SUMMARY FINDINGS

Attitude of human being is such an crucial psychological factor that it needs a deeper sense of clarification and logical relationships to be understood with respect the todays modern world, especially in financial considerations, because the changes in demography, business, psycological environemnt of the investors', and flow of information that may bring change in the attitudes towards risk. So, the currect study is proposing a model, where the investors' attitude is logically related to the investment confirmation. Here the investors' attitude is especially studied relating the risk.

The attitudes of investors towards risk associated with investment plays an important role in investment confirmation. It is an established fact by various researches that the attitude differs across individuals. If that individual is an investor, then it is very imperative to be studied along some important determinants as proposed in the model. The determining factors building the attitudes of investors' towards risk for investment in securities are the fundamentals information of security relating to risk and return associated to it, demographic factors like age, income, gender, life style characteristics of investors like self-confidence and leadership character, psychological factors like the desires, life goals, prejudice, biases and emotion and the risk bearing capacity of investors like financial risk tolerance and risk tolerance attitudes in general of a individual.

The above model reveals that the factors like fundamentals information, demographic factors, life style characteristics of investors, psychological factors and the risk bearing capacity continuously influence the investors' attitude towards risk. It is suggested that a strong & positive attitude towards risk leads to investment confirmation with more intensity and hence the investors take less time to involve in investment action. Further, the investors will be less likely to be biased. On the other hand, if the strength of the attitude is less, then the investment confirmation will be of less intensity, which leads to delayed investment action and there are more chances of being biased.

6. CONCLUSION

Investments signify the employment of funds with the aim of achieving future benefits for both organization d individual. It plays an important role in economic growth. The study revealed factors primarily influencing the investment confirmation of investors. While selecting any investment avenue, the investors are rational by measuring the cost and benefits from it as the investor perceive some level of risk always. The fundamental factors such as securities like beta (risk factors), past return, EPS, firm size, age of firm, share price, share turnover and market equity ratio, return on equity (ROE) and price to earning affect the selection of investment. Apart from the fundamental factors, the investment of the investors is always influenced by psychological factors like behaviour, sentiments, personality traits, risk taking abilities and the demographic factors like age, sex, income and education. Thus, to understand the rational behaviour and attitude of investors in the investment decisions, a mediated model has been developed to test the impact of different fundamental variables on risk behaviour aspects that ultimately leads to the investment decisions making process. This study investigated various determinants affecting the attitude towards risk in the decision-making process, where the decision process reached the investment confirmation. Investment confirmation with more intensity, take less time in investment action. This is the ultimate step required by the firms rather than only the decision-making process of individual investors.

7. LIMITATION OF THE STUDY & FUTURE RESEARCH AVENUES

This study is based up on review of published research works, surveys, and case studies. Hence, future researchers can prove or challenge it empirically. The proposed model is addressing limited number of determinants of attitude towards risk, which have the relevant dimensions according to available literature. So, further studies can be made by taking more number of factors that are capable of determining the attitude towards risk. Till now also investment confirmation is a little learned fact among the researchers. Thus, further studies can be made to find out a more relevant base for investment confirmation rather than attitude towards risk.

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Examining the Product Adoption Rates and Viability of Mobile Health Microinsurance in Zimbabwe.

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A B S T R A C T

The study sought to evaluate the product adoption rates and viability of mobile health microinsurance in Zimbabwe. The main objectives were to examine the potential benefits of mobile health microinsurance to the poor and the insurers; assess the challenges of mobile health microinsurance to the insurers and insureds; examine the product uptake rates of mobile health micro insurance and assess the viability of mobile health microinsurance in Zimbabwe. The study adopted the explanatory and descriptive research design. The research focused on the company that is currently offering the mobile health microinsurance product as well as clients who are currently insured under the product which is the Hospital Cash Plan. A total of 50 respondents was used (comprising of 10 executives and 40 walk in clients) as study subjects. Questionnaires and interviews were used as research instruments to collect data. The research findings revealed that the adoption rates are low and the scheme had not been performing well. The mobile health microinsurance products need to reach large volumes and be correctly priced in order to be viable and profitable. Insurers highlighted challenges of lack of awareness and education by clients as causing the low rates. The study recommended use of advertisement of the products their products, correct pricing, strategic alliances with NGOs, coming up with innovative products, fewer exclusions to attract more clients and educational awareness.

Key terms : Microinsurance, mobile health microinsurance, uptake rates, viability and profitability

LIST OF ACRONYMS

MHI ..... Mobile health insurance

MNO's…..... Mobile network operators

Zimstat ..... Zimbabwe national statistics agency

NGOs…..... Non Governmental Organisations

INTRODUCTION

There are many insurance products in the world market, some of which are specific to certain environments .Health microinsurance is a product which exists but has not been explored fully in many markets especially Zimbabwe. Most countries do not have full understanding of this product and are ignorant of it, and to the insurers its disadvantages are quick to come to mind when the subject is mentioned. Insurers are conscious of problems related to microinsurance such as high costs and low adoption rates. According to Churchill (2007) The transactions costs under health microinsurance are not proportional because the small values result in high costs. Because of this and some other disadvantages the insurers are reluctant to offer health microinsurance products. The poor have had to resort to measures such as borrowing and help from non governmental organisations.

Developing countries have sought to overcome these challenges by leveraging the distribution channel offered by mobile networks through the introduction of mobile health microinsurance. In a bid to cut costs, to attract numbers and to ultimately make health microinsurance more viable and profitable some insurance companies in developing countries like Zimbabwe have now introduced mobile health microinsurance. According to Tellez (2012) mobile health microinsurance can be defined as "any type of microinsurance product which leverages the mobile channel, whether or not a mobile money platform exists to improve a part of the insurance value chain which can include: product design, pricing, marketing and sales, policy administration and claims payment."Most people although they are living below the poverty datum line own at least a cell phone especially the urban poor. According to The Postal Regulatory Authority Report of Zimbabwe 2014 mobile subscribers are currently at 13,500,000 million with a penetration ratio of 103.4%.

Out of an industry with 24 players short term insurance companies there is only one insurance company in the industry offering mobile health microinsurance namely Eagle Insurance which started offering the product in the year 2012. Most insurers in the Zimbabwean market are still unsure about the profitability and viability of these products as well as the benefits that this holds for them as well as the consumers. For mobile health microinsurance to be successful insurers need to attract large volumes and cut on transaction costs. This study sought to evaluate the product adoption rates the viability as well as the profitability of these products.

2. LITERATURE REVIEW

2.1. Mobile Health Microinsurance defined

Churchill (2003) defines microinsurance as the protection of the low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. Churchill clearly spells out that microinsurance is similar to all other forms of insurance except for the clearly defined target market, the poor. Churchill adds on to say the definition of poor differs or varies by country but microinsurance is for persons ignored by mainstream commercial and social insurance schemes especially those working in the informal sector. Ahuja and Guha-Khasnobis (2005) postulate that microinsurance, is different from insurance in general since it is a low value product involving modest premium and benefit package. They go on further to explain that microinsurance is different since it requires different design anddistribution strategies for example premium is based on community risk rating as opposed to individual risk rating. MHI still targets the same group of people. Because MHI is offered via mobile phones it is therefore a strategic innovation to the traditional way of offering microinsurance. According to Tellez (2012) MHI can be defined as "any

type of microinsurance product which leverages the mobile channel, whether or not a mobile money platform exists to improve a part of the insurance value chain which can include: product design, pricing, marketing and sales, policy administration and claims payment."Chaudry and Fazilda (2013) support Tellez's definition by postulating that under MHI insurers partner with mobile network operators (MNOs) to take advantage of their technology platforms and agent networks to provide insurance to the vast pool of mobile phone subscribers.

2.2. Benefits of MHI

According to Chaudry and Fazilda (2013) microinsurance is beneficial if administered via mobile phones. Premiums are collected on a daily basis and do not have to be paid as lump sum which makes it affordable for low income people. Flexible premiums are affordable and payable at the members pace. Tarazi (2012) postulates that it is essential for insurers to have a mechanism for collecting small premiums from widely spread customers they need to design premium payment plans that can be collected regularly at shorter intervals and at a lower cost. This makes it very affordable for the low income people.

Chaudry and Fazilda (2013) also explain that another benefit of MHI to the client is that they are simple to administer. Clients simply sign up by phone or text message. According to McCord (2006) by exploring innovative solutions, insurance agencies can be convinced to lower their premiums which makes insurance cheaper and more affordable to the poor populations. Tellez (2012) discusses the ways in which insurers can take advantage of the mobile networks to reach more people and cut on transaction costs. The drop in these costs can be incorporated in the premium calculation resulting in the drop in insurance premiums. Tellez (2012) postulates that it can be an extremely cost effective channel for, example, reminding customers when premium payments are due, because sending such reminders can be entirely automated. This is accessible on even very low end handsets. According to Ghosh (2013) cutting costs can also be achieved through SMS channels by advertising the product and handling customer feedback. Technology does two key things that help drive the development of financial services: it cuts costs, and bridges physical distance. These two issues high operating costs and clients that are spread out and difficult to access represent two of the biggest barriers to microinsurance development (http://www.ilo.org/global/about-the-ilo/ visited 31/07/2016).

According to Tellez (2012) in addition to these added advantages of MHI there is also an advantage of loyalty and trust. People are more willing to pay their premiums through mobile service providers than insurance companies. Insurance companies are less trusted by consumers than mobile service providers. MHI therefore instils more consumer confidence. Mobile networks provide a cost effective way of

regularly communicating with clients. Customers can use mobile channels to access policy data, check payment status and submit changes to policy coverage if required. Insurers can send messages to clients to remind them of premium payments. For example YuCover customers in Kenya can use the menu on their phone to check policy details and register claims when required.(Tellez,2012).

Tellez (2012) also postulates that one of the major challenges faced by insurance providers when designing and pricing new products is lack of historical data. The real time rendering of insuranceand mobile transaction information can dramatically improve this process and give insurers access to reliable data to find patterns necessary for better understanding their customers allowing them to design more appropriate products for them. Record keeping is also improved thereby eliminating redundant processes and reducing fraud. For claims settlement the readily available data reduces the amount of documentation necessary making the process more efficient.

2.3. Challenges of MHI

One of the greatest challenges for microinsurance is the target market's lack of insurance information and understanding. This leads to weak demand for such services. It also opens the door to deliberate miss-selling by agents striving to reach quotas or higher commission levels, which further deteriorates the reputation of insurance. (Churchill,2007). Promoting consumer education about the value of insurance might be time consuming and costly, although the return in terms of reduced lapse rates may be considerable. (Churchill,2007) According to Ito and Kono (2009) there are usually many exceptions which insurers have to explain. They also have to explain conditions on which indemnity will be paid out ,how policyholders can access health care services and how they should send out claims. Because the poor may not understand the concept completely they can even think they are being deceived when they stay healthy and do not claim since according to them 'they have paid the premium and gained nothing.' According to Leatherman, Christensen and Holtz (2010) improper pricing of MHI products along with funding deficiencies or uncertainty faced by insurers, hospitals, and clinics creates situations where health microinsurance programmes cannot reach their target populations in expected numbers and/or cannot sustain themselves over time. McCord (2007) indicated that in four of seven MHI programmes reviewed, premiums were improperly priced. In all cases, the premiums were too low. Of these, only two programmes had obtained actuarial assistance.

2.4. Conditions necessary for the profitability of MHI

There are certain elements that have to be met for any microinsurance scheme to be profitable to insurers. For MHI to be profitable there are certain elements that have to be met. The key to profitability with MHI is that it is a strategy based on a philosophy of "low-margin/high-volume".'To make it

profitable, an insurer must rely on pricing that is as accurate as possible with low margins and sell large volumes of business. As long as growth in revenues is greater than growth in incremental costs, scalability means profitability. For microinsurance initiatives to be viable business propositions, they need to make a contribution to overall profitability of the business relative to their risk and the investment of capital (McCord ,2007). This therefore implies that for MHI to be a success insurers need to accurately and correctly price their products and the products have to be quite popular with the consumers in order to create large volumes for the creation of a viable pool. If the pool is too small the volatility of claims can lead to an unexpected increase in claims.

To be sustainable, a microinsurance scheme must minimize operational costs. Insurance requires a large number of policyholders to reach economies of scale. It can involve costly claims verification processes, cumbersome data management, and a high volume of transactions due to regular premium payments. When this model is translated to a micro scale, maintaining a good ratio of operating costs to premium payments becomes difficult. Players in the microinsurance field need to cut costs and they recognize that technology is one of the solutions.(http://www.ilo.org/global/about-the-ilo/ visited 31/07/2016).

2.5. Success of MHI products in other developing countries

In most developing countries partnerships between insurers and MNOs are very successful. McCord (2012) noted that the African microinsurance market grew by more than 200 per cent during 2010 and 2012. Eight out of nine markets with more than one million insured (not counting South Africa) have reached those customers through mobile-phone-based insurance . According to Gross et al (2013) In Ghana, Senegal and nNamibia insurance offered through MNOs doubled the insured population in the country within one year, compared to 40 years for a typical insurance market with many active players . In Africa reports of success of the product has been reported in Kenya and Uganda. Microcare in Uganda and Changamka in Kenya have both been enjoying success in mobile health microinsurance. According to Wang (2013) Changamka has managed to reduce administrative costs by almost 50 percent, while increasing numbers in an unprecedented way.

3. METHODOLOGY

The survey research design was deployed for the study. The survey is a non experimental descriptive research method. A formal study was carried out in order to provide answers to the research questions though exploratory characteristics are present in order to develop areas for future research. The research was conducted on a non statistical basis in order to target a certain class of respondents under field or natural conditions. It follows an ex post facto design where the researcher has no control over the variables hence should guide against introducing bias through influencing variables. The researcher

used this form of research design since it is the most appropriate in obtaining descriptive and explanatory information as is postulated by (Wagenaar and Babbie ,1983) and it also relevant to this research. This research used qualitative techniques due to the varied opinion and views involved in the subject of insurance. Data was collected through in-depth interviews for clarity of critical aspects of the matter. Data was also collected from the clients through questionnaires. The target population was set on the senior executives of the two insurance companies currently offering MHI and insurance clients. This population was considered due to their involvement in the aspect of MHI insurance. The clients gave information on their level of confidence in MHI, the source and drivers of their confidence was sought. Senior executives were given the desired consideration for the assessment of the product adoption rates and the reasons thereof. 40 walk in clients were handed out questionnaires to fill in. The researcher carried out interviews with the 10 executives at Eagle Insurance Company. A combination of sampling methods was adopted. Quota sampling technique, purposive and simple random sampling were used for different classes of the research population. The quota sampling procedure is based on the selection of a number of respondents that possess a certain characteristic. This is because the relevant data will need to be collected from the company already offering the product as they will have a better insight and knowledge to what the researcher intends to find out. Simple random sampling was used in administering questionnaires to the walk in clients . Black (1999) points out that total population sampling is a type of purposive sampling technique where the researcher chooses to examine the entire population that has a particular set of characteristics. Since total population was adopted in including all relevant executives from the insurance company offering MHI in Zimbabwe. It gives deep insight into the phenomenon of adoption rates and profitability and different explanations are obtainable by this method.

4. RESULTS

a) According to the survey out of the 10 targeted executives a 100% response was obtained as the researcher managed to carry out interviews with all of them. Of the 40 questionnaires administered to the clients all 40 were returned but 36 were found to be usable.

b) The clients were asked on whether they thought the scheme was affordable or not. The clients pay $1.50 per month for a payment of $100 for everyday that they are in hospital with a maximum of $6000 per year and a maximum of $3000 per event. Most clients were happy and they felt that the product was affordable. The staggering of the amount during the whole month also made the product more affordable. This could probably be the case since 62.6% of the population is deemed to be poor and 16.2% living in extreme poverty, according to Poverty and Poverty Datum analysis 2013, (www.zimstat.com).

c) The research sought to determine the product adoption rates of the scheme. All the executives from Eagle indicated that the uptake rates for the Hospital cash plan at Eagle was low and they had a problem with the defaulting on subscriptions from their acquired clients. The hospital cash plan was still quite far from the targeted number of a million subscribers. They went on to cite two main challenges as being behind the low uptake rates. The respondents were of the opinion that it was due to the lack of consumer awareness and education. Given the target market the respondents highlighted the lack of education as a barrier to understanding the product.

This is supported by theory were according to Churchill (2007) one of the greatest challenges for microinsurance is the target market's lack of insurance information and understanding. This leads to weak demand for such service.

e) The respondents who comprised of the clients indicated two main challenges they were facing under the scheme. They indicated that the main challenge was in accessing healthcare when they wanted to claim. Some of the hospitals they had been referred to did not accept the medical aid cards despite the fact that prior arrangements had been made between the facilities and the insurance companies. The other challenge they were facing was the actual restriction as to the hospitals they could visit. Under the scheme the clients can only get medical attention from government hospitals, mission hospitals as well as municipal clinics. The respondents indicated that in some cases they needed to get specialist care that they could only find in private hospitals.

f) The benefits of MHI were also highlighted. 50% of the clients were happy that their health needs were being catered for.25% of the clients were happy at the affordability of the product while 25% of the clients were of the opinion that the most important benefit is the easiness in transacting since the process is via mobile phones. To register one would simply send his first name, surname date of birth, sex and ID number to a given number. To pay the subscriptions one would simply send the recharge number to that same given number. The same question was also posed to the executives who cited three main benefits which are affordability ,meeting health needs and easiness in transacting. This view was supported by Chaudry and Nabeel (2013) who postulated that microinsurance is beneficial if administered via mobile phones since premiums are collected on a daily basis. They are simple to administer.

g) The executives were further asked on whether they thought the premiums were fair and adequate to sustain the pool. 50% of the respondents thought they were adequate. 25% were of the opinion that they were not adequate and 25% were not sure and they still wanted more time in running the schemes to be completely sure. On further inquiry the respondents revealed that premiums were

charged on what they 'thought was affordable' not any past experience or actuarial model. This is in contradiction to what most authors deem to be the correct pricing method. MHI has to be correctly priced for it to be viable. It cannot be determined on what the insurer deems to be affordable. (Tellez ,2012)

h) The executives indicated that profitability was average and not what they expected. 50% indicated that the scheme was not really profitable and a lot of issues such as creating awareness and pricing issues needed to be addressed.

The study was set out to evaluate the product uptake rate as well as the viability of MHI. The study also looked at the benefits that can be enjoyed by the consumers and the insurers from MHI. The challenges being faced in the provision of these products were also highlighted. The study has also sought to devise solutions to the challenges highlighted.

1. According to literature MHI offers quite a few benefits to the poor. Although a few benefits were highlighted the research can safely conclude that the benefit enjoyed most is that of having a peace of mind since their health needs will be met. Churchill (2006) noted that the greatest benefit that microinsurance can bring to the poor is to satisfy their health needs. Most never usually recover after a health shock has hit them. Maleika and Kuriakose (2008) concur with this view by noting that microinsurance is a powerful tool for protecting the poor and their assets . Other major benefits highlighted include easiness to transact and affordability.

2. On the issue of affordability it was determined that the products are quite affordable for the poor. Affordability is dependent on two factors which are the amount itself as well as the payment pattern. The amounts were deemed to be low and the premium also does not have to be paid at once. Premium payment is quite flexible. This is supported by Tarazi (2012) who postulates that premiums need to be collected regularly over shorter intervals at a lower cost.

3. Although insurers are sceptical about offering the traditional health microinsurance they should consider offering MHI as there are a lot of benefits that can be obtained from these products. Based on the findings the research can conclude that easier administration of the scheme is the main benefit of MHI. According to Tellez (2012) mobile microinsurance provides easier administration. No paperwork is involved.

Most authors however agree that the largest benefit that can be obtained from MHI is that of reaching more people. The major role that technology plays is to reach more people and cut costs. McCord (2012)

states that by investing in research and technology microinsurance is able to reach more people. In Zimbabwe however the same can not be said. This can be attributed to the fact that the company is not investing as much as they should in bringing awareness to the people through use of mobile phones.

4. Despite the benefits being enjoyed the research however noted that a few challenges were being faced in the provision of these services. The failure to access health care when they wanted to claim is the major challenge faced by the poor. Some clients were turned away from hospitals. This is despite the fact that prior arrangements This could be a reason why the default rate was high. This conclusion is supported by Leatherman, Christensen and Holtz (2010) who postulate that health facilities in developing countries often deliver no or poor quality services which lowers member satisfaction.

5. The research needed to determine whether they would be enough to ensure the insurers survival. Premiums are charged on what the insurer perceives to be affordable. Literature states that for the schemes to be viable pricing needs to be accurate. McCord (2007) indicated that in four of seven health microinsurance programmes reviewed, premiums were improperly priced. Of these, only two programmes had obtained actuarial assistance. Tellez (2012) supports this by identifying correct pricing as being crucial for the sustenance of microinsurance pools.

6. The product adoption rates was one of the major questions that the research aimed to answer. The research concluded that the product adoption rates of the Hospital Cash Plan are low since they are still far from the targeted numbers . The default rate on subscriptions is quite high for the Cash Plan. The low uptake rates was attributed to the lack of product awareness and education

7. The overall viability of the schemes is measured on two main aspects which are the numbers as well as the margins. At the current time the research concludes that the scheme is failing to acquire large numbers. The pricing of the products is also not accurate. The research concludes that MHI is quite viable in Zimbabwe but proper measures need to be put in place. Investment needs to be made in creating awareness as well correct pricing of the schemes.

6. RECOMMENDATIONS

The researcher suggests the following recommendations for the guaranteed success of mobile health microinsurance products.

One of the major challenges faced by insurers and the insured is the lack of product awareness and consumer education. Insurance is sustained by the law of numbers. The insurers need to devise ways in which they can ensure that the consumer is aware and educated about the product. It was quite interesting to note that despite the mobile channel the company offering the product is not using cell phone messages to advertise their products and make the consumer more aware of the products on offer. This can be one sure way of increasing awareness. The insurance companies can also have strategic alliances with NGOs to advertise their products. NGOs are well trusted by most people and also they have access to most of the target population since they work with them on other campaigns. The product should be continuously visible in the market to maintain the existing clients, trust and subscriptions hence need for promotions, advertising, sponsorships and exhibitions. Insurers can increase awareness by engaging airtime dealers and mobile money agents. Tellez (2012) suggests that, by working with mobile operators, insurers can also take advantage of MNOs' large and mature distribution networks of airtime dealers and mobile money agents. In that regard mobile money agents like Ecocash agents (in the case of Econet)and airtime vendors can be educated about the products available and in turn educate the consumers. They can even sell the products and also help in claims processing. Incentives would then be given to the mobile money agents in the form of commission for each policy sold .This will help in minimising costs and creating public awareness to the products available. This will also create trust because customers are already familiar with the retailers. By engaging airtime dealers and mobile money agents the insurer is not only brining awareness but also minimising costs and gaining trust.

There is need for the government to play a significant role in helping provide risk management tools needed by very low income families .Government can assist in dealing with challenges such as providing infrastructure and injecting in the pools until they are stable and profitable .McCord (2007) postulates that the government could assist in providing technical support and training to health microinsurance institutions and operators. The government could also make sure that legislation allowed them to get some reinsurance support as well as making sure that the clients had no trouble in accessing health care under the two schemes.

Once there are too many exclusions the policy becomes very unpopular and not trustworthy expanding member benefits can ensure that more people join the schemes. The Hospital Cash Plan in Zimbabwe excludes pregnant women, chronic illnesses as well as those over 60. According to Lloyds (2009) Madison Insurance in Zambia discovered that they could still make profits even without the HIV/AIDS exclusion.

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Universal Health Coverage in India: Prospect and Way Forward – A Review

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ABSTRACT

Universal health coverage (UHC) is the means to provide accessible and appropriate health services to all citizens without financial hardships. India, an emerging economy with demographic window of opportunity has been facing dual burden of diseases in midst of multiple transitions. Health situation in the country despite quantum improvements in recent past has enormous challenges with urban-rural and interstate differentials. Successful national programs exist, but lack of ability to provide and sustain UHC. Achieving UHC require sustained mechanisms for health financing and to provide financial protection through national health packages. There is a need to ensure universal access to medicines, vaccines and emerging technologies along with development of Human Resources for Health (HRH).Health service, management, and institutional reforms are required along with enhanced focus on social determinants of health and citizen engagement. UHC is the way for providing health assurance and enlarging scope of primary health care to nook and corners of the country.

Methodology of the study includes secondary data through journals and data reviews through various data published on websites (National and international).The terms used for searching were social health insurance, health insurance and spending on health by both developed and developing countries. Data sources include High level expert group report on UHC in India by Planning Commission of India, WHO reports ,Mc Kinsey report on UHC were used to know the various health insurance schemes in various countries.

Key Words: Health Insurance, India, Social Health Insurance, Universal Health Coverage.

BACKGROUND

WHO defined health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity and to maintain the health of an individual we need health system. A good health care or the health service should be for every citizen of the country. As per WHO the term Universal Health Coverage is used to address this issue; the goal of Universal Health Coverage is to ensure that all people obtain the health services they need without suffering financial hardship when paying for them. This requires a strong, efficient, well-run health system; a system for financing health services; access to essential medicines and technologies; and a sufficient capacity of well-trained, motivated health workers[1].

The literacy rate of India is 74 and sex ratio is 940 females per 1000 males (2011 census). As per SRS Bulletin 2011, the vital-rates indicates a Birth-rate of 22.1 per thousand, crude death rate of 7.2 per thousand population and life expectancy of 66.2 years. The various health outcomes still places India in the category of developing countries which is still a far distance away from achieving the targets of

Universal Health Coverage (UHC) set by United Nations under Millennium Development Goals (MDG- 2015).

Government expenditure on healthcare in India is far below that of other developing countries. According to the World Health Organization Report published in 2002, India ranked thirteenth from the bottom in terms of public spending on health2. Estimates based on the Census show that India has approximately 20 health workers per ten thousand people. The 2.2 million health workers included 677,000 allopathic doctors accounting for 31% of the health workforce and 200,000 AYUSH practitioners accounting for 9% of the health workforce. Nurses and midwives (30%) and pharmacists (11%) are the other two large groups. Others including ophthalmic assistants, radiographers and technicians accounted for 9% of the total. The combined density of allopathic doctors nurses and midwifes (11.9) is about half of the WHO benchmark of 25.4 workers in these categories per ten thousand populations for achieving 80% of births attended by skilled personnel in cross-country comparisons[3].

According to WHO, India ranks lowest among BRICS (Brazil, Russia, India, China, South Africa) countries and is among the bottom five countries with the lowest public health spending globally. Moreover, amongst the BRICS nations, in 2011, Russia's out-of-pocket expenses stood highest at 87.9 per cent closely followed by India (86 per cent), China (78.8 per cent), Brazil (57.8 per cent), and South Africa (13.8 per cent). On the other hand, these expenses in developed economies of US and UK were comfortably poised at 20.9 per cent and 53.1 per cent respectively. In India, high out-of pocket spending is primarily due to extremely limited healthcare insurance coverage, both personal and government funded. This has led to high levels of out of pocket spending by the people and pushes approximately 39 million of them into poverty each year. Despite of the increasing government's role in health care still India is lacking in comparison to other nations in terms of the health indicators.

Two nationally representative surveys DLHS (2007-08) and NFHS (2005-06) shows only five percent of the households in India were covered under any kind of health insurance. Within the insurance schemes, the state owned health schemes are the most subscribed (39.2), followed by the Employee State Insurance Scheme (17 percent). Among the households belonging to the lowest economic categories, less than 3 percent were covered by any health scheme or health insurance. However, the recent trends show that the community health insurance targeting poor households are becoming much popular and it may be the most appropriate way of supporting the families vulnerable to catastrophic health spending. However, the paradox is that around 73 percentages of the rural people is getting just20 percent of the health care facilities, but around 27 percentages of the urban people is getting remaining 80 percentages of the facilities[2].

Health insurance is fast emerging as an important mechanism to finance health care needs of the people. The need for an insurance system that works on the basic principle of pooling of risks of unexpected costs of persons falling ill and needing hospitalization by charging premium from a wider population base of the same community. In the present scenario the annual expenditure on health in India amounts to about $7.00 in rural areas and $10.00 in urban areas per person, majority of care being provided by the private sector[4]. According to the World Health Organization, greater than 80 per cent of total expenditure on health in India is private and most of this flows directly from households to the private-for-profit health care sector.

Health insurance schemes are increasingly recognized as the preferable mechanism to finance health needs. Health insurance in India is in very nascent stage. It is dominated by government schemes. The major public health insurer in India is the government-owned public insurance with about 60% market share4. Health insurance in the form of healthcare financing (Mediclaim) was introduced in India in 1986-1987 by four subsidiaries of General Insurance Company (GIC) to support the ailing healthcare industry. They are The New India Assurance Company, Oriental Fire and Insurance Co., National Insurance Co., and The United India Insurance Co. In recent years, there has been a liberalization of the Indian healthcare sector to allow for a much-needed private insurance market to emerge. Due to liberalization and a growing middle class with increased spending power, there has been an increase in the number of insurance policies issued in the country[5].

The world over, the countries have evolved variety of healthcare systems as per prevalent socio-economic and geopolitical conditions which caters for the needs of the nations. These healthcare systems have their own validity and are successful in some cases in achieving MDG. A developing country like India which is vast in size and has diversity in population on the basis of language, food, economic status, race, climate, terrain etc., needs to learn from the success and failures of these existing healthcare models. Hence there is a need to evolve a healthcare system which caters for the diverse requirements of population of India. However, reflecting on the efforts of other countries to achieve UHC and the health outcomes achieved can itself assist India in formulating the way forward. Globally, best healthcare insurance coverage are provided by countries like Japan, France, Italy, Switzerland, Spain, Netherland, Taiwan , Norway, Sweden, Singapore and Israel.

Healthcare economics across the world can be broadly divided into two categories – capitalistic (like the United States) or socialist (UK and rest of Europe). In the first category, most healthcare resources are owned by private entities and in the second the government's owns the resources, taxes the citizens and provides them healthcare. The evidence which shows that the second system works better because even

though the US spends 17.9 (highest) GDP on healthcare than any other country, the facilities aren't available to all, whereas UK's National Health Service (8.4% GDP) or France's system(11.2%) which was deemed by WHO in 2000 to be best in the world. A tax-based health financing mechanism, as in UK, Cuba, Singapore and Sri Lanka or a broad based social health insurance programs as in Germany, France, Mexico, etc. is being prescribed as a key instrument of health financing strategy for many low income countries like India to achieve universal health coverage.

Health Insurance Models of different countries

United States of America

Health care facilities of U S A are largely owned and operated by private sector businesses. According to United States Census Bureau (2012), out of entire population only 32.6% is availing benefits provided by Public Health Coverage, Private Health Coverage is 63.9%, and uninsured people are 15.4 %. Public programs provide the primary source of coverage for most seniors and low-income children. Families covered under Medicare are 15.7%, Medicaid are 16.4% and Military Health Insurance are 4.4%. Private insurance for non-elderly working population form major part of health coverage in United States which involves Consumer Driven, Managed Care and Health saving Account. Due to costly health services in America, people cannot able to afford it and hence Obama care or Patient Protection and Affordable Care Act (PPACA) came into picture with the goals of increasing the quality and affordability of health insurance, lowering the uninsured rate by expanding public and private insurance coverage, and reducing the costs of healthcare for individuals and the government. The basic idea of capitalism is seen even in healthcare were in the system encourages generation of money and has followed principles of revenue generation through business. In US the healthcare is dominated by the private insurance agencies who have inflated the cost of healthcare for earning maximum profits. In such capitalistic dominated health care system the patient is seen as a customer with adequate money.

US health care system is distinguished by the fact that the Government has facilitated the capitalistic concept and hence despite showing approximately 18% of GDP being spent on the healthcare the health outcomes are not amongst the best. It indicates restricted reach of the healthcare facilities which is available to only the richer segments of the society.

United Kingdom (UK)

Healthcare in the United Kingdom is a devolved matter, meaning England, Northern Ireland, Scotland and Wales each have their own systems of publicly funded healthcare. A variety of differences exist between these systems, as a result of each region having different policies and priorities. The UK

insurance is the third largest in the world and the largest in Europe. The National Health Service (NHS) is a national service funded through national taxation and it is the Government which sets the framework for the NHS and which is accountable to Parliament for its operation. However, the UK also has a private healthcare sector, in which healthcare is acquired by means of private health insurance. This is typically funded as part of an employer funded healthcare scheme or is paid directly by the customer. The UK healthcare system is distinctive based on the fact that it is public insurance provided by Government. The system is completely funded from taxation; all the different constituent states have powers to adapt to the requirements of their people.

Israel

Israel provides its citizens the universal health coverage and participation in the medical insurance plan is compulsory. All citizens are entitled to basic health care as a fundamental right. Based on legislation passed in the 1990s, citizens join one of four health care funds (Clalit-the largest with about 54% of the population belonging to it, Maccabi, Kupat, HolimMeuhedet) and for basic treatment but can increase medical coverage by purchasing supplementary health care. In a survey of 48 countries in 2013, Israel's health system was ranked fourth in the world in terms of efficiency. All Israeli citizens are entitled to the same Uniform Benefits Package. The Uniform Benefits Package covers all costs in the areas family medicine, emergency treatment, elective surgery, transplants, and medications for serious illness. However, availability of services differs by location, as each of these organizations operate their own medical facilities, including private hospitals.Israel is a country with continuous conflict with its neighbors and has struggled for its existence over last six decades. It values life of its limited population and hence government provides UHC. This system though suitable for UHC in may not be adopted in a vast country like India where the human resources is not as much valued due to its abundance.

Singapore

Singapore generally has an efficient and widespread system of healthcare. Singapore was ranked 6th in the World Health Organization's ranking of the world's health systems in the year 2000. Bloomberg ranked Singapore's healthcare system the second most efficient in the world after Hong Kong. Government ensures affordability of healthcare within the public health system, largely through a system of compulsory savings, subsidies, and price controls. Singapore's system uses a combination of compulsory savings from payroll deductions to provide subsidies within a nationalized health insurance plan known as Medisave. Within Medisave, each citizen accumulates funds that are individually tracked and such funds can be pooled within and across an entire extended family. The vast majority of Singapore citizens have substantial savings in this scheme. The main distinctive features of healthcare system of Singapore are that it cares for a small population size which has high per capita income. The

complete population contributes through compulsory savings from the payroll deductions. Though this system is one of the best in the world, its direct implementation in country of the size of India with high unemployment rate and below poverty line population will be the biggest challenge.

Way Forward

Even WHO has observed that, "UHC is not a one size fits all" journey and governments will need to develop approaches that fit the social, economic and political contexts of their countries". WHO has been explicit that countries should prioritize four key actions to finance UHC: reduce direct payments, maximize mandatory pre-payment, establish large risk pools, and use general government revenue to cover those who cannot afford to contribute. The guidelines of WHO are open-ended and needs to be adapted by a country based on the analysis of varied challenges posed due to socio-economic ground realities. In fact for a country of the size and population of India a very ethnic model needs to be evolved which is able to meet the requirements of diverse population living in varied conditions.

The existing Healthcare System in India is following a combination of Capitalist and Socialist Model. In this model the Government contributes around 30 percent of total national spending on healthcare for 80% of the population. The private sector spends 70 percent of total national spending on healthcare for 20% of the population. This has brought in a large disparity in the availability of healthcare in the country.

The adaption of US healthcare system in India will not help in UHC since it has not even helped the population of the only superpower of the world. However, since USA is a big democratic country with large number of states and population like India there are a lot of practical lessons which can be derived from their healthcare system. Similarly the UK healthcare system can be adapted in India for UHC; however, there are limited number of tax-payers who will have to contribute for vast majority of population who are below poverty line. This deficiency along with unmotivated corrupt governance is the biggest hindrance to adoption of state funded healthcare insurance system.

States like Kerala have shown that integrated approach involving other sectors like education and water & sanitation along with good governance can produce world class health outcomes. Hence the way forward for our healthcare system is to evolve an indigenous system based on States by strengthening the existing set-up and eliminating the deficiencies. The system can be further strengthened by incorporating the implementable aspects from the best healthcare systems in the world. The deficiencies and challenges faced by the present healthcare system in India have large diverse population with varied cultures spread in different terrain and climatic conditions. There is lack of resources being a developing

country. There is high level of unemployment and poverty increases the dependence on limited number of taxpayers. Above all there is a lack of leadership from the central government side and within states as well. With an increasing level of population and rapid increasing economy there is an increasing level of aspirations of people in a growing economy.

It is important to mention about the lack of regulatory body for private providers. Private insurance providers are targeting the richer segment of population. Public insurance (RSBY) are targeting private providers which is making a vicious loop of burden on the population. Lack of accountability and rampant corruption in the existing government Healthcare System is one of the drawbacks of our country. Health is a state subject and the major revenue from taxation is generated by Central Government. The improvement in health outcomes due to implementation of Food Security Bill, improvement in literacy rate, improvement due to Swatch Bharat Abhiyan etc need to be integrated.

India being the developing nation can learn a lot from these nations. One of the major aspects will be to develop financing systems based on the four "key ingredients" outlined by WHO. Rather than looking to adapt European-style employment-based SHI, build on the lessons from the growing number of low- and middle-income countries that are making progress towards UHC. The nation should make equity and universality explicit priorities from the outset and avoid the temptation to start with the "easiest to reach" in the formal sector. Those living in poverty must benefit at least as much as the better off every step of the way. The focus efforts should be on collecting insurance premiums from people in informal employment, look to more efficient and equitable ways of raising revenue for health from tax reform including sharing of taxes with State Governments. Efforts should be made towards pooling together all government revenues for health like expenditure on Food Security Bill, Water and Sanitation (Swatch Bharat Abhiyan, Clean Ganga Project), Quality Education etc for assessing health outcomes. AYUSH should be integrated as integral part of the UHC and evolve new parameters for requirement of funds based on health outcomes. Gap in the human resource of health care professional should be filled by improving the quality education for medicos and non-medicos. A learning lesson can be taken from institutions like IIT; the Government Healthcare System should be able to generate minimum 30% revenue through RSBY for their sustenance. This will increase accountability of healthcare set-up and establish public-public partnership. A Central Regulatory Board to be set-up for whole country for Centralized policy making for private providers. The State must establish State Regulatory Boards for decentralized control and monitoring of private players. The RSBY to be linked with the "Swa-DhanYojana" of opening of bank accounts where-in 5 crore new accounts have been opened and Rs 1500 crore deposit has been collected by banks.

As India is moving ahead on path to be economic power within the 21st century, there is a requirement to have a vision to ensure that the benefits of growth reach all sections of the society uniformly. To meet this end a useful tool to measure the accomplishments repeatedly in the long journey to economic growth can be the health outcomes by achieving Universal Health Coverage.

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