# RISK AVERSION AND MOTOR INSURANCE DEMAND: EMPIRICAL EVIDENCE FROM NIGERIA

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**Abstract:** Insurance demand is often pushed by high level aversion of risk. Risk aversion is seen as the heartbeat of the demand for insurance. Therefore, this study examined the relationships between risk aversion and insurance demand with its empirical findings among selected motorists in Lagos, Nigeria. This study adopted descriptive research plan. While convenience sampling procedure, information was gathered via a structured questionnaire. With 10 selected Local Government Council Areas in Lagos State, five hundred and fourteen (514) respondents were targeted. This research adopted simple frequency technique and Kendall's rank correlation coefficient. While some germane questions were formulated and to which supportive discussion were verbally validated, an hypothetical statement was tested. The study recommended that more clarifications be made by insurance firms in dealing properly with motor insurance policyholders in relations to their diverse risk attitudes; motorists' decreasing marginal utility of income should concurrently be matched with their decision to opt for motor insurance policies; insurance companies should design insurance products that are inherently concave utility driven in nature so as to change the usual maxim that 'insurance is sold but not bought' to 'insurance is bought and sold'; and Government should drive a policy to combat poor risk attitude among motorists and ensure that motor insurance is applied as a requisite instrument for moderating behaviours among drivers.

**JEL classification: G22, M21, R 41**

**Key words: Risk aversion, Risk attitude, Motor insurance, Expected Utility Theory, Prospect Theory**

## 1. INTRODUCTION

The knowledge of risk aversion is core driver in behavioural studies (Aumann 2017; Kahneman & Thaler, 2006; O'Donoghue & Sommerville, 2018; Rabin & Thaler, 2001). According to O'Donoghue & Sommerville (2018), the risk averse situations basically applied in period when individual is making selection among activities which portends fiduciary outcome. They stressed an individual who expresses hatred towards risk is more desirous to forgo certain expected gain in a bid to curtail risk and also expresses the desire to opt for insurance. More so, individual who despices risk the

more will be more longing to give out monetarily. According to Kunreuther and Pauly (2005), risk averse persons are always desirous for higher premium or parallel amount in anticipation of value of losses from a set of unsure circumstances against which they will be covered. They buttressed that the maximum amount an individual person will be willing to dispense for coverage is hinge upon his degree of risk aversion.

However, Outreville (2014) noted that basic utility theory explains frameworks revolving round risk averse circumstances where people desire to avert atmospheric milieu full of high loss. He stated further that once an insurance coverage is made possible at certain fair premium, expected utility theory emphasises prediction of high level desire for insurance as loss circumstance escalate. According to Real (1991) as cited in Outreville (2013), the higher an absolute aversion of an individual towards risk, the greater the basic risk premium expected to motivate investment decisions. Outreville (2014) ascribed risk aversion as the heartbeat of the demand for insurance. Previous studies have investigated various variables which negatively affect insurance demand to include lack of financial literacy and exposure to financial market (Gine & Vickey, 2008); lack of trust (Cole et al., 2010); liquidity constraint and ambiguity (Botha, 2017). However, quite a number of studies (such as Beckett, Hewer and Howcroft, 2000; Capuano and Ramsey, 2011; Willis, 2008) had noted the limited attention given to the analysis of insurance peculiarities on behavioural nature of individual consumer as basis of research. Thus, consumer behaviour with reference to insurance service that hinge upon their risk behaviour and assumed knowledge, raises question of adverse choices and behaviour risk in insurance milieu (Finkelstein & Poterba, 2004; Finkelstein & McGarry, 2006; Ulbinaite, Kucinskiene, & Moullee, 2013).

Barseghyan, Molinari, O'Donoghue, and Teitelbaum (2013) remarked an estimated relationships between risk aversed behaviour and insurance demand. They reiterated the extent of individual degree to risk and necessitate an investment premium. They explained expected utility representation across the concavity function, which depicted divergent conditions of wealth with reducing marginal utility for increased wealth. As cited in Botha (2017), individual expresses substantial aversion for risk in comparison with other individual when they are widely more risk averse, meaning that the exchanged funds for risk is lesser than other individual decisions. Therefore, individual motorists decisions toeard motor insurance, according to According to Awunyo-Vitor (2012), is indispensable to allow for an even risk transfer of motor loss in exchange of premium consideration. Motor insurance(otherwise called automobile insurance) safeguards motorists from possible large pecuniary motor loss ( (Outreville, 1990 as cited in Huang & Query, 2007).

## 2. OBJECTIVES

This study aims to investigate the nexus between risk aversion and motor insurance demand in Lagos, Nigeria. This paper is structured as follows: introduction; literature review and hypotheses; methodology section; result and discussion; conclusion, recommendations, study contributions and future suggestions

## 3. LITERATURE REVIEW

Preference for risk affect desires for insurance (Barry, Ellinger, Schnitkey, and Sherrick, 2004). With expected utility theory (EUT), utility is a function of preference

for risk (Pindyck & Rubenfield, 2005 as cited in Branstrand & Wester, 2014). Every individual person is often averse to risk and in such case struggle to curtail risk (Hansson & Lagerkvist, 2012). According to Zhang, Brennan and Lo (2014), an individual aversion to risk springs up from declining marginal utility of income. Through insurance purchase, preference for avoidance of risk is often established. Once it is discovered that individual persons are risk averse, their willingness to protect themselves against prices exceeding the reduction of the expected damages will be ignited (Kind, Botzen & Aerts, 2017).

Slovic (2016) put up dimensional facets of insurance demand decisions; when he noted insurance as coping system to tackling identified risk. Outreville (2014) emphasises the relationship between risk aversion and risk behaviour. Risk aversion is function insurance market milieu (Cohen & Einav, 2007). They further established the relationship between risk preferences of individual households and standard risk aversion. Lieber (2014) noted that if individual consumers wield not rational expectations over future distribution of claims, data-related claims cannot assist to segregate a low degree of risk aversion from overoptimistic notions concerning risks. Therefore, risk aversion becomes pertinent in a principal-agent model, and a source of insurance trade-off (O'Donoghue & Somerville, 2018). According to Fleurbaey (2018), an individual aversion to risk explains more gratification from a given income than unsafe income due to little value of specified income and help ignites the willingness of individual risk hater to potentially afford it.

According to Outreville (2014), policyholders' financial attitudes are significant discourse in insurance demand. Insurance, according to Oyetayo (2001), is described as a system of compensation for loss, damage, death and any other unexpected circumstances in consequence of certain periodic disburment of a predetermined price. Olsson (2002) stipulates that insurance will cover the financial consequences of any impact. Tomczyk, Doligalski and Zaborek (2016) mentioned that a company will be better equipped, if they have adequate knowledge of its customer, to service customer requirements more competitively and profitably. The consequences of comprehending the behaviour of individuals encountering uncertainties are valid for insurance and for most financial services sectors (Outreville, 2014). It is contentious that researching into insurance poses a great deal of empirical research on contracts (Chiappori & Salanie, 2003). Some major studies have been conducted with reference to insurance demand (Dragos, 2014; Hussels, Ward & Zurbruegg, 2005; Sehhat & Kalyani, 2011; Tooth, 2015). Graven (2007) as cited in Adeleke, Olowokudejo, & Ajemunigbohun (2016) gave a demonstration of insurance demand equation that explained four cases of logarithmic utility such as: effect of changes in wealth, effect of changes in the probability of loss, effect in changes in loss severity, and effect of changes in insurance premium. Seog (2010) expressed that full insurance is easily purchased under an actuarially fair premium, while partial insurance occurs whenever there is an unfavourable premium.

Several empirical studies including Beck and Webb, 2003; Browne, Chung and Frees, 2000; Esho, Kirievsky, Ward and Zurbruegg, 2004) have shown that the level of demand for insurance can be influenced by a great number of variables such as: political, economic, legal and social factors. Earlier study by Diacon (1983) as cited in Ajemunigbohun and Oreshile (2014) mentioned factors affecting demand to include: attitude to risk and risk awareness, price of insurance, income and wealth, compulsory and tax incentives. According to Nyce (2007), several factors affecting the insurance

demand include: insurance mandate and regulation, financial status, risk tolerance, real services rendered (claims settlement), and tax incentives. However, insurance demand has been misconstrued as a demand for certainty, but in reality the demand for insurance derives from demand for an uncertainty payoff of income or wealth (Nyman, 2001). Similarly, the decision to purchase is encapsulated in its future condition as insurance demand (Cummins & Danzon, 1997). Therefore, Beenstock, Dickson, and Khajurian (1988) opinionated that a consumer widens it economic scope of discretion and opportunity by protecting themselves from financial loss in the event of accident, fire, or theft. According to Browne and Kim (1993), some of the factors affecting insurance demand are noted as: individual wealth, insurance prices, and the probability of loss; meanwhile Rossi and Black (2001) asserted that insurance demand provides for enough coverage in relations to loss that diminishess the frequency of fiduciary pandemonia when risk occasions.

## 4. METHODOLOGY

This research work adopted descriptive research plan. The motivation for its chioce was due to fact that it provides the researcher a profile of pertinent aspects of the phenomena of interests and also examined the happenings around the sample subjects which are devoid of any attempt of manipulation (Asika, 2008; Sekaran & Bougie, 2016). Accordingly, survey approach was useful because of its capacity for morally predicts and also assists in conducting the same data regarding all sample situations (Aldridge & Levine, 2001; Easterby-Smith, Torpe & Jackson, 2008). The data instrument compised of two parts, A and B. While part A consisted of personal profile of participants, part B detailed statements related to research variables. The data gathering tool assisted the researchers to hold unto responses through the adopting Likert-scaling measurement attached with a covering letter.

Lagos state, being area of investigation, according to Lagos Bureau of Statistics (2017), have the total number of newly registered motor vehicles and renewed motor vehicles registration recorded at 257,590 and 616,234 respectively; which make up a total of registered motor vehicles in the state at 873824. The target population comprises members of the motoring communities within the sampling frame of 20 approved Local Government Council road environments in Lagos State. The sampling units (specifically ten local government areas) comprising Ajeromi-Ifelodun, Alimosho, Amuwo-Odofin, Badagry, Ikeja, Ikorodu, Lagos Island, Mushin, Ojo, and Surulere were chosen for questionnaire survey, out of which a sample was determined. For genuine responses and attention to the research instrument, the efforts of some research assistants were engaged which allowed for proper distribution and administration of the data collection instrument. The selection of these sample areas was due to their high population density and industrial activities that trigger regular motoring movement of both human and material resources (Lagos Bureau of Statistics, 2016).

This study employed a convenience sampling technique. This sampling technique was useful because the selected participants were readily and easily available (Sekaran & Bougie, 2016). The target population comprised of motor insurance policyholders who own or drive motor vehicles within the metropolis of Lagos. The choice of the sample locations was consequent upon considerable number of motoring population and ease of survey instrument distribution. For time consciousness and easy accessibility, ten (10) research assistants were deployed at each research location for the

distribution and retrieval of questionnaires. The total sample size was statistically determined by Yamane's (1967) formula as cited in Ajay and Masuku (2014) given as:

$$n = \frac{N}{1 + Ne^2}$$

$$n_f = \frac{873824}{1 + 873824\ (0.05)^2} = 399$$

Where: $n_f$= the sample size,

N= the population size,

e= the acceptable sampling error

95% confidence level and p=0.05 are assumed

Judging from the above generated sample size, the researchers considered this number to be a sizeable representation of the entire population under study. Ultimately, among 800 copies of questionnaire distributed (.i.e. 80 questionnaires per research assistant), 514 copies were found useful for analytical results, giving a 64% response rate. Simple frequency percentage table and Kendall's rank correlation coefficient techniques. Five Likert-scaling measurements of 'strongly disagree' 'disagree', 'indecision', 'agree' and 'strongly agree' were adopted.

Regarding the research validity, theoretical and content were choices of validity. While the former was carried out through variables explained from past and relevant literatures, the later was designed via the administration of a set of questionnaire draft to chosen motor insurance policyholders, motor insurance experts and scholars in insurance field. Experts in this profession, therefore, examined this instrument and supported with great instructions, to which the researcher leveraged upon in order to the instruments within the respondents' understanding. On the level of reliability, 0.7135 was estimated as the Cronbach alpha implying that the research gathering tool superseded the required standard of 0.70.

## 5. RESULTS AND DISCUSSION

In an attempt to justify risk aversion and motor insurance demand, simple frequency percentage and Kendall's rank correlation coefficient techniques were employed for data analysis. While simple frequency percentage was employed for better descriptive presentation of data collected; Kendall's rank correlation coefficient technique (a non-parametric technique) was equally adopted to justify statistically positive nexus between risk aversion and motor insurance demand in Lagos, Nigeria.

### *5.1. ANALYSIS OF RESEARCH QUESTIONS*

**Table no 1 Explanation on individual motorist's risk aversion as a construct of risk attitude**

| S/N | | Strongly disagree | Disagree | Uncertain | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|---|
| **i.** | Choice of transportation can greatly inform possible avoidance of accidents on our road | *06 (1.2%)* | *25 (4.9%)* | *41 (7.9%)* | *173 (33.7 %)* | *269 (52.3%)* | **514** |
| **ii.** | Drivers' past | *114* | *143(27.8* | *61* | *108* | *88* | **514** |

| S/N | | Strongly disagree | Disagree | Uncertain | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|---|
| | experience greatly affect the possible reduction of road crashes and contingencies | *(22.2%)* | *%)* | *(11.9%)* | *(21.0 %)* | *(17.1%)* | |
| **iii.** | Frequent checks on vehicle roadworthiness is a good risk attitude to detect possible loss exposure | *4 (0.8%)* | *13 (2.5%)* | *21 (4.1%)* | *137 (26.6 %)* | *339 (66%)* | **514** |
| **iv.** | Willingness and readiness to make financial and physical commitment help to prevent risks and its relative consequences | *29 (5.7%)* | *48 (9.3%)* | *49 (9.5%)* | *171 (33.3 %)* | *217(42.2 %)* | **514** |
| **v.** | Risk avoidance is a reliable technique to motor risk management | *43 (8.4%)* | *78 (15.2%)* | *32 (6.2%)* | *147 (28.6 %)* | *214 (41.6%)* | **514** |

Source: *Authors' computation, 2019*

The table 1 above explains the motorists' risk aversion as a function of their risk attitude. For table 1i, 86% of the motorists expressed their agreement that *"choice of transportation has greatly informed avoidance of accidents on the road*". While 6.1% disagreed, 7.9% were indicated their doubt. For table 1ii, 50% indicated their disagreement that "*drivers' part experience had affected reduction of road crashes and contingencies experienced'*. While 38.1% displayed their agreement, 11.9% were uncertain about it. For table 1iii, there exists a high level agreement that *"frequent checks on vehicles roadworthiness is a good risk attitude to detect possible loss exposure"* with a 92.6%. 3.3% and 4.1% both indicated disagreement and uncertainty of the statement respectively. For table 1iv, a 75.5% of the motorists thus showed their agreement that '*willingness and readiness to make financial and physical commitment assist prevention of risk and its relative consequences*". In same regard, 15% and 9.5% were respectively expressed for both disagreement and indecisions of the motorists. For table 1v, a 70.2% displayed their agreement that '*risk avoidance is a reliable technique to motor risk management'*. While 6.2% signified their doubt, 23.6% disagreed with the comments.

### *5.2. HYPOTHESES TESTING*

Ho: Risk aversion has no positive nexus with motor insurance demand in Lagos, Nigeria

Kendall's rank correlation coefficient technique was employed for data analysis. The commonly known Kendall's tau coefficient (τ) is a statistical instrument adopted to estimate the ordinal nexus between two quantified characteristics.

Kendall's tau b is a well known statistical measurement for depicting the strength of the monotonic nexus between two constructs. It ranges between plus and minus one.

The test procedure is as follows:

Ho is the null hypothesis that ɾ is zero. Hi represents the alternative hypothesis that the actual ɾ is non-zero. Choose the value $z_{\alpha}$, based on the normal distribution, so that the probability of rejecting Ho when Ho is true is equal to a specified value, $\alpha$.

**Table no 2 Correlations of the positive nexus between risk aversion and motor insurance demand in Lagos metropolis**

| | | | Risk aversion | Demand for motor insurance |
|---|---|---|---|---|
| Kendall's tau b | Risk aversion | Correlation Coefficient<br>Sig. (2-table)<br>N | 1.000<br><br>514 | .136** |
| | Demand for motor insurance | Correlation Coefficient<br>Sig. (2-table)<br>N | .136**<br><br>514 | 1.000 |

**. Correlation is significant at the 0.01 level (2-tailed).

*Source: Authors' computation, 2019*

**Interpretation:** Using Kendall's tau b, the coefficient value of 0.136 shows that there is a positive but low relationship between risk aversion and demand for insurance.

**Decision:** Since the result is significant at 0.05 level of significance (i.e. p-value of 0.000) generated by the result is less than 0.05 significance level of the study, therefore null hypothesis is rejected and alternative hypothesis is accepted. This indicates that risk aversion has positive but low relationship with demand for motor insurance. This result is in consistence with the yearnings of previous studies such as Barseghyan et al. (2013); Eeckhoudt, Fiori, and Gianni (2018); kunreuther and Pauly (2005), and Outreville (2013, 2014). Ericson, Kircher, Spinnewijn, and Starc (2016) submitted that individuals who are highly risk averse are of the expectation to reduce their exposure and then, desire for insurance. Therefore, risk aversion becomes pertinent in a principal-agent theory, and serves as a source of insurance trade-off (O'Donoghue & Somerville, 2018).

## 6. CONCLUSIONS AND RECOMMENDATIONS

This study has been able to confirm risk aversion and motor insurance demand in Lagos, Nigeria.. However, risk aversion has shown positive but low relationship with demand for motor insurance. The study found that risk aversion becomes pertinent in a principal-agent theory, and serves as a source of insurance trade-off. Therefore,

fathoming the attitude of individuals encountering uncertainties are correct for insurance.

Having considered the findings, the research recommended thus that:

i. Insurance companies should make clarifications on their firms' values when connecting with motor insurance policyholders in relations to their diverse risk attitudes;
ii. Motorists' decreasing marginal utility of income should concurrently be matched with their decision to opt for motor insurance policies;
iii. Frequent enlightenment programmes should be rolled out quarterly or bi-annually to capture more motorists into the pool of existing motor insurance funds;
iv. Insurance companies are advised to design insurance products that are inherently concave utility driven in nature so as to change the usual maxim that *'insurance is sold but not bought'* to '*insurance is bought and sold'*;
v. insurance companies should always consider the risk tolerant level, financial status, and conditions for premium of motorists before rolling out their motor insurance policies for purchase;
vi. Insurance companies and regulators should collaborate efforts with academia and devote this collaborations toward research and development in the area of insurance behavioural studies that will help improve insurance curriculum in Nigeria to better the industry capacity in terms of insuring public behaviour, redefinition of insurance policy to suit the Nigeria environment, expansion of market share and the likes; and
vii. Government should drive a policy to combat poor risk attitude among motorists and ensure that motor insurance is applied as a requisite instrument for moderating behaviours among drivers.

The research contributes immensely to knowledge in that it's educates motorists on the need to continually take conscious steps on their attitudes to risks and the need to see insurance as the most reliable technique whenever they are to approach motoring risk situations. It informs regulatory authorities in Nigeria insurance industry of the necessity to review, on a continuous basis, customers' database of motor insurance providers with reference to the number of motor vehicles in Nigeria. Stakeholders in the industry should periodically educate motorists on road risk situations in a bid to positively affect the behavioural disposition of drivers, curtailing the number of risk occurrences on our roads and develop motor insurance scheme that can carter for the needs of overall road users.

There are some important limitations to this research work. First, it emphasised the relationship between risk aversion and demand for insurance without taking cognizant of the risk seeking and risk indifferent persons. Second, the data for this report were collected from the motor insurance policyholders without taking note of the views or opinions of insurance companies in Nigeria. Thirdly, the research work is also limited in the area of the socio-demographic constructs of risk attitudes and demand for insurance. Future research studies should be embarked upon so as to address the limitations experienced in this study.

## REFERENCES

1. Adeleke, I., Hazard perception and demand for insurance among selected

| | | |
|---|---|---|
| | Olowokudejo, F.F., Ajemunigbohun, S.S., | motorcyclists in Lagos, Nigeria. *The South East Asian Journal of Management*, 10 (2), 121 – 140, 2016 |
| 2. | Ajay, S., Masuku, M.B., | Sampling techniques and determination of sample size in applied statistics research: An overview. *International Journal of Economics, Commerce and Management*, 2 (11), 1 – 22, 2014 |
| 3. | Ajemunigbohun, S.S., Oreshile, A.S., | Risk attitude and demand for motor insurance: An examination of selected motorists in Lagos State, Nigeria. *Journal of Developing Country Studies*, 4 (2), 144 – 153, 2014 |
| 4. | Aldridge, A., Levine, K., | *Surveying the social world: Principle and practice in survey research*. Buckingham: Open University, 2001 |
| 5. | Asika, N., | *Research methodology in the behavioural sciences.* Lagos, Nigeria: Longman Nigeria Plc, 2008 |
| 6. | Aumann, Y. | *An axiomatic foundation for the theory of risk aversion with applications to multi-commodity risk aversion.* Working Paper, June. Available at: https://sites.google.com/site/aumannbiu/home/publication-by-topic=1, 2017 |
| 7. | Awunyo-Vitor, D., | Comprehensive motor insurance demand in Ghana: Evidence from Kumasi Metropolis. *Management*, 2 (4), 80 – 86, 2012 |
| 8. | Barry, P., Ellinger, P., Scnitkey, G., Sherrick, B., | Factors influencing farmers' crop insurance decisions. *American Journal of Agricultural Economics*, 86 (1), 103-114, 2004 |
| 9. | Barseghyan, L., Molinari, F., O'DonoghueT.,Teitelbaum, J.C., | The nature of risk preferences: Evidence from insurance choices. *American Economic Review*, 103 (6), 2499-2529, 2013 |
| 10. | Beck, T., Webb, I., | Economic demographic and institutional determinants of life insurance consumption across countries. *World Bank Economic Review*, 17 (1), 51 – 88, 2003 |
| 11. | Beckett, A., Hewer, P., Howcroft, B., | An exposition of consumer behaviour in the financial services industry. *International Journal of Banking Marketing*, 18 (1), 15 – 26, 2000 |
| 12. | Beenstock, M., Dickson, G., Khajurian, S., | The relationship between property-liability insurance premiums and income: An international analysis. *Journal of Risk and Insurance*, 55 (2), 259 – 272, 1988 |
| 13. | Botha, A. | *Financial behaviours of customers as determinants for risk aversion and insurance consumption in South Africa.* Gordon Institute of Business Science, University of Pretoria, 2017 |
| 14. | Branstrand, F., Wester, F., | *Factors affecting crop insurance decision – A survey among Swedish farmers.* Master's thesis in Advanced level of Agricultural Programme – Economics and Management, Swedish University of Agricultural Sciences, 2014 |
| 15. | Browne, M.J., Kim, K., | An international analysis of life insurance demand. *Journal of Risk and Insurance*, 60, 617 – 663, 1993 |
| 16. | Browne, M.J., Chung, J., Frees, E.W., | International property-liability insurance consumption. *Journal of Risk and Insurance*, 67 (1), 73 – 90, 2000 |

17. Capuano, A., Ramsey, I., *What causes suboptimal financial behaviour? An exploration of financial literacy, social influences and behavioural economics.* University of Melbourne Legal studies Research Paper, 504. Accessed: https://www.cclsr.law.unimelb.edu.au/files/FINANCIAL_LIETRACY_PROJECT_RESEARCH_REPORT_MARCH_20113.pdf, 2011
18. Chiappori, P.A., Salanie, B., Testing contract theory: A survey of some recent work. *Advanced in Economics and Econometrics: Theory and Applications.* 8th World Congress, 115-149, 2003
19. Cohen, A., Einav, L., Estimating risk preference from deductible choice. *American Economic Review*, 97, 745-788, 2007
20. Cole,S.A., Gine, X., Tobacman, J., Topalova, P., Townsend, R.M., Vickey, J.I., Barriers to household risk management: Evidence from India. *American Economic Journal: Applied Economics*, 5 (1), 104-135, 2013
21. Cummins, D.J., Danzon, PM., Price, financial quality and capital flows in insurance market. *Journal of Financial Intermediation*, 6, 3 – 38, 1997
22. Dragos, S.L., Life and non-life insurance demand: The different effects of influence factors in emerging countries from Europe and Asia. *Economic Research-Ekonomiska Istrazivanja*, 27 (1), 169 – 180, 2014
23. Easterby-smith, M., Thorpe, R., Jackson, P.R., *Management research.* 3rd ed. London: Sage, 2008
24. Eeckhoudt,L., Fiori, A.M., Gianni, E.R., Risk aversion, loss aversion and the demand for insurance. *Risks*, 6 (60), 1-19, 2018
25. Ericson, K.M., Kircher, P., Spinnewjin, J., Starc, A., *Inferring risk perception and preferences using choice from insurance means: Theory and evidence.* Retrieved from: https://.pkircher/papers/manuscript_EKSS.pdf, 2016
26. Esho, N., Kirievsky, A., Ward, D., Zurbruegg, R., Law and the determinants of property- casualty insurance. *Journal of Risk and Insurance*, 71 (2), 265 – 283, 2004
27. Finkelstein, A., McGarry, K., Multiple dimensions of private information: Evidence From the long-term care insurance market. *American Economic Review*, 96 (4), 938-958, 2006
28. Finkelstein, A., Poterba, J., Adverse selection in insurance markets: Policyholder evidence from the UK Annuity market. *Journal of Political Economy*, 112 (1), 183-208, 2004
29. Fleurbaey, M., Welfare economics, risk and uncertainty. *Canadian Journal of Economics*, 51 (1), 5-40, 2018
30. Gine, R.T., Vickey, R., Patterns of rainfall insurance participation in rural India. *The World Bank Economic Review*, 22, 539-566, 2008
31. Hansson, H., Lagerkvist, C.J., Measuring farmers' preferences for risk: A domain-specific risk preference scale. *Journal of Risk Research*, 15 (7), 737-753, 2012

32. Huang, D., Query, T.J., *Design a new automobile insurance pricing system in China: Actuarial and social considerations*. Casualty Actuarial Society Forum, 67-102, 2007
33. Hussels, S., Ward, D., Zurbruegg, R., Stimulating the demand for insurance. *Risk Management and Insurance Review*, 8 (2), 275 – 278, 2005
34. Kahneman, D., Thaler, R.H., Anomalies: Utility maximization and experience utility. *Journal of Economic Perspectives*, 20 (1), 221-234, 2006
35. Kahneman, D., The myth of risk attitudes. *Journal of Portfolio Management*, 36 (1), 1-11, 2009
36. Kind, J., Botzen, W.J., Aerts, C.J. Accounting for risk aversion, income distribution and social welfare in cost-benefit analysis for flood risk management. *Advanced Review*, 8, 1-20, 2017
37. Kunreuther, H., Pauly, M., Insurance decision-making and market behaviour. *Foundations and Trends in Microeconomics*, 1 (2), 63-127, 2005
38. Lagos Bureau of Statistics, *Abstract of Local government statistics.* Retrieved from: https://mepb.lagosstate.gov.ng/wp-content/uploads/site/29/2017/01/ABSTRACT-OF LOCAL-GOVERNMENT-STATISTICS-2016.pdf, 2016
39. Lagos Bureau of Statistics, *Transport statistics.* Retrieved from: https://www.lagosstate.gov.ng/Transport_statistics_2017.pdf, 2017
40. Lieber, E., *Does it Pay to Know the Prices in Health Care*?. University of Notre Dame. Working Paper, 2015
41. Mercer, J., Prospect theory and political science. *Annual Review of Political Science*, 8, 1-21, 2005
42. Nyman, J.A., *The demand for insurance: Expected utility theory from a gain perspective*. July, 17. Retrieved from: https://www.researchgate.net/publication/45131640, 2001
43. O'Donoghue, T., Somerville, J., Modeling risk aversion in economics. *Journal of Economic Perspective*, 32 (2), 91-114, 2018
44. Olsson, C., *Risk management in emerging markets: How to survive and prosper*. Harlow: Pearson Education Limited, 2002
45. Outreville, J.F., The relationship between relative risk aversion and the level of education: A survey and implications for the demand for life insurance. *Journal of Economic Surveys, 2013*
46. Outreville, J.F., Risk aversion, risk behaviour and demand for insurance: A survey. *Journal of Insurance Issues*, 37 (2), 158 – 186, 2014
47. Oyetayo, Y., *Introduction to insurance.* Lagos: Wale Printing Press, 2001
48. Pritchett, S.T., Schmit, J.T., Doerpinghans, H.I., Athearn, J.L., *Risk management and insurance.* 7th ed. USA: West Publishing Company, 1996
49. Rabin, M., Thaler, R.H., Anomalies: Risk aversion. *Journal of Economic perspectives*, 15 (1), 219-232, 2001
50. Rossi, P., Black, J., *Entrepreneurship and innovation in automobile insurance.* Routlegde: New York, 2001
51. Sehhat, S., Kalyani, V.N., Effective factors for corporate demand for insurance: Empirical evidence from Iran. *Insurance Markets and Companies: Analysis and Actuarial Computations*, 2 (3), 65 – 75, 2011

| | | |
|---|---|---|
| 52. | Sekaran, U., Bougie, R., | *Research methods for business: A skill-building approach*. 7th ed. USA: John Wiley & Sons Limited, 2016 |
| 53. | Seog, S.H., | *The economics of risk and insurance.* West Sussex: John Wiley & Sons Limited, 2010 |
| 54. | Slovic, P., | *The perception of risk*. USA: Taylor & Francis, 2016 |
| 55. | Tomczyk, P., Doligalski, T., Zaborek, P., | Does customer analysis affect firm performance? Quantitative evidence from the Polish insurance market. *Journal of Business Research*, 6 (365), 47-61, 2016 |
| 56. | Tooth, R., | *Analysis of demand for home and content insurance*. Australia: Insurance Council of Australia, 2015 |
| 57. | Ulbinaite, A., Kucinskiene, M., Moullee, Y.L., | Determinants of insurance purchase decision making in Lithuania. *Engineering Economics*, 24 (2), 144 – 159, 2013 |
| 58. | Willis, L.E., | *Against financial-literacy education.* Accessed at: https://www..law.ulowa.edu/documents/ilr/willis.pdf, 2008 |
| 59. | Zhang, R., Brennan, T.J., Lo, A.W., | Origin of risk aversion. *Economics Sciences*, 111 (50), 17777-17782, 2014 |



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