Influence of Demographic Factors on Car Insurance Demand

[1]**Thahirunissa Arshath**

[1]Senior Lecturer in Accounting and Finance,
[1] College of Economics and Business Administration,
[1]University of Technology and Applied Sciences, Muscat, Sultanate of Oman

Abstract: This research has been done to analyze the influence of demographic factors on the demand for car insurance of salaried individuals working in Muscat city. This study uses Frequency analysis and one-way ANOVA tools to examine the relationship between the dependent and the independent variables. The survey was conducted with 88 sample respondents using convenience sampling technique. The results showed that there was a significant association between some of the demographic factors and the car insurance buying behavior of the sample respondents.

Index Terms – **Car insurance, Demographic variables, Risk Aversion, Insurance buying behavior.**

I. INTRODUCTION

People prioritize insurance buying based on their financial conditions. In recent years, the insurance market has contracted more than in previous years, and people have shown comparatively less interest in purchasing car insurance policies. The premia received by insurance companies reduced by 16 per cent and 11 per cent for transport insurance and properties insurance respectively. (Times of Oman, 2022). Purchasing car insurance is compulsory in Oman. But most people prefer to take third party insurance rather than comprehensive insurance for their cars due to increasing economic costs. The majority of the policies sold out in retail portfolios are third party liability policies (National Centre for Statistics and Information, 2017). The decision for buying car insurance, is determined by personal factors of insurance buyers. So, there is a need to examine the relationship between car insurance demand and risk attitudes of the insured. This study aims to find the relationship between the demographic factors on car insurance demand.

1.2 Research Objectives

This research intends to fulfill the following objectives:
1. To study the demographic profile of the car insurance buyers and
2. To analyse the influence of the demographic variables on the car insurance demand

1.3 Research Question and Hypothesis

The main research question of this study was to know if there is any association between the demographic profile and the demand for buying car insurance. The Null hypothesis (H_01) so framed was that: There is no significant association between the socio-economic profile and the risk attitudes of the sample.

The alternative Hypothesis (H_a1) was - There is a significant association between the demographic profile and the risk attitudes of the sample.

1.4 Scope and Limitations

This research focusses on the socio-economic status and the domestic car insurance demand of salaried people living in Muscat, Oman. the research also suffered from some limitations such as (i) The study cannot be generalized as it was conducted only among 88 domestic car insurance users and (ii) It does not investigate the risk attitude of car insurance buyers.

1.5 Significance

This study will be helpful for the insurance professionals and policymakers to find out which are the most important factors that influences the car insurance demand of people and enable them to design suitable insurance products for public consumption. It will enable them to bring out innovative insurance products suiting the styles and needs of the users.

II. REVIEW OF LITERATURE

2.1 Related Studies

It has been noticed in the past studies regarding risk attitudes of insurance buyers that the risk acceptance and tolerance level of people is derived from their personality and demographic traits. The economic conditions, and lifestyle of human beings also

determine the risk-taking behavior (Eiser et. al., 2012). When an individual faces risk, he is inclined to purchase insurance products. However, sometimes people do not buy insurance in spite of facing risky situations (Outreville, 2014).

People's life situations influence their spending towards essentials and comforts. It has been observed that increase in expenses like food, education and other living expenses makes people to spend less on buying insurance products. (Eling, Ghavibazoo, and Hanewald, 2021). It was also stated by Mark Greene in his book on Risk and Insurance that independent factors like age, sex, psyche, youth experiences, wisdom, etc. have an effect on risk attitudes of people and it also determine the insurance consumption behavior. (Mark Greene, 1977).

Alrazni et. al., (2018) reviewed some of the researches on the Takaful industry in the GCC region and mentioned that Insurance infiltration is less in GCC region compared to other parts of the world primarily due to the lack of insurance product expansion policies of the insurance companies. Tregubova and Sinyavskaya (2018) used econometric modeling of micro-economic demand for insurance in Russia and they found that women are more unwilling to buy insurance than men.

Sergey (2014) examined the willingness to overpay for insurance and for consumer credit and concluded relative risk aversion of people results in readiness to pay more for buying insurance products. Outreville (2014) reviewed the literature available on risk aversion, risk behavior, and demand for insurance and found out that the demand for insurance and the wealth elasticity of people are interlinked which determines the changes in the willingness to insure.

2.2 Research Gap

Most of the past researches investigated the relationship between the demand for insurance and risk attitude. Domestic car insurance policy purchase was never the center of discussion in these studies. Neither did they consider salaried individuals in Muscat. There is a geographical and conceptual gap found in the literature review.

2.3 Theoretical framework

The literature review helped in deducing the framework of the research. The dependent variable of this research is the demand for car insurance, which is dependent on the demographic profile of the sample. The independent variables are the demographic features such as age, gender, education, marital status, employment type, monthly income, number of dependents, type of asset owned etc.

III. RESEARCH METHODOLOGY

3.1 Population and Sample

The population considered for this research is salaried class employees owning cars in Muscat city. In this research, 88 samples from the population have been selected using non-probability convenience sampling technique, for data collection and processing.

3.2 Data and Sources of Data

The data has been gathered from two sources namely- primary and secondary. The primary data was collected with the help of a well-planned questionnaire. The secondary was obtained from journals, thesis, and online news which are cited under references section of the study.

3.3 Research Instrument

The data was collected with the help of a well-structured questionnaire. The first part of the questionnaire had questions relating to the demographic profile such as age, gender, education, marital status, employment type, monthly income, number of dependents, type of asset owned. The second part consisted of four questions relating to perceptions of the participants regarding willingness and ability to purchase car insurance demand. The online questionnaire was distributed using google forms and the data was collected during the month of May, 2023.

3.3.1 Reliability Statistics

The Cronbach's Alpha for the questionnaire was more than 0.70 which explains the reliability and internal consistency of the questions.

Table 1: Table showing the Reliability Statistics of the Data			
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Demographic Variables	.729	.738	8
Insurance Demand Variables	.741	.750	5

3.4 Statistical tools

The raw data collected through a questionnaire was processed with the help of Statistical Package for Social Sciences. Frequency distribution and one-way analysis of variance were applied to analyze the association between the dependent and the independent variables.

IV. RESULTS AND DISCUSSION

4.1 Frequency Distribution of the Independent Variables

The data collected were coded and exported to SPSS software. The frequency analysis of the demographic profile has been tabulated in the following table.

S. No.	Variables	Frequency	Percent	Valid Percent
	Table 2: Table showing Frequency Distribution of the Independent Variables			
1	*Gender*			
	Male	56	63.64	63.64
	Female	32	36.36	36.36
	Total	88	100	100
2	*Age*			
	18-35 years	37	42.05	42.05
	36-55 years	27	30.68	30.68
	Above 55 years	24	27.27	27.27
	Total	88	100	100
3	*Education*			
	School	3	3.41	3.41
	Diploma	11	12.5	12.5
	Bachelors	56	63.64	63.64
	Masters	18	20.45	20.45
	Total	88	100	100
4	*Employment Type*			
	Part-time	16	18.18	18.18
	Full-time	72	81.82	81.82
	Total	88	100	100
5	*Monthly Income*			
	Up to 500 OMR	21	23.86	23.86
	501 to 1000 OMR	17	19.32	19.32
	1001 to 1500 OMR	31	35.23	35.23
	Above 1500 OMR	19	21.59	21.59
	Total	88	100	100
6	*Marital Status*			
	Married	56	63.64	63.64
	Single	32	36.36	36.36
	Total	88	100	100
7	*Dependents*			
	Up to 6	43	48.86	48.86
	7 to 13	40	45.45	45.45
	More than 13	5	5.68	5.68
	Total	88	100	100
8	*Insurance*			
	Comprehensive	47	53.41	53.41
	Third-Party Liability	41	46.59	46.59
	Total	88	100	100

Source: Computed data

Table 2 is a summarized presentation of the classification of the sample and its important demographic traits. Majority of the respondents were males. Most of the respondents belonged to the younger age group of 18-35 years. Majority of the sample was educated up to Bachelors level. Most of them worked as full time employees. Many belonged to the monthly income group of 1001 to 1500 Omani riyals. More than half of the survey participants were married. Most of the participants had up to 6 dependents in their family and most of them had taken comprehensive vehicle insurance for their cars.

4.2 Association between Dependent and Independent Variables

Table 3 brings out the association between the demographic profile and their insurance buying behavior. The mean score of the insurance demand of the respondents was taken as the factor and the demographic characteristics was taken as the independent variables. The results of the one-way ANOVA revealed significant association only between age, education level and marital status of the respondents and their car insurance demand. The other demographic variables were statistically insignificant.

Table 3: Table showing ANOVA of Car Insurance Demand and Demographic Variables						
		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	8.14	2	4.07	6.79	0.002
	Within Groups	50.94	85	0.6		
	Total	59.08	87			
Education Level	Between Groups	3.69	2	1.84	4.2	0.018
	Within Groups	37.3	85	0.44		
	Total	40.99	87			
	Within Groups	97.65	85	1.15		
	Total	101.82	87			
Marital Status	Between Groups	1.48	2	0.74	3.34	0.04
	Within Groups	18.88	85	0.22		
	Total	20.36	87			

Source: Computed data

4.3 Association between Dependent and Independent Variables

To find which of the sub-categories of the demographic variables had more influence on the car insurance demand, the below given descriptive statistics were taken:

Table 4: Table showing Descriptive Statistics for ANOVA of Insurance Demand and Demographic Variables						
Demographics	Labels	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound
Age	18-35 years	1.9	0.99	0.31	1.19	2.61
	36-55 years	2.02	0.81	0.1	1.81	2.22
	Above 55 years	1.24	0.44	0.11	1.01	1.46
Education_level	School	2.7	0.67	0.21	2.22	3.18
	Diploma	3.15	0.63	0.08	2.99	3.31
	Bachelors	2.71	0.77	0.19	2.31	3.1
	Masters	3.01	0.69	0.07	2.87	3.16
Marital_Status	Married	1.5	0.53	0.17	1.12	1.88
	Single	1.28	0.45	0.06	1.16	1.39

Source: Computed data

Table 4 shows that as the mean values of the salaried individuals who were in the age group of 36 to 55 years were more, they were inclined to buy insurance products than other age groups. Similarly, in case of education, diploma certificate holders showed interest in buying insurance products. The married individuals also had disposition to buy insurance policies for their vehicles than unmarried salaried class individuals.

V. FINDINGS

The result of the hypothesis testing has been summarized here. From Table 3, it can be seen that the p-values of the variances are less than 0.05 which shows that the results are significant. At 95% level of confidence, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it has been found out that there is a significant association between the demographic variables of age, education level and marital status of the salaried class employees and their inclination to buy insurance products.

VI. CONCLUSION AND RECOMMENDATIONS

This research has revealed with appropriate evidences that the demographics of people have an impact on their insurance buying behavior. The background and situations of people influences their spending pattern. It determines the level of risk and the perceived intention to buy insurance products. Age and education were influencing factors for buying behavior which affirms the earlier researches done in this field. Married people were inclined to buy insurance products than unmarried people. But there was no influence of the gender, number of dependents and income of the salaried individuals on their car insurance demand. So, this study also negates some of the earlier studies.

The current study has been done on a small-scale basis. The research topic can be further analyzed by taking a larger sample and going for a nationwide research. Future researchers can focus on comparing territories across borders which will help in understanding the impact of ethnicity and perceived risk attitude of people in buying insurance products. This research will form a basis and provide guideline for doing research in the field of insurance buying behavior of individuals. It will be useful to policy makers and insurance companies for devising insurance products tailor made to the needs of the users.

REFERENCES

[1] Alrazni, A. & Alhabshi, S.M. & Uluyol, B, 2018. A Comparative Study of the Historical and Current Development of the GCC Insurance and Takaful Industry. Journal of Islamic Marketing. 9.

[2] Sergey MALAKHOV, 2014. Willingness to Overpay for Insurance and for Consumer Credit: Search and Risk Behavior Under Price Dispersion, Expert Journal of Economics, Sprint Investify, vol. 2(3), pages 109-119.

[3] Tregubova, A. & Sinyavskaya, T., 2018. Econometric Modeling of Micro-Economic Demand for Insurance. Doi:10.5593/sgemsocial2018/1.3/S03.017.

[4] J. Richard Eiser, Ann Bostrom, Ian Burton, David M. Johnston, John McClure, Douglas Paton, Joop van der Pligt, Mathew P. White, Risk interpretation and action: A conceptual framework for responses to natural hazards, International Journal of Disaster Risk Reduction, Volume 1, 2012, Pages 5-16, ISSN 2212-4209, https://doi.org/10.1016/j.ijdrr.2012.05.002.

[5] Muscat Daily. (2022). Car insurance claims on the rise in Oman. [online] Available at: https://www.muscatdaily.com/2022/02/19/car-insurance-claims-on-the-rise-in-oman/ [Accessed 16 May. 2023].

[6] Pratt, J.W. and Zeckhauser, R.J. (1987). Proper Risk Aversion. Econometrica, 55(1), p.143.

[7].Oman's insurance sector clocks a growth of 13% in third quarter, Times of Oman, December 2022. Retrieved from https://timesofoman.com/article/124961-omans-insurance-sector-clocks-a-growth-of-13-in-third-quarter [Accessed 16 May. 2023].

[8] Eling, M., Ghavibazoo, O. and Hanewald, K. (2021). Willingness to take financial risks and insurance holdings: A European survey. Journal of Behavioral and Experimental Economics, 95, p.101781.

[9] Outreville, J.F. (2014). Risk Aversion, Risk Behavior, and Demand for Insurance: A Survey. Journal of Insurance Issues, [online] 37(2), pp.158–186. Available at: https://www.jstor.org/stable/43151298 [Accessed 16 May. 2023].

[10] Mark R. Greene, 1977. Risk and Insurance. South-Western Publishing Company, 4th Edition, ISBN: 9780538063302.