Risk Perceptions and Attitudes of Lecturers in response to the new University of Zimbabwe degrees curriculum

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Abstract
This paper investigated the risk attitudes and preferences of lecturers at the University of Zimbabwe in response to the new degrees curriculum that was recently implemented. Overall, 44.7% of the lecturers were risk neutral, showing that the change would not perturb their responsibilities eminently whilst 36.2% were risk-lovers. There were significant association between risk attitude and gender, years of experience and the faculties where the lecturers worked, and an insignificant association was exhibited with the personality of the lecturers who were predominantly open-minded. The multinomial regression model showed that risk loving was significantly defined for the lecturers in the faculty of science and those with 6 – 10 years experience; risk averse was significant for female lecturers and for lecturers from the faculties of engineering and agriculture. This study therefore concludes that male lecturers, teaching staff with 6-10 years of experience and the faculty of science support the launch of the new university curriculum. Personal attributes of lecturers were found to be insignificant when considering decisions on the launch of the program as in most cases where these attributes play a very significant role.

Key Words: risk perception, risk attitude, personality, association, modeling

1. Introduction

Decisions on public policies rides on the assumption of homogeneity of behavior of the people in terms of risk perceptions and risk attitudes and less on the benefits and the ill-effects associated. Behavior encompasses but is not entirely, personality attributes, emotions, trust, empathy, mood, and moral values, which unfortunately in most people groups that are characteristically heterogeneous tend also to be heterogeneous, even in homogeneous groups, heterogeneity in behavior is inevitable. Long term success of public decisions hinges mainly on the apprehension of the public's risk attitudes and perceptions towards the decision, as they are the bearers of the consequences of the decision.

The University of Zimbabwe in line with its drives for quality assurance and marketing as the international brand of choice for tertiary education, commencing in the 2012/13 effected the new degree curriculum structure in most of its program, now having a one year industrial attachment, moving from the three- year structure. The population groups whose risk perceptions and attitudes are of interest to investigate for the sake of projecting the appropriateness of this change and its admissibility are the lecturers, students, and the parents. In an earlier paper, Matangi and Maposa (2012) investigated the students' risk management, but here we seek to investigate the risk perceptions and attitudes of the lecturers as they play a crucial role in the expedience of the programs.

2. Literature Review

Kalogeras et al (2008), coined risk perception as the reflection of a consumer's interpretation of his/her chance of beingexposed to the contents of a risk. The understanding of this is pivotal for institutional decision-making and for policy implementation in order for the expected goals to be achieved. Schmidt (2004) acknowledged that the main qualitative determinants of risk perception based on the risk to be met were voluntariness, controllability, delay effect, natural vs. manmade, familiarity and habituation, benefit and risk-benefit distribution, and the role of the media. These all point to the association of risk perception to both the demographic and personality attributes of the individuals involved or exposed to a risk.Nordenstedt and Ivanisevic (2010) consented to the fact that risk perception plays an integral part in risk management in terms of the quality and impact of the decisions made based on its knowledge. In spite of the already acknowledged demographic significant differences in risk perceptions Nordenstedt and Ivanisevic (2010b) also observed that values (*an attribute of personality*) were fundamental in governing human behavior.To explain the anticipatory connection betweenmotivational values and risk perception, they recommended that finer statistical methods and larger samples be used.

Risk attitude is determined by risk perception as it is the chosen response of an individual or group to uncertainty that matters. An effective comprehension of risk attitude is vital in the promotion of sound decision-making in risky situations. This is done through the identification of the risk preferences of the participants in a risk situation.

Kalogeras et al (2008b) together with Costa Font and Gil (2009) concurred that risk perception and risk attitude, as separate entities, were of great importance in the understanding of the risk response of consumers to food safety issues and genetically modified organisms. Costa Font and Gil (2009b) appreciated that risk perception was paramount in decision-making especially whenthere was insufficient information to the consumers hence the factor of control over the risk was no longer in their hands. Lee *et al* (1994) noted that in a survey done of technological issues, the public could not form consistent sentiments due to the effect of risk management issues and hence they recommended that institutions and researchers involved in such studies should ensure that they effectively communicate relevant information so that the people could make consistent opinions. This affirms the qualitative factors acknowledged by Schmidt (2004) in risk perceptions

and ultimately in risk attitude of the public in policy implementation on their societies. Schroeder *et al* (2007) noted that food safety issues contributed to market volatility due to the consumers' concerns and reactions in terms of risk perceptions and risk attitudes hence did an investigation of these on beef consumption in four countries. Their research findings showed that food safety management strategies should vary across countries because of identified differences in food safety risk attitudes and risk perceptions. They alluded to the need of comprehending cross cultural beliefs (*a personality determinant*) in the risk perceptions and attitudes due to the markets' globalization and hence trade dependency. Hyntka (2011) revealed the challenges brought about by the concepts of social amplification and social attenuation in terms of amplification and underestimation of risk which influenced decision-making and sustenance, all these emanating from risk perceptions, which he defined to be an individual's beliefs about how unsafe certain activities or hazards actually are. He acknowledged the difference in risk perceptions and risk attitude of which in the latter he noted that variations amongst individuals were in both content and context, that is, domain-specific, such as personal choices.Slovic *et al* (1982) asserted that studying risk perceptions was essential in that through the examination of people's opinions, helps to characterize and evaluate hazardous activities and technologies. They further consented to the fact that acceptability of risk analysis guided societies' response with a minimum of conflict, contradiction and doubt whilst others fueled debate on decisions or policies implemented. Schwartz and Hasnain(2002), in their medical research on informed consent forms, observed that understanding risk perceptions and risk attitudes were crucial in order to avoid ethical dilemmas in shared medical decision making and in designing educational materials for risk communication. The 'reflection effect' was revealed in the risk attitudes of the undergraduate students sampled in terms of the gain and loss frames of the outcomes.

Anderson *et al* (2011) observed that personality traits had a stronger predictive power over economic preference particularly over credit scoring, job persistence, and heavy truck accidents. These findings showed that an integration of personality and decision theories provided a platform for the conceptual structure to understanding how personality traits affected economic preferences. Weigel (2009) observed that personality type was among a host of factors that were instrumental in risk management decision-makingamongst farm producers. However, C*á*rdenas and Stout (2010) showed that there was no significant correlation between personality and decision making or intelligence, albeit they lamented the homogeneity of the sample, which limited on the variance amount.

3. Materials and Methods

The research design employed in this investigation was quantitative research design as we wanted to find out the risk perceptions and attitude of the lecturers at the University of Zimbabwe in response to the new degrees curricula. Data was collected over the period September up to November 2012 through the administration of a questionnaire. The target population consisted of lecturers in the faculties of Arts, Science, Social Science, Engineering, Commerce, and Agriculture. The diverse spectrum of faculties ensured that heterogeneity was inevitable in the data collected. The five-factor model of personality best known as OCEAN; Openness, Conscientiousness, Extroversion, Agreeableness, and Negative Emotionality (*Neurotic*), according to Santos *et al* (2009), was used to model the personality of the lecturers.

This study was a snap investigation, and the absence of acomprehensive sampling frame of the lecturers restricted our sampling technique to a non-probability one, in this particular case, we employed convenience sampling.

The data was analyzed using Statistical and Presentational System Software (SPSS) version 16 andSTATA. Explorative quantitative analysis were conducted on the risk perceptions and personalities exhibited, tables were constructed to ascertain the risk attitudes of the lecturers. Association tests were doneusing the chi-

square on personality and risk attitude. The level of significance employed in these investigations was = 0.05. A multinomial logistic regression model was used to ascertain the relative odds associated with the different lecturer personalities to their risk attitudes.

4. Results and Discussions

The sample consisted of 97 lecturers from different faculties and departments. The composition by gender of these lecturers was 64.9% males and 35.1% females. This reflects the distribution of gender on lecturing positions at the University of Zimbabwe. The age distribution of the lecturers shows that 33% were in the age group 25-34, 39.2% in the age group 35-44, 19.6% in the age group 45-54 and 8.2% in the 55+ age group. This shows that the majority of lecturers at the University of Zimbabwe are in the 35-44 age group, highlighting the impact of brain drain in the last decade which saw most experienced and senior academics leaving the institution and country for greener pastures in the region and abroad. The majority of the participating lecturers had between six and ten years of experience (41.1%), followed by those with 1-5 years (40%). The majority of respondents (66.3%) indicated that they had an open minded personality, 17.9% said they were of an agreeable disposition while only 3.2% professed to be extroverts and 2.1% said they were neurotics. The balance of personal attributes, academic experience, age and sex helped us to assess the risk preferences and attitude of these lecturers in a more representative and comprehensive manner.

The sample revealed that only 94 out of 97 (96.9%) of the respondents completed the risk preference questions, indicating a 96.9% response rate. The risk attitudes distribution of the lecturers consisted of 36.2% risk lovers, 44.7% risk neutral and 19.1% risk averse. This shows that most lecturers were risk neutral pertaining to the introduction of the four year degree program curriculum. In other words, most lecturers seem not to be concerned or worried about whether the new curricula were introduced or not.

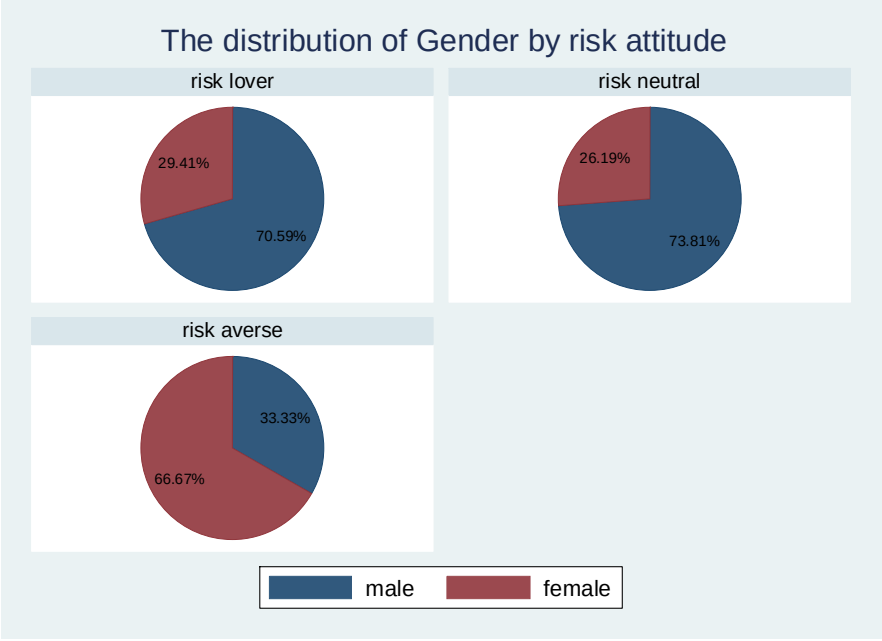

Figure 1: Distribution of gender by risk attitude

Figure 1 shows the distribution of gender within each risk attitude. For those who are risk lovers, 70.59% were males and 29.41% were females. This indicates that for the risk lovers, more males were risk tolerant as

compared to their female counterparts and hence they were keener to have specialization programs as compared to the female lecturers. The 44.7% lecturers who were risk neutral were composed of 73.81% males and 26.19% females. The risk averse respondents were constituted of 66.67% females and 33.33% males. This indicated that most female lecturers were not for the change of the degrees curriculum. This highlighted the general trends in risk attitudes towards any risky decisions; male lecturers tended to be more risk tolerant as compared to their female counterparts who always showed a conservative position.

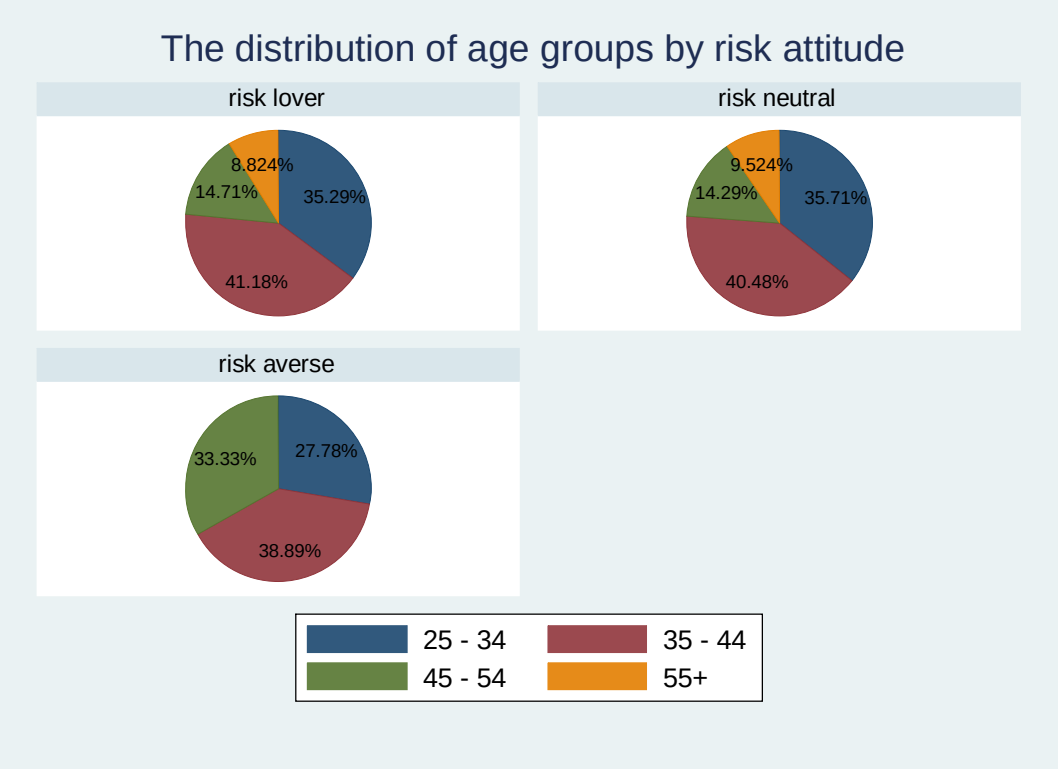

Figure 2: The distribution of risk attitude by age groups

Figure 2 shows that among those that indicated that they were risk loving, 36.29% were in the age group 25-34, 41.18% were from the 35-44 age group. These age groups constitute the majority of employees at the University of Zimbabwe who are lecturing and they dominate in each of the risk attitude categories.

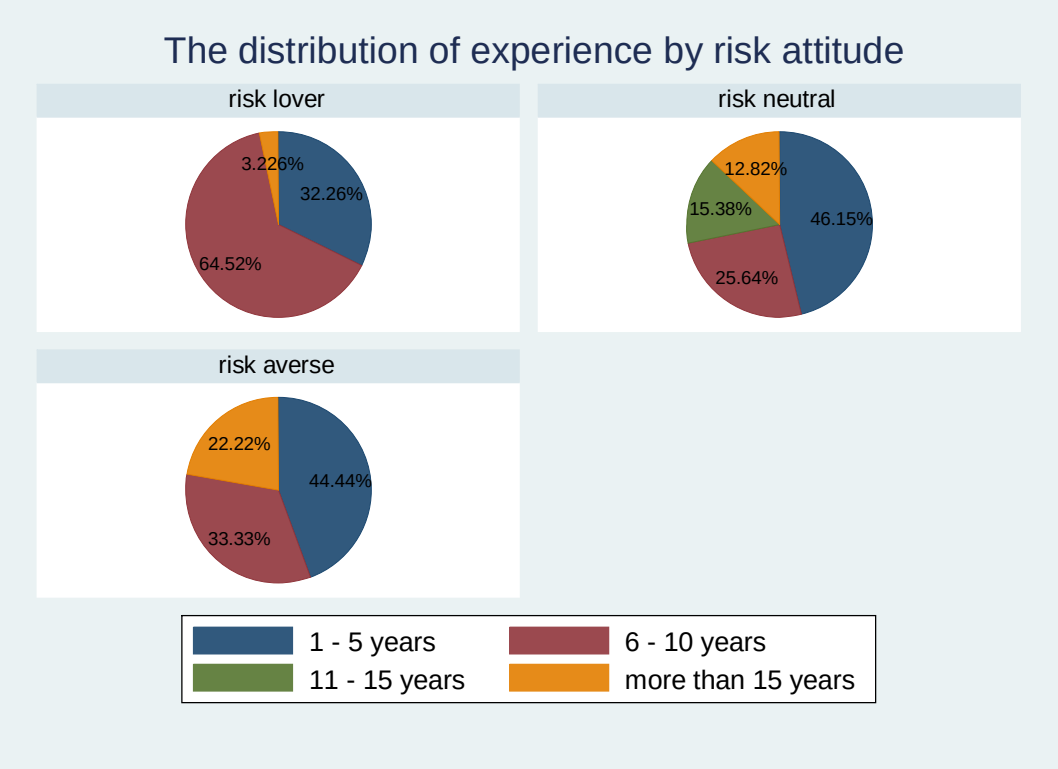

Figure 3: Distribution of experience by risk attitude

Figure 3 shows that most of the respondents (46.15%) who indicated that they were risk neutral had 1-5 years of working experience whilst for the risk loving, 64.52% had 6-10 years of experience. This shows that the lecturers with 6-10 years experience were for the change in curricula whilst the other experience levels lecturers were not so keen of the idea.

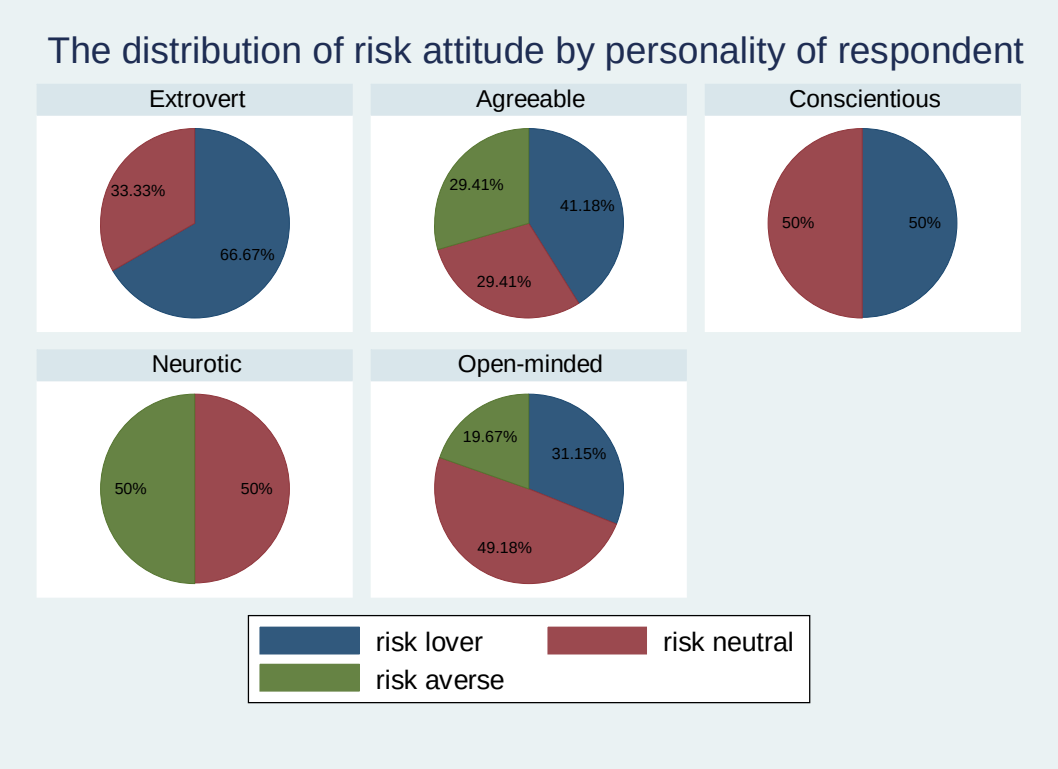

Figure 4: The distribution of risk attitude by personality

The sample revealed that only a few respondents said they were extroverts 3.2% and neurotic (2.1%) hence we may not derive much from these two in terms of the distribution of their risk attitudes. In the agreeable group, 41.18% were risk loving, 29.41 were risk-neutral, and 29.41% were risk averse. The open minded lecturers consisted of 49.18% risk-lovers and 19.67% were risk averse, with the remainder being risk neutrals.

4.1 The associations between risk attitude and the lecturers' characteristics

Chi-square tests of association were carried out between the risk attitudes and the lecturers' demographic characteristics at a significance level, α, of 5% and the following results were obtained.

Table 1: The table for associations between risk attitudes and lecturers' characteristics

Lecturer characteristic	Chi-square value	Degrees of freedom	p-value
Gender	9.819	2	0.007
Age group	4.807	6	0.569
Faculty	29.759	10	0.001
Experience	18.868	6	0.004
Qualification	8.054	6	0.234
Place of training	10.017	8	0.264
First qualification	5.475	6	0.484
Personality	8.289	8	0.406

Table 1 shows that the lecturers' risk attitudes were related to their gender, the faculties in which they worked in, and their years of experience. The other attributes were not significantly associated with the risk attitude disposition of the lecturers.

4.3 The multinomial model of the risk attitudes in terms of the demographic attributes of the lecturers

Multinomial regression analysis was conducted to ascertain the relationship between the risk attitudes of the lecturers and their demographic characteristics, and the following results were obtained.

Table 2: The multinomial model for risk perceptions with significant determinant lecturer characteristics

	Coef. Std. Err.	z	P>z	[95%Conf.	Interval]
Risk lover					
Gender					
Male	ref				
Female	.143533 .7513856	0.19	0.849	-1.32916	1.616222
Faculty					
Arts	ref				
Science	1.804918 .8956196	2.02	0.044	0.049536	3.5603
Social Sci.	-.9984331 1.035211	-0.96	0.335	-3.02741	1.030544
Eng.	-.6971201 .956951	-0.73	0.466	-2.57271	1.17847
Com.	1.131282 1.443348	0.78	0.433	-1.69763	3.960192
Agric.	-18.30487 3640.161	-0.01	0.996	-7152.89	7116.279
Experience					
1-5 yrs	ref				
6-10 yrs	1.465157 .7227545	2.03	0.043	0.048584	2.88173
11-15yrs	-19.21429 5258.104	0	0.997	-10324.9	10286.48
16+ yrs	-.3280816 1.34588	-0.24	0.807	-2.96596	2.309794
const	-.7975892 .8090426	-0.99	0.324	-2.38328	0.788105
Risk neutral	(base outcome)				
Risk averse					
Male	ref				
Female	1.446553 .7342938	1.97	0.049	0.007363	2.885742
Faculty					
Arts	ref				
Science	-.5022829 1.112982	-0.45	0.652	-2.68369	1.679122
Social Sci.	-.8451135 1.039039	-0.81	0.416	-2.88159	1.191365
Eng.	-2.977274 1.478659	-2.01	0.044	-5.87539	-0.07916
Com.	-.693696 1.93029	-0.36	0.719	-4.477	3.089604
Agric.	-2.239888 1.129717	-1.98	0.047	-4.45409	-0.02568

Experience					
1-5 yrs	ref				
6-10 yrs	.3505722 .7943582	0.44	0.659	-1.20634	1.907486
11-15yrs	-18.82503 6186.795	0	0.998	-12144.7	12107.07
16+ yrs	1.945592 1.159458	1.68	0.093	-0.3269	4.218088
Const.	-.7225106 .8315524	-0.87	0.385	-2.35232	0.907302

Table 2 shows the multinomial logistic regression model with the significant determinant lecturer characteristics as determined from the chi-square tests of association from Table 1. The table shows that for gender, females were 0.1435 likely to be in the risk loving category than in the risk neutral category, relative to their male. The table also shows that the female lecturers were 1.4465 likely to be in the risk averse category than to be in the risk neutral category in comparison to the male lecturers. This result indicates that female lecturers were more likely to favor a more conservative decision than a risky one.

The faculty of science lecturers were significantly different from the faculty of arts lecturers on their risk attitudes ($p=0.044$). The lecturers from the Science faculty were 1.8049, almost twice likely to be in the risk loving category than to be in the risk neutral category, in comparison to the lecturers from the faculty of Arts. This shows that the faculty of science lecturers were fully behind the change in curricula in contrast to their counterparts in the faculty of arts. The faculty of science lecturers were also 0.50223 less likely to be in the risk averse category than the arts faculty lecturers as compared to being in the risk neutral category.

The years of experience also indicated a significant difference in how those lecturers who had 1-5 years of experience differed from those who had 6-10 years of experience ($p=0.043$). The results showed that lecturers who had 6-10 years of experience were 1.4652 more likely to be in the risk loving category than to be in the risk neutral category compared to those lecturers who had 1-5 years of experience. Lecturers with 6-10 years of experience were also 0.3506 likely to be in the risk averse category than those who had 1-5 years of experience. This result indicates how the years of experience had an impact on how the lecturers decided on supporting the new curricula with four years for undergraduate students. The lecturers who had 6-10 years of teaching experience at the university were more likely to support the new curricula as compared to the new staff that had not been exposed to the system for as much time.

5. Conclusion and Recommendations

We conclude that the majority of the lecturers were risk neutral implying that they were not perturbed much by the change of the degrees curriculum. A considerable number of them were risk lovers showing that they were eager to embrace the change to the degrees curriculum. Significant associations were revealed between the lecturers risk attitudes and gender, their years of experience, and the faculties where they work. The association between the risk attitude and the faculty of teaching revealed the perceived notion of the lecturers on the one year industrial attachment with respect to their fields of specialization; hence the feasibility of this option has to be investigated at faculty level. Personality was insignificantly associated with the lecturers' risk attitudes. The faculty of science lecturers were twice more likely to be in support of the new proposed program, this may be as a result of a long debate that have existed in the faculty of changing the curriculum to suit the trends other institutions of higher education at both national and regional level. The research paper also concludes that there is a higher chance for women to be more conservative in their decision making (risk neutral/averse) as compared to the male lecturers. This is a common trait in most decision making situations, women tend to be more risk averse whilst men are risk takers. Years of experience was also shown to be significantly associated with a risk loving attitude, that is, the attitude of supporting the new curriculum. Most of the lecturers with 6-10 years were in support of the idea as compared to other years of experience; this may be due to the time period at which these people started their jobs at the University.

We recommend that risk perceptions and studies be further investigated at faculty levels on the one year attachment, with the exception of the faculty of science which seemed to appreciate it. Furthermore, as most

lecturers were risk neutral in respect to the new degrees curricula, the university must embark on rigorous workshops of motivating them to embrace this initiative for it to be successful.

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