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# DISTRIBUTION CHANNELS OF INDIAN LIFE INSURANCE INDUSTRY: UNDERSTANDING CUSTOMERS' AWARENESS

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## ABSTRACT

*The study endeavors to analyze the level of awareness among life insurance customers regarding services provided by distribution channels of life insurance industry in India. Using Ordered Probit Regression on primary survey of 617 customers reveals that regardless of present efforts of insurance companies, the expected probability of awareness among customers towards distribution channels is not at all aware. They show complete awareness towards individual agent channel amongst the other channels prevailing in the industry. The factors like television and internet are the significant sources in spreading complete information among policyholders. The insurers need to improve the level of awareness by looking into the factors viz. information through phone and through friends/ relatives/colleagues which are failing to spread complete understanding among their clients. From demographic variables; gender and education put in significant impact with regard to awareness of customers toward the services endowed by intermediaries. The analyses reveal that life insurers need to improve the insightful of their clients regarding numerous distribution channels. For consecutive and flourishing growth of the industry, it is necessary to make vigilant scrutiny of the assorted alternatives related to various channels.*

**KEYWORDS***:* Life Insurance Industry, India, Distribution Channels, Awareness, Ordered Probit Regression.

## INTRODUCTION

The globalization of Indian economy in 1991 and establishment of Insurance Regulatory Development Authority (IRDA) in year 2001 led to the growth of Insurance Industry. The vigorous augmentation of Indian Life Insurance industry is owed to emergent and incredible performance of numerous distribution channels (Sethi, 2008 and Govardhan, 2008). These channels are interdependent organizations involved in moving the products, services and information from business to consumers (Baradhwaj, 2013). They are regarded as the important segments of Industry which devise association between consumers; who are in search to procure insurance policies or products and insurance companies; who are looking-for to sell those policies or products (Cummins and Doherty, 2006 and Parekh, 2011). They are mediator

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between buyer and seller (Parekh, 2011) whose role is to scan the market, matching the requirements of parties involved and thereby helping their clients to select from best competing offers (Cummins and Doherty, 2006).

There are various channels undertaking business in the industry in form of issuance of policies and collection in premium amount. Firstly, an independent agent is a certified individual who sells insurance products on behalf of one insurance company. They receive a commission from the company on all policies sold (Cummins and Doherty, 2006; Sud 2012). As far as the marketing of Life insurance in Indian domain is concerned, the agent has been instrumental in spreading the message with respect to market growth and insurance penetration (Regan and Tennyson, 1996). The only difference between individual and corporate agent is that, latter is considered as employees of insurance companies who sell insurance products on behalf of the company itself (Bawa and Chattha, 2016). Thereafter, another channel prevailing in insurance domain is Bancassurance, which is a synergy of banks and insurance companies, where insurance products are sold by banking networks (Reddy et al. 2004; Aggarwal, 2004; Ku et al. 2009; Fan and Cheng, 2009). It is one of the low cost distribution channels which have emerged as a viable, most preferred and relied distribution channel in the market (Bhattacharya, 2004; Boon and Bane, 2008). The aperture of market for private participation has brought strong competition in the industry and thus a need for specialized distribution channel (Reddy, 2014) was felt that can prop up the clientele in assessment of their total risk exposure and put forward the suitable insurance product to cover such risks. The insurance brokers thus emerged as professional entities with required technical expertise to offer customized insurance solutions (Ramakrishna, 2014). While an agent represents only one insurance company (one general, one life or both), a broker may deal with more than one life insurer or general insurer or both (Baradhwaj, 2013). With growing awareness of Life Insurance, many customers prefer to transact either online or through phone or email. For such customers, there is rise of direct selling channel. It is system of selling insurance either online or through phone where insurer sells directly to the insured via its employees (Dumm and Hoyt, 2002).

The escalation of any organization is directly related to economic development of a nation. But the marketing of services is an intricate apprehension and has become challenging phenomenon in every domain. In similar instance, the growth of Indian Insurance industry lies in marketing of its services which depends on remarkable performance of its intermediaries. In today's cut-throat scenario, the proficient working of transitional channels and maintaining its strong network with clients is an important constituent, though it has become biggest confront (Krishnamurthy, 2005). Therefore the working of intermediate network posses effective and heedful task (Jhaveri, 2005). So in the light of severe hostility, insurers require mammoth distribution strength to reach out its huge customer base. The distribution strategies require litheness towards facing marketing challenges and without involvement in the practices of mis-selling and falsification. On the other hand multiple distribution networks create a wider range of opportunities for insurers to attract and serve customers in a differentiated way, keeping in mind the customer's preferred combination of product, pricing, service and channel. In current state of affairs, customers are

becoming progressively more aware of their prospects while technology is enabling them to make comparisons, thus they demand higher standards of services. Moreover insurers are shifting from a product-focused view to a customer-focused and have directed their strategies towards increasing customer awareness and satisfaction, through improved service quality (Chen and Lai, 2010) and consequently making it harder for intermediate channels to manage their services more efficiently. The present study attempts to examine the extent of awareness and factors that are affecting the awareness of policyholders toward services provided by distribution channels of Indian Life insurance industry. The study is going to provide useful information to policy makers, distribution channels and policyholders.

The analysis has been divided into different sections. Including the present introductory one, followed by a literature review which is highlighting the essential manifestation of distribution channels and customer's perception towards services bestowed by companies as a whole. Thereafter research methodology and fundamentals of Ordered Probit Regression model have been discussed. The subsequent section offers an empirical exposition on customers' awareness, factors affecting extent of awareness regarding distribution channels performing in Indian life insurance industry. The last section concludes the study and offers some policy implications.

## REVIEW OF LITERATURE

Lakshmikutty and Baskar (2006) explained that distribution channels had been helpful in overcoming the problems and challenges faced by various insurers. The ultimate success of marketing of channels depends upon matching the elements of market with the suitable segment of intermediaries thereby understanding the needs of targeted populations. Viswanathan (2006) and Sethi (2008) observed that prior opening of insurance industry to private sector, it was linked with only tied agency channel (Govardhan, 2008) and now the emphasis revolved around creating alternative channels like brokers, bancassurance and direct marketing. Sethi (2008) concluded that increase in the number and type of intermediaries had resulted in an enhanced number of products, insurance penetration and premium income. In the pace of hasty changes in Indian insurance industry, the customers had enjoyed diversity of products and services with multiple distribution channels. As the result of transformation that took place, the value proposition of distribution channel had distorted from products based to customer focused. Viswanathan (2006) disclosed that in the clobber of an exigent environment, the customer's perception lies at the center and the ultimate rationale of success was matching the right segment of customer with the right products at the right time with right distribution channel.

Lymberopoulos et al (2004) through the survey from 720 bank customers observed that awareness of the customers towards bank as a channel was near to the ground, but willingness to interact with them remained very high. Rajkumari (2007) also concluded that the level of awareness among bank customers towards bancassurance distribution system is very low. As well the bank official did not show any kind of interest or relation to their customers after selling the policies. In the same instance Popli and Rao (2009) observed low level of awareness among

customers towards bancassurance channel and aimed at designing some effective marketing strategies which helped in creating understanding among customers. Khattak and Rehman (2010) by taking a sample of 156 respondents and through One-Way ANOVA examined the relationship between demographic variables and awareness of customers and they expressed their familiarity towards products and services provided by banks. Yusuf et.al (2009) conducted the survey of 392 insuring and non-insuring respondents to gauge their awareness level and general attitudes heading towards insurance companies which concluded that except gender, other demographic factors specifically age, marital status, educational status, profession and household income play a considerable role in the attitudes of Nigerian towards insurance services. Grover, Bhalla (2013) also scrutinized the awareness level and unearthed factors that affect awareness level of bank customers regarding bancassurance channel of Indian Life Insurance Industry. With the sample of 552 customers of Punjab who have taken their life insurance policies through banks, the results were analyzed through Ordered Probit model. The paper reported incomplete awareness and aspects like duration of bank -customer's relationship, income of the consumer and bank brochures were some of the highlighting factors that affect the degree of awareness toward bancassurance channel. Banne and Bhola (2014) and Thirupathi (2014) revealed the major factors which prejudiced the preference of respondents towards insurance companies were the agents, friends and relatives. Gautam and Kumar (2012) endeavored to analyze the attitudes and awareness by taking responses from 377 customers of National Capital Region of India towards life insurance services. After analyzing results through ANOVA, and Independent T-Test showed that demographic variables: age, gender, marital status, level of education, monthly income and mode of employment had considerable impact on consumers' outlook towards Indian insurance services.

The aforementioned studies which discussed above: firstly are conceptual in nature, focusing on the functions performed by various distribution channels. Secondly, studies are directed towards evaluating awareness regarding services provided by banks and insurance companies. The present study is highlighting the preview in different directions (as per researcher's knowledge). There is a dearth of research which is directing towards understanding awareness with respect to distribution channels of Insurance sector in India. It also differs in the context of methodology used and sample coverage.

On the basis of an extensive review of literature and in order to achieve the said objectives, the following hypotheses have been framed:

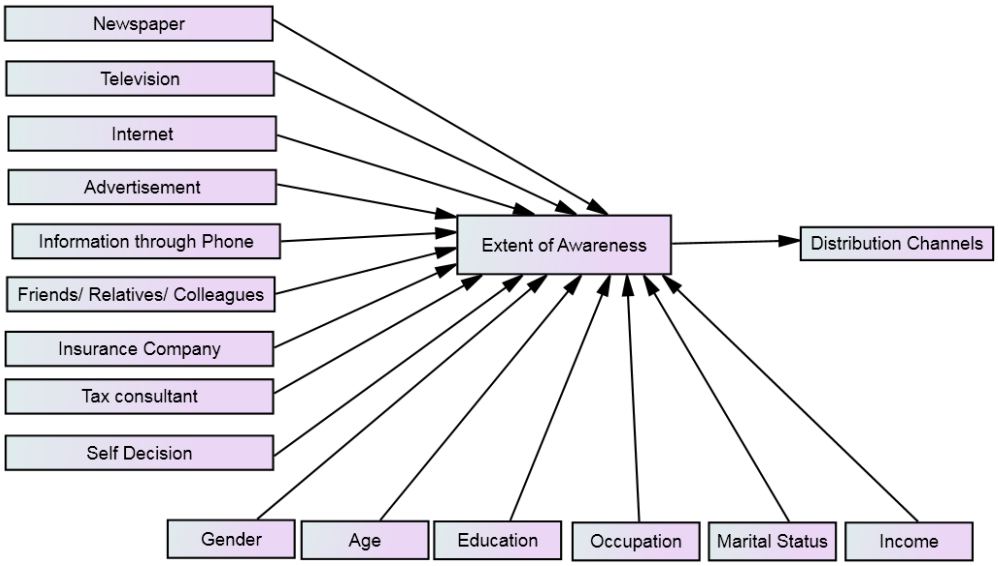
*H01: There is no significant relationship between various sources of information (H01a. newspaper; H01b. television; H01c. internet; H01d. advertisement; H01e. information through phone; H01f. friends/relatives/colleagues; H01g. insurance company; H01h. tax consultant; H01i. self-decision) and awareness of the customers regarding distribution channels.*

*H02: There is no significant relationship between various demographic variables (i H02a. gender; H02b. age; H02c. education; H02d. occupation; H02e. marital status and H02f. monthly income) and awareness of the customers regarding distribution channels.*

## DATA AND RESEARCH METHODOLOGY

The study is primary in nature. A survey has been conducted from Life insurance policyholders which is selected on the basis of judgmental sampling based on the criteria that they have purchased at least one life insurance product/policy from distribution channels (individual agent, corporate agent, bank, broker, direct marketing) as well as dealing with them. The data has been collected through web based questionnaire and personal interview of customers at their residence and work place. The survey was conducted in May, 2015 and took around five months to accomplish. It has been carried out in three cities i.e. Amritsar, Jalandhar and Ludhiana on the basis of geographical divisions and convenience sampling method. A draft questionnaire is initially developed and pilot-tested with a sample of 100 respondents to check for any ambiguities or communication errors. Of the 630 questionnaires filled by respondents, 617 are finally accepted and 13 are rejected due to incomplete data and other errors. Subjects related to awareness regarding different distribution channels, sources of information and their demographic profile has been asked from the customers. The descriptive statistics are used to judge the awareness level of customers and Ordered Probit Regression, with the help STATA 11 has been used to spot the factors influencing extent of awareness among the insurance customers towards distribution channels. The Parallel regression assumption through likelihood ratio test has been checked.

**Figure 1: Structural Model**




In Figure 1, the extent of awareness is dependent variable and rests are the independent variables. Amongst sources of information, a unit value is assigned if the respondent has ticked a source otherwise the variable is assigned a zero value. The lower portion of the diagram includes demographic variables.

**Table 1: Demographic profile of Respondents**

| Variables | Categories | Number of Respondents | Percentage of total Respondents (n=617) |
|---|---|---|---|
| Gender | Male | 483 | 78.3 |
| | Female | 137 | 21.7 |
| Age (in years) | Less than 35 | 280 | 45.4 |
| | 35 years and above | 337 | 54.6 |
| Education | Under Graduates and Graduates | 449 | 72.8 |
| | Post Graduates and others | 168 | 27.2 |
| Occupation | Business | 245 | 39.7 |
| | Service | 205 | 33.2 |
| | Others | 167 | 27.1 |
| Marital Status | Married | 508 | 82.3 |
| | Unmarried | 109 | 17.7 |
| Income (in rupees) | Less than 50000 | 272 | 44.1 |
| | Above 50000 | 345 | 55.9 |
| City | Amritsar | 217 | 35.1 |
| | Jalandhar | 206 | 33.3 |
| | Ludhiana | 194 | 31.4 |

The table exhibits that majority (78.3%) of respondents are male, lying in age category of 35 years and above (54.6%). Most of the respondents are graduates or below (72.8%), having business as their profession (39.7%), are married (82.3 %) and having monthly income above 50000 (55.9 %). Almost an equal number of respondents are from three cities. The original categorization of demographic characteristics has been changed to comply with results of analysis.

**Ordered Probit Model**

The ordered probit regression examines the relationship between dependent and independent variables where outcomes of dependent variable need to be ordinal in nature. The underlying relationship is described as follows:

$$y = x\beta + \varepsilon$$

$$y = 1 \begin{cases} 0 \text{ if } y \leq 0 \\ 1 \text{ if } 0 \leq y \leq \mu_1 \\ 2 \text{ if } \mu_1 \leq y \leq \mu_2 \\ N \text{ if } \mu_{n-1} \leq y \end{cases}$$

In the equation y is unobserved dependent variable, x is vector of independent variables, and $\beta$ is vector of regression coefficients which we wish to estimate. The categorization of dependent variable is as follows;

$Y_{1=}$ { 1; if not at all aware about distribution channels
2; if partially aware about distribution channels
3; if significantly aware about distribution channels
4; if completely aware about distribution channels

In such instance for ordered categorical dependent variable, the use of Ordered Probit regression has been suggested (Duncan et.al, 1998; Hasegawa, 2010; Long and Freese, 2006) over the simple regression model. The model serves as an appropriate framework for statistical analysis whenever survey responses are ordinal or categorical in nature (Daykin and Moffatt, 2002; Madalla, 1986). Let x is vector consisting of all explanatory variables affecting the extent of awareness regarding distribution channels among insurance customers and β be the vector of all slope parameters to be estimated:

$$L(\beta,\mu_1\ \mu_2\ \mu_3) = P(y_1=1) \times P(y_2=2) \times P(y3=3) \times P(y_4=4) \quad (1)$$

Where, $P[yi = 1] = P[y^*_i \le \mu_1] = P[\beta'x + \dot{\varepsilon}_i \le \mu_1]$,

$= P[\dot{\varepsilon}_i \le \mu_1 - \beta'x]$,

$= \Phi(\mu_1 - \beta'x)$;

$P[yi = 2] = P[\mu_1 \le y^*_i \le \mu_2] = P[\mu_1 \le \beta'x + \dot{\varepsilon}_i \le \mu_2]$,

$= P[\mu_1 \le \beta'x \le \dot{\varepsilon}_i \le \mu_2 - \beta'x]$,

$= \Phi(\mu_2 - \beta'x) - \Phi(\mu_1 - \beta'x)$;

$P[yi = 3] = P[\mu_2 \le y^*_i \le \mu_3] = P[\mu_2 \le \beta'x + \dot{\varepsilon}_i \le \mu_3]$,

$= P[\mu_2 \le \beta'x \le \dot{\varepsilon}_i \le \mu_3 - \beta'x]$,

$= \Phi(\mu_3 - \beta'x) - \Phi(\mu_2 - \beta'x)$;

And $P[yi = 4] = P[y^*_i \le \mu_3] = P[\beta'x + \dot{\varepsilon}_i \le \mu_3]$

$= P[\dot{\varepsilon}_i \le \mu_3 - \beta'x]$

$= 1 - \Phi(\mu_3 - \beta'x)$

Thus, the likelihood function may be written as:

$$L(\beta,\mu_1\ \mu_2\ \mu_3) = \Phi(\mu_1 - \beta'x) * [\Phi(\mu_2 - \beta'x)] - \Phi(\mu_1 - \beta'x)]$$
$$\times [\Phi(\mu_3 - \beta'x) - \Phi(\mu_2 - \beta'x)] * [1 - \Phi(\mu_3 - \beta'x)] \quad (2)$$

Where, Φ represents cumulative distribution function (CDF) defined as follows;

Maximizing (2) with respect to β, $\mu_1$, $\mu_2$, $\mu_3$, the estimates of these parameters can be obtained. The point estimates of β are slope estimates, whereas, $\mu_1$ $\mu_2$ $\mu_3$, are unknown threshold parameters representing threshold limits $y_i^*$. In the study, higher the extent of awareness, more likely that alternative will be chosen (Hill et al., 2011). In categorical response models, point estimates of dependent variable are not only used for understanding the reasons. The application and use of marginal effects is preferred (Long and Freese, 2006) which has been represented:

$$\left.\begin{aligned}
\frac{\partial P\,(y=1)}{\partial Xk} &= \Phi\,(\mu_1 - \beta'x) * \beta_k \\
\frac{\partial P\,(y=2)}{\partial Xk} &= [\Phi\,(\mu_2 - \beta'x) - \Phi\,(\mu_1 - \beta'x) * \beta_k \\
\frac{\partial P\,(y=3)}{\partial Xk} &= [\Phi\,(\mu_3 - \beta'x) - \Phi\,(\mu_2 - \beta'x)] * \beta_k \\
\frac{\partial P\,(y=4)}{\partial Xk} &= 1 - \Phi\,(\mu_3 - \beta'x) * \beta_k
\end{aligned}\right\} \qquad (3)$$

In these expressions Φ denotes the probability function of a variable, and its values are always positive. These marginal effects represent the change in the probability of a dependent variable with one unit change in the independent variable (Maddala, 1986). The direction of effect depends upon the sign of $\beta_k$; a positive value symbolizes favourable response, whereas a negative value signifies adverse impact.

**The parallel regression test**

The core assumption of ordered probit regression is that relationship between each pair of outcome groups need to be same. In other words, it assumes that coefficients that portray the relationship between the lowest versus all higher categories of the response variable are the same as those, which describes relationship between next lowest category and all higher categories etc. This is called proportional odds or the parallel regression assumption. There are different models to describe the relationship between each pair of outcome groups. In present study, proportional odds assumption through a likelihood ratio test has been considered. The command omodel computes an approximate likelihood ratio (LR) test. Essentially, this method compares the log likelihood from oprobit to that obtained from pooling binary models estimated with probit regression, making an adjustment for the correlation between the binary outcomes. The null hypothesis is that: there is no difference in the coefficients between models, so we hope to get a non-significant result.

## ANALYSIS AND INTERPRETATION OF RESULTS

The preliminary examination includes descriptive statistics of informational sources and extent of awareness of customers towards distribution channels. Thereafter, subsequent section deals with the interpretation of results obtained through execution of Ordered Probit model (OPM). A detailed analysis of marginal affects for each category of awareness has been performed that helps to identify the relevance of each mechanism in spreading awareness at different levels.

**Table 2: Awareness of customers towards distribution channels**

| Channels | Not at All Aware | Partially Aware | Significantly Aware | Completely Aware |
|---|---|---|---|---|
| Individual Agents | 3.9 | 11.8 | 30.1 | 54.1 |
| Corporate Agents | 47.0 | 21.9 | 17.7 | 13.5 |
| Brokers | 44.7 | 26.9 | 13.5 | 14.9 |
| Bancassurance | 25.4 | 29.7 | 21.6 | 23.3 |
| Direct Selling | 34.4 | 25.0 | 19.9 | 20.7 |

*Source*: Primary Survey (Figures are in percentages)

The Table 2 illustrates awareness among customers towards the distribution channels of Indian life insurance industry. The responses portray that customers are completely aware (54.1%) with the individual agents. For corporate agents and brokers, policyholders are not at all aware, that is to say 47 and 44.7 per cent respectively. There are mixed basket responses for bancassurance, where 25.4 per cent have reported not at all awareness and 23.3 per cent have exhibited complete awareness. Thereafter, 34.4 per cent and 25 per cent of the policyholders are not at all and partial aware of direct selling channel respectively. These results are consistent with studies given by Jain and Goyal (2012), Rajkumari (2007), Popli and Rao (2009).

**Table 3: Sources of information towards Distribution channels**

| Variables | Frequency | Percentages |
|---|---|---|
| Newspaper | 143 | 23.2 |
| Television | 165 | 26.7 |
| Internet | 243 | 39.4 |
| Advertisement | 164 | 26.6 |
| Information through phone | 202 | 32.7 |
| Information through Friends/Relatives/colleagues | 380 | 61.6 |
| Insurance company | 237 | 38.4 |
| Tax Consultant | 161 | 26.1 |
| Self Decision | 252 | 40.8 |

Percentages more than 100 due to multiple choices

The Table 3 portrays that there are many sources available, from where the customers can access information or they can act according to their convenient sources to deal with various channels. The major influencing informational source of policyholders is information through friends/relatives/colleagues as 61.6 per cent of the respondents are influenced by them. It has been examined by Thirupathi (2014) and Murugesh (2015) that clients get information about the products and services from their friends and relatives. Secondly 40.8 per cent of the policyholders prefer to take their own decision rather than relying on other sources. Afterwards, internet and insurance company emerges as one of the major source, as 39.4 and 38.4 per cent of the policyholders respectively are persuaded by it.

**Table 4: Probability distribution of the categories of the level awareness for distribution channels**

| Category | Particulars | Stata Command | Probability |
|---|---|---|---|
| P (Y =1) | Not at all Aware | mfx, predict (p outcome (1)) | 0.307 |
| P (Y =2) | Partially Aware | mfx, predict (p outcome (2)) | 0.238 |
| P (Y =3) | Significantly Aware | mfx, predict (p outcome (3)) | 0.208 |
| P (Y =4) | Completely Aware | mfx, predict (p outcome (4)) | 0.247 |

Table 4 comprises the probabilities of each category of dependent variable. The results demonstrate that customers have the highest probability of being not at all aware. The observed probability is highest to the extent of 0.307 followed by a probability of completely aware of 0.247. The magnitude of being partially aware and significantly aware is 0.238 and 0.208 respectively. As represented in Table 2, the customers show extent of complete awareness towards the individual agent channel, whereas customers are totally unaware with other innovative channels. A very similar kind of responses appears while calculating their probabilities.

Table 5 put forward the point estimates of parameters taken in model which helps us to identify the factors that are affecting the awareness of policyholders towards distribution channels. According to Daykin and Moffatt (2002) the estimates of slope parameters help to decide the direction of relationship among independent and dependent variables.

**Table 5: Point estimates of parameters of ordered probit model**

| |
|---|
| Iteration 0: log likelihood = -4240.035 |
| Iteration 1: log likelihood = -4169.540 |
| Iteration 2: log likelihood = -4169.530 |
| Iteration 3: log likelihood = -4169.530 |
| LR chi2(15) = 141.01 |
| Prob > chi2 = 0.000 |
| Log likelihood = -4169.530 |
| Pseudo R2 = 0.016 |

*Continued…*

| **DV: Awareness** | Coef. | Std. Error. | Z | P>z | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| **IDV: Sources of information and Demographics Variables** | | | | | | |
| Newspaper | 0.070 | 0.155 | 0.45 | 0.653 | -0.235 | 0.374 |
| Television | 0.415*** | 0.129 | 3.23 | 0.001 | 0.163 | 0.667 |
| Internet | 0.231*** | 0.041 | 5.6 | 0.000 | 0.150 | 0.312 |
| Advertisement | -0.367 | 0.488 | -0.75 | 0.452 | -1.325 | 0.590 |
| Information through Phone | -0.146*** | 0.045 | -3.27 | 0.001 | -0.233 | -0.058 |
| Friends/Relatives/ Colleagues | -0.105** | 0.042 | -2.48 | 0.013 | -0.188 | -0.022 |
| Insurance company | 0.067 | 0.042 | 1.6 | 0.11 | -0.015 | 0.150 |
| Tax Consultant | 0.057 | 0.047 | 1.23 | 0.219 | -0.034 | 0.149 |
| Self Decision | -0.052 | 0.041 | -1.26 | 0.209 | -0.132 | 0.029 |
| Gender | 0.108** | 0.049 | 2.19 | 0.028 | 0.011 | 0.205 |
| Age | 0.011 | 0.027 | 0.43 | 0.665 | -0.040 | 0.063 |
| Education | 0.111*** | 0.028 | 3.92 | 0.00 | 0.055 | 0.166 |
| Occupation | 0.012 | 0.014 | 0.82 | 0.413 | -0.016 | 0.040 |
| Marital Status | 0.015 | 0.058 | 0.26 | 0.798 | -0.098 | 0.128 |
| Income | -0.012 | 0.017 | -0.71 | 0.481 | -0.045 | 0.021 |
| cut1 | -0.109 | 0.152 | - | - | -0.407 | 0.189 |
| cut2 | 0.508 | 0.152 | - | - | 0.209 | 0.806 |
| cut3 | 1.080 | 0.153 | - | - | 0.781 | 1.380 |

Notes: *** and ** represent that the coefficient is statistically significant at 1 and 5 percent levels of significance respectively.

*Source*: STATA Output.

The analysis of Table 5 illustrates that how the magnitude of change in outcome probability for a given change in one independent variable depends on level of all independent variables. So as per analysis, among the sources of information, television and internet contribute positively and significantly (p value < 0.01) towards awareness of customers. Two sources of information, namely information through phone and friends/ relatives/colleagues are significantly (p value < 0.01), but negatively affecting (since coefficients appear to be negative) the extent of awareness regarding distribution channels. This shows that insurers are required to put extra efforts to make these sources work more effectively, in order to grab more clients. Therefore the hypotheses: H01b, H01c, H01e and H01f are rejected. On the other side, there are no significant relationships found with respect to other sources of information specifically newspaper, advertisement, insurance company, tax consultant and self-decision. These aforementioned sources fail to impart awareness regarding services of distribution channels among the policyholders. Therefore insurers need to look into these sources which fail to spread information and subsequently hypotheses H01a, H01d, H01g H01h and H01i are accepted.

Among the demographic variables, gender and education of the customers put in significant effect towards the awareness of customer. Taking the reference category in consideration, it can be said that males are more aware as compared to females. The respondents who are graduates or under graduates, are more aware in comparison to those have attained higher education. It means awareness among the customers regarding distribution channels is envisaged by their gender and occupation. Subsequently hypotheses: H02a and H02c are rejected. On the other hand significant relationships do not occur with respect to age, occupation, marital status and income whereby hypotheses H02b, H02d, H02e and H02f are accepted.

**Table 6: Parallel Regression Test**

Iteration 0: log likelihood = -4240.035
Iteration 1: log likelihood = -4169.540
Iteration 2: log likelihood = -4169.530
LR chi2(15) = 141.01
Prob > chi2 = 0.0000
Log likelihood = -4169.530
Pseudo R2 = 0.016
**Approximate likelihood-ratio test of equality of coefficients across response categories:**
chi2(30) = 105.38
Prob > chi2 = 0.000

| **DV: Awareness** | Coef. | Std. Err. | z | P>z | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| **IDV: Sources of information and Demographics Variables** | | | | | | |
| Newspaper | 0.070 | 0.155 | 0.450 | 0.653 | -0.235 | 0.374 |
| Television | 0.415 | 0.129 | 3.230 | 0.001 | 0.163 | 0.667 |
| Internet | 0.231 | 0.041 | 5.600 | 0.000 | 0.150 | 0.312 |
| Advertisement | -0.367 | 0.488 | -0.750 | 0.452 | -1.325 | 0.590 |
| Information through Phone | -0.146 | 0.045 | -3.270 | 0.001 | -0.233 | -0.058 |
| Friends/Relatives/ Colleagues | -0.105 | 0.042 | -2.480 | 0.013 | -0.188 | -0.022 |
| Insurance company | 0.067 | 0.042 | 1.600 | 0.110 | -0.015 | 0.150 |
| Tax Consultant | 0.057 | 0.047 | 1.230 | 0.219 | -0.034 | 0.149 |
| Self Decision | -0.052 | 0.041 | -1.260 | 0.209 | -0.132 | 0.029 |
| Gender | 0.108 | 0.049 | 2.190 | 0.028 | 0.011 | 0.205 |
| Age | 0.011 | 0.027 | 0.430 | 0.665 | -0.040 | 0.063 |
| Education | 0.111 | 0.028 | 3.920 | 0.000 | 0.055 | 0.166 |
| Occupation | 0.012 | 0.014 | 0.820 | 0.413 | -0.016 | 0.040 |
| Marital Status | 0.015 | 0.058 | 0.260 | 0.798 | -0.098 | 0.128 |
| Income | -0.012 | 0.017 | -0.710 | 0.481 | -0.045 | 0.021 |

*Source*: STATA Output.

As demonstrated in Table 6, command omodel is an alternative to oprobit for estimating ordered probit models. It produces the same results as given in Table 5, but it also reports an approximate likelihood-ratio test of whether the coefficients are equal across categories. All coefficients keep constant across all levels in parallel regression. Thus, the interpretations of these variables are similar to those in estimated OPM. In this case, the parallel regression assumption is rejected at 0.01 level. Very importantly, significant p-value is evidence to reject the null hypothesis that coefficients are equal across categories. A non-significant p-value justifies that we have inappropriate model for the data.

Thereafter to look intently the impact of aforementioned variables and to defend the negative impact of two sources of information discussed in prior table, the analysis of marginal effects is necessary. Table 7 provides a detailed analysis with respect to marginal effects computed for each category of dependent variable.

**Table 7: Marginal effects of factors affecting the level of awareness**

| Dependent Variables → / Independent Variables ↓ | Prob of NA P(Y=1) | | Prob of PA P(Y=2) | | Prob of SA P(Y=3) | | Prob of CA P(Y=4) | |
|---|---|---|---|---|---|---|---|---|
| | Coef | P -value | Coef | P-value | Coef | P-value | Coef | P-value |
| **Sources of information** | | | | | | | | |
| Newspaper | -0.024 | 0.647 | -0.004 | 0.692 | 0.005 | 0.625 | 0.023 | 0.66 |
| Television | -0.130 | 0.000 | -0.034 | 0.021 | 0.018 | 0.000 | 0.146 | 0.003 |
| Internet | -0.080 | 0.000 | -0.012 | 0.000 | 0.018 | 0.000 | 0.074 | 0.000 |
| Advertisement | 0.138 | 0.473 | 0.001 | 0.952 | -0.039 | 0.525 | -0.101 | 0.371 |
| Information through Phone | 0.052 | 0.001 | 0.006 | 0.001 | -0.012 | 0.002 | -0.045 | 0.001 |
| Friends/Relatives/ Colleagues | 0.037 | 0.013 | 0.005 | 0.022 | -0.008 | 0.012 | -0.033 | 0.014 |
| Insurance company | -0.024 | 0.109 | -0.003 | 0.128 | 0.005 | 0.106 | 0.021 | 0.112 |
| Tax Consultant | -0.020 | 0.216 | -0.003 | 0.251 | 0.004 | 0.206 | 0.018 | 0.223 |
| Self Decision | 0.018 | 0.21 | 0.002 | 0.202 | -0.004 | 0.215 | -0.016 | 0.207 |
| **Demographics Variables** | | | | | | | | |
| Gender | -0.038 | 0.028 | -0.005 | 0.033 | 0.009 | 0.03 | 0.034 | 0.028 |
| Age | -0.004 | 0.665 | -0.001 | 0.666 | 0.001 | 0.665 | 0.004 | 0.665 |
| Education | -0.039 | 0.000 | -0.005 | 0.000 | 0.009 | 0.000 | 0.035 | 0.000 |
| Occupation | -0.004 | 0.413 | -0.001 | 0.415 | 0.001 | 0.414 | 0.004 | 0.413 |
| Marital Status | -0.005 | 0.798 | -0.001 | 0.798 | 0.001 | 0.798 | 0.005 | 0.798 |
| Income | 0.004 | 0.481 | 0.001 | 0.482 | -0.001 | 0.481 | -0.004 | 0.481 |

*Source*: STATA Output.

Marginal effects highlight how much probability of outcome variable changes when we change the value of a particular category, holding all categories constant at same values (Duncan et. al, 1998). The coefficient explains the percentage change in the probability of dependent variable

due to one percent change in independent variable. The sources of information namely television and internet bearing positive coefficient in Table 5, shows a negative coefficient in categories of not at all aware (P (Y=1)), partial aware (P (Y=2)) and significant aware (P (Y=3)) in Table 7. The analysis hereby confirms that television and internet are the significant sources in spreading complete information regarding distribution channels among the customers of life insurance. The sources (information through phone and friends/relatives/ colleagues) bearing negative coefficient in Table 5, observed to be having positive coefficient for categories of no awareness (P (Y=0)) and partial awareness (P (Y=1)) in Table 7. Hence, it may be concluded that information through phone and through friends/ relatives/colleagues are diffusing either no or partial awareness among customers.

Viewing the marginal effects of demographic variables, the scenario depicts the same results. The variable gender and education bearing positive coefficient in Table 5, observed to be having a positive marginal effect for categories of significant aware (P (Y=3)) and complete aware (P (Y=4)) in Table 7. The analysis substantiates that gender and education are important influencing factors of customer's awareness towards distribution channels of life insurance.

## CONCLUSION AND POLICY IMPLICATIONS

The study has been carried out with an objective to analyze the extent of awareness among the customers, towards services provided by distribution channels of Indian life insurance industry. From the discussion above, it has been found that distribution channel is not new concept and people are becoming familiar with it with the passage of time, but yet customers are not well-known with prevalence of alternative channels like corporate agents, bancassurance and direct selling. The awareness of customers is still at nascent stage. The execution of the ordered Probit model demonstrates that customers who are purchasing their policies from distribution channels has the highest probability of not at all aware followed by a probability of completely aware. The customers show complete awareness regarding individual agent channel only, amongst the other channels prevailing in the industry. The distribution channels may spread the desired intensity of information among the customers and help them to choose an appropriate service provider. For the successive and flourishing growth of the industry, it is necessary to make heedful scrutiny of the assorted alternatives related to various channels. On the other hand, the factors like television and internet are the significant sources in spreading complete information regarding distribution channels among life insurance customers. The authorities at various levels are encouraging and exaggerating campaigns to help in creating awareness among the masses. They need to organize viral advertisement through TV and internet to create awareness about potential benefits of intermediate network to both policyholders and insurers. Therefore, launching an awareness campaigns through mass media could be an important way in creating awareness at grassroot levels to reach an untapped market. This calls for an effective education and special programs which could improve understanding of public on the various beneficiary services offered by intermediary channels. Giving talks and carrying out campaigns at initial levels might open up their mind. The customers might not seize the opportunities now, but they will definitely

consider them in future like providing information on the importance of having life insurance and the sources for availing insurance. They should not consider it as business perspectives rather serve as responsibility to society as a whole. Consequently, insurance sector needs to improve the level of awareness by looking into the factors viz. information through phone and through friends/ relatives/colleagues which are failing to spread complete awareness regarding distribution channels among the policyholders. Thus, the analyses reveal that life insurers need to improve the perceptive of their clients regarding numerous channels. There require to transform the attitude and translate the knowledge into behavior by guiding them or making them aware about various procedures and policies associated with them. This will help in enhancing the confidence and trust of people on various issues.

## REFERENCES

Aggarwal, V. (2004). Bancassurance, Concept Framework and Implementation, *The Journal of Insurance Institute of India*, 30, 34-51.

Banne, A. S. & Bhola, S. S. (2014). Awareness of Life Insurance Among Sample Customers, *Indian Streams Research Journal*, *4*(7). Retrieved on November 15, 2010 from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2482109

Baradhwaj, C L. (2013). Distribution compliance framework- vital hub of the wheel, *IRDA Journal*, 9 (9), 31-37.

Bawa, S. K., & Chattha, S. (2016). Performance Evaluation of the Intermediary Channels of Life Insurance Industry in India, *Eurasian Journal of Business and Economics*, 9 (17), 51-65.

Bhattacharya, A. (2004), Bancassurance-Needs and Effects, *The Insurance Times*, Vol. 24 (10): 27-36.

Boon, A. and Bane (2008). Polygamous Bancassurance, *Insurance Chronical*, *The Icfai University Press*, pp. 23-25.

Chen, M. & Lai, C. (2010). Distribution systems, loyalty and performance, *International Journal of Retail and Distribution*, 38(9), 698-718.

Chiang-Ku, F., Shu-Wen, C. & Cheng-Ru, W.(2009). Using GRA and DEA to Compare Efficiency of Bancassurance Sales with an Insurer's Own Team, *Journal of Grey System*, 21(4).

Cummins, J. & Doherty, N.(2006). The economics of insurance intermediaries, *The Journal of Risk and Insurance*, 73 (3), 359-396.

Daykin, A. R. & Moffatt, P. G. (2002). Analyzing ordered responses: A review of the ordered probit model, *Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences*, 1(3), 157-166.

Dumm, R. and Hoyt, R. (2002). Insurance Distribution Channels: Market in Transition pp1-12[online]http://www1.iisonline.org/pdf/Insurance%20Distribution%20Channels%20(JIR%20submission).pdf (Accessed 10 May 2012)

Duncan, C., Khattak, A. & Council, F. (1998). Applying the ordered probit model to injury severity in truck-passenger car rear-end collisions, *Transportation Research Record: Journal of the Transportation Research Board,* 1635, 63-71.

Gautam, V. & Kumar, M. (2012). A Study on Attitudes of Indian Consumers Towards Insurance Services, *Management Research and Practice*, 4 (1), 51.

Govardhan, N. (2008). Relevance of distribution channels, *IRDA Journal,* 6 (10), 7-10.

Grover, N. & Bhalla, G.S. (2013). Level of Awareness Regarding Bancassurance and Choice of Insurance Product among Bank Customers in India, *Eurasian Journal of Business and Economics*, 6 (12), 63-77.

Hasegawa, H. (2010). Analyzing tourists' satisfaction: A multivariate ordered probit approach, *Tourism Management*, 31 (1), 86-97.

Hill, R. C., Griffiths, W. E. & Lim, G. C. (2011). Principles of econometrics (Vol. 5), *Hoboken, NJ: Wiley*.

Jain, D. & Goyal, N. (2012). An Empirical Study of the Level of Awareness towards Various Rights and Duties among the Insured Households in Rajasthan, India, *Researchers World, 3*(3), 40-49.

Jhaveri, N. (2005). Are Indian Families Adequately Insured?, *Vikalpa*, 30(3), 106-108.

Khattak, N. A., Rehman, K. U. (2010). Customer satisfaction and awareness of Islamic banking system in Pakistan, *African Journal of Business Management*, *4*(5), 662-671.

Krishnamurthy, S. (2005). Insurance Sector: Challenges of Competition and Future Scenario, *Vikalpa*, 30(3), 96-101.

Ku Fan, C. & Wen Cheng, S. (2009). An efficiency comparison of direct and indirect hannels in Taiwan insurance marketing, *Direct Marketing: An International Journal*, *3*(4), 343-359.

Lakshmikutty, S., Baskar, S. (2006, June 12). Insurance Distribution in India: A Perspective, retrieved from http://www.mib.com/kd/html/Insurance_Distribution_India.html#

Long, J. S. & Freese, J. (2006). Regression models for categorical dependent variables using Stata, *Stata press*.

Lymberpoulos, K., Chaniotakis, I.O. and Soureli, M. (2004). Opportunities for Banks to Cross-Sell Insurance Products in Greecem, *Journal of Financial Services Marketing*, 9(1), 34-48.

Maddala, G. S. (1986). Limited-dependent and qualitative variables in econometrics, *Cambridge university press*, No. 3.

Murugesh, V. (2015). The Policyholders' Preference and Satisfaction towards Life Insurance Corporation of India's Policies, *International Journal of Business and Management Invention* 4 (8), pp 9-14.

Parekh, A. (2011). Current issues in Life Assurance retrieved from www.actuariesindia.org/CILA/CILA%202011/Ashvin%20Parekh.pdf

Popli, G S. and Rao, D. N. (2009). An Empirical Study of Bancassurance: Prospects and Challenges for selling Insurance Products through Banks in India. Retrieved on December 29, 2010 from http://ssrn.com/abstract=1339471.

Rajkumari, M. (2007). A study on customer's preference towards insurance service and bancassurance, *The ICFAI Journal of Risk and Insurance*, *1*(4), 49-58.

Ramakrishna, V. (2014). Driven by Market Dynamics- Role of Insurance Broker, *IRDA Journal*, Volume XII, No. 3, 29-31

Rao, G. (2006). Brokers in Indian and other markets- A comparative study, *IRDA Journal*, (1), 11-14.

Reddy, C. S., Reddy, P. M. and Reddy, C. S. (2004). Liberalization of Insurance: Opportunities and Challenges, *The Insurance Times*, Vol. 24(3): 23-27.

Regan, L., Tennyson, S. (1996). Agent Discretion and the Choice of Insurance Marketing System, *Journal of Law and Economics*, 39: 637-666

Sethi, S. (2008). Role of intermediaries in Insurance, *IRDA Journal*, 6(10), 29-31.

Sud, R. (2012). Trailblazers in distribution: the agency channel, *IRDA Journal*, 10(1), 35-38.

Thirupathi, T. (2014). A study on the awareness level of LIC policy holders in Salem district, *Asia Pacific Journal of Research, Vol I, Issue XIII*.

Tiwari, A. & Yadav, B. (2012). A customer survey and perception towards bancassurance with reference to life insurance industry, *South Asian Journal of Marketing and Management Research*, 2(2), 142-164.

Viswanathan, S. (2006). Role of distribution channels, *IRDA Journal*, 5 (1), 20-21.

Yusuf, T. O., Gbadamosi, A. & Hamadu, D. (2009). Attitudes of nigerians towards insurance services: an empirical study, *African Journal of Accounting, Economics, Finance and Banking Research*, 4(4), 34 -46.

**Appendix**

**Insurance Intermediaries' Awareness**

Q1. To what extent are you aware with the following life Insurance intermediaries?

| Sr. No. | Intermediaries | Completely Aware 4 | Significantly Aware 3 | Partially Aware 2 | Not at all Aware 1 |
|---|---|---|---|---|---|
| 1a | Individual agent | | | | |
| 1b | Corporate agent | | | | |
| 1c | Broker | | | | |
| 1d | Bancassurance | | | | |
| 1e | Direct selling | | | | |

Q2. What are your sources of information and awareness of services of intermediaries? You can tick multiple options relevant to you.

| Sr. No. | Sources of Information | |
|---|---|---|
| 2a | Newspaper | |
| 2b | Television | |
| 2c | Internet | |
| 2d | Advertisement | |
| 2e | Information through Phone/mobile | |
| 2f | Friends/ Relative/ Colleagues | |
| 2g | Insurance company | |
| 2h | Tax consultant | |
| 2i | Self decision | |
| 2j | Any other (please specify) | |

***Demographic profile of the policyholders (Mark √)***

- **Gender**
  1) Male 2) Female

- **Age**
  1) Less than 25 years 2) 25-35 years
  3) 36-45 years 4) 46 years and above

- **Educational Qualification** 1)
  Under graduate 2) Graduate
  3) Post graduate 4) Any other

- **Occupation**
  1) Business 2) Professional
  3) Service 4) Agriculturist
  5) Housewife 6) Retired
  7) Any other (specify)

- **Marital status**
  1) Married 2) Unmarried

- **Family monthly Income**

  1) Less than Rs 30000 2) Rs 30000-40000 3)
  Rs 40001-50000 4) Rs 50001-60000
  5) More than Rs 60000