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*Research Paper*

## **Self-Esteem, Risk-aversion and Post Purchase Regrets: Moderating effect of Demographics in Sri Lankan Shopping Malls**

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### **ABSTRACT**

Mall shopping is a dynamic trend in today's marketplace where the mall owners highly focus on delighting their consumers. Post-purchase regret is one of the critical areas investigated in consumer satisfaction theories. Though many studies have been focused on post-purchase regrets, very few studies have been focused on moderating the effect of customer demographics. As a result, this study was designed to investigate the effect of selected demographics on customers' self-esteem and risk-aversion perceptions of experiences at malls. The available literature was thoroughly referred to as design studying hypotheses for the investigation. Data were collected by following an online survey based on a structural questionnaire targeting people who experienced mall shopping in 2020. After verifying the sample's reliability and validity, the collected valid responses (349) were considered for the analysis. The analysis results indicated a moderating effect of career and the consumer's monthly income on the relationship between post-purchase regret and self-esteem. On the other hand, the demographics such as age, gender, marital status, occupation, and monthly income of the consumer were found as moderators for the relationship between post-purchase regret and risk-aversion of the consumer. Based on the findings, relevant recommendations were discussed to improve the customer experience at malls.

**Keywords:** Post-purchase, Risk-aversion, Self-esteem, Moderating Effects, Shopping Mall

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## 1. INTRODUCTION

At present, with rapid urbanization, mall shopping has gained enormous growth. The mall shopping concept enables customers to gain a more fabulous buying experience at malls. Placing a large variety of retail shops under one roof combined with entertainment facilities helps consistently to attract customers to malls. As per Bloch et al. (1994), the concept of “buying everything in one place” is the leading cause of such an attraction towards the malls. The trend of mall shopping diffused rapidly after establishing “Country Club Plaza”, the world’s first shopping mall, founded by J.C. Nichols Company in Kansas City in 1922 (Animesh). The demographics and socialization might have mainly influenced the movement. As per Rajagopal (2009), the size of the customer segments in urban areas was affected primarily by the growth of malls.

Shopping Malls not only focus on delivering products and services. It is also a place where the community makes arrangements to meet-ups. Paul (2017) states that the growth of malls is higher than retail shops because of the availability of the latest brands and products at discounted prices. Though there is a rapid growth in shopping mall establishments, management must continuously focus on customers as they represent company stability in competitive markets. Thus, frequent concern about customer satisfaction, as well as regrets, is vital. The retail sector in Sri Lanka has a significant opportunity for economic advancements due to rapid urbanization. As of 2019, the share of the urban population in the total population of Sri Lanka was 18.59% (Plecher, 2020). The increasing demand for malls has increased the diversity of support the mall operators provide.

Regret can be defined as an adverse effect and a counterfactual thought of the customer (Moakhar, Shafigh, Kazemi, Zerafat, & Kalantari, 2018). From a customer satisfaction perspective, a regret resulting from dissatisfaction can be identified as one of the most significant factors. While satisfied customers spread good word of mouth, the dissatisfied ones switch to alternative brands and share negatives among others. Since word of mouth is

more powerful than all the other communication tools, a deeper concern is always vital to retain the customer base. It was found that the average consumer makes a couple of thousands of decisions daily (Zeelenberg & Pieters, 2007), and regret starts to occur when they make wrong decisions or judgments (Clarke & Mortimer, 2013). Regrets may cause to increase in the number of complaints received by the company and damage customers' repurchase intentions. Since the regret can damage the mall itself and its brand name, management focuses on customers' post-purchase behavior, and their attitudes are of utmost importance for their survival.

The study objective is to find the moderating effect from customer demographics on the defined relationships in Sri Lankan shopping malls. As the scope for cognitive factor evaluation is high, this study is confined to identifying moderating demographic factors for the relationships between post-purchase regret and self-esteem; risk-aversion. According to the study of Ekanayake and Karunarathne (2021), these two factors have a significant relationship with post-purchase regret. Self-esteem and risk-aversion of a consumer are factors that appear through the self-perception of a consumer. Those variables are somewhat sensitive to marketing efforts. For instance, a service experience at a mall shop can alter the self-esteem of a consumer. It can also extend to reduce or increase the risk-aversion of the consumer. From the marketing perspective, understanding these relationships is helpful to recognize customer behavioral status; thus, management can develop marketing strategies appropriately. The study also aims to identify ways to enhance the post-purchase customer experience at malls by understanding the interference of demographics.

## **2. LITERATURE REVIEW**

In behavioral studies, customer satisfaction is considered one of the prominent factors in understanding service quality. By definition, satisfaction is the consumers' response to a product or service, including under or over fulfillment (Oliver, 1997). In literature, numerous factors have been identified which affect customer satisfaction.

Bloch, Ridgway and Dawson (1994) states that a shopping mall is a place where products and services as well as a consumable experience. With consumption, a level of satisfaction can be identified. In consumer behavior, post-purchase regret is the dissatisfaction with a

product after it has been purchased (Izah & Iskandar, 2019). Saleh (2012) noted that regret directly affects satisfaction and purchase intention. Regret necessarily lowers the consumer satisfaction level, which leads to brand switching (Bui, Krishen, & Bates, 2011). Zeelenberg and Pieters (2007) have investigated a set of propositions that capture essential psychology elements and stated that regret is distinct from related other specific emotions. The capture of these regrets in shopping malls tends to identify feasible options to retain customers.

The self-esteem of a consumer is one of the significant cognitive elements that lead to post-purchase regret. As per Zeigler-Hill and Myers (2012), there's a difference in self-esteem levels between men and women. Self-esteem shows a positive attitude towards themselves (Rosenberg, 1965), and this attitude has been extended to post-purchase behavior. As per Zeelenberg and Pieters (2007), self-disgust leads to post-purchase regret. This has been confirmed by Rai and Kimmel (2015) and noted positive effects of perceived self-responsibility on post-purchase regret. It implies that people can follow or reject a product under the influence of societal thoughts. In other words, social factors are bound to the self-esteem of a customer. It implies that when self-esteem is high, people move with social relationships outstandingly.

Risk-aversion is another factor that relates to consumer post-purchase regret. Li, Liu, and He (2014) defined risk-aversion as the willingness to accept risk when there's uncertainty about the outcome. As per Zeelenberg and Pieters (2007), regret aversion influences behavioral decisions. Concluding Zeelenberg and Pieters (2007) statement, Rai and Kimmel (2015) stated that post-purchase regret also increases proportionally when risk-aversion increases.

However, Consiglio and Van Osselaer (2019) revealed that when service quality is good, high or low self-esteem consumers have the same risk aversion while high self-esteem consumers are less risk-averse. Contrastingly, Yang, Dedovic, and Zhang (2010) found that low-self-esteem and high self-esteem people have the same risk-taking decision-making in behavioral assessment. Further, the study extended the conclusion using electrophysiology and suggested that high self-esteem participants experienced more emotional signals than low-esteem participants when making decisions.

The literature review showed that the cognitive elements, namely; self-esteem and risk-aversion are significant factors to assess post-purchase regret. However, these findings were further developed through demographic moderation effects by some researchers. As for the situational factors, moderating analysis of Ekanayake and Karunaratne (2021) found that the career of the consumer is a critical factor for post-purchase regret. On the other hand, a clear behavioral difference in the time and geographical locations can be identified through the literature. Since customer behavior and satisfaction is an ongoing process that constantly changes with the environment, a clear identification of post-purchase regret and changes in consumer behavior in different geographical locations is vital to implement different techniques to maximize customer satisfaction. Also, very limited applications in mall shopping were noted throughout the literature review. Therefore, an intensive review of consumer behavior reveals that understanding moderating effect analysis is a successful step for the development. The following literature provides the necessary background to develop hypotheses in Sri Lankan mall-shopping concept.

Several moderating factors that affect the relationship between cognitive factors and post-purchase regret have been identified in the literature. For instance, Armstrong (2017) findings have been noted an unchanged post-purchase regret level with age. From a self-esteem perspective, similar indistinguishable behavior was found in a study conducted in Japan (Ogihara, 2019). In contrast, several authors have seen the changes in regret levels with customers' age. For example, Dietz (1996) identified a decrease in self-esteem with age. Another study showed less aversion in the 41-55 age group than in the 25-40 (Arora & Kumari, 2015). With that, the following hypotheses were designed to identify the moderating effect of age in the current study.

*H<sub>1a</sub>: The age of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

*H<sub>The age</sub>: Age of the consumer moderates the relationship between risk-aversion and Post-Purchase Regret at shopping malls in Sri Lanka.*

When considering the gender of a consumer, women like to shop for aesthetic products, while men prefer functional purchases (Dittmar, 1989). It implies that the gender of the consumer matters with the impulse buying behaviour; especially among women.

Usually, women tend to make a purchase decision with the best options, while men tend to choose according to their necessity immediately. Moakhar, Shafiqh, Zerafat and Sohae (2018) found that Self-esteem positively affects post-purchase regret. Additionally, Hanks and Mattila (2014) found that when female consumers are in a good mood, they tend to have less guilt about the purchase. According to Kavitha (2018), concerning the Indian context, males have a reasonable product quality satisfaction at malls, while a female was stating a satisfactory. A contradiction was raised by Saleh (2012), saying that post-purchase regret is more intensive among women in the Saudi region. But, according to (Lakshmi, Niharika, & Lahari, 2017), there's a difference in purchasing concerning gender. These findings imply a behavioral difference with the time and geographical locations. Since there's a contradiction, the current study addresses the following hypotheses.

*H<sub>1b</sub>: Gender of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka*

*H<sub>2b</sub>: Gender of the consumer moderates the relationship between risk-aversion and Post-Purchase Regret at shopping malls in Sri Lanka*

Education level is another factor considered in previous studies to observe consumer behavior some studies have considered not only a consumer but also parental education for behavioral changes. For example, as per Sahin, Barut, and Ersanli (2013), parental education level has a positive influence on the self-esteem of adolescents in Turkey. Concerning the influence of gender in the Pakistan context, the self-esteem of female adolescents is higher than that of males (Bhamani, Jamil, & Mohsin, 2014). Further, this study has concluded that female adolescents have scored higher in academics in Pakistan. However, Aryana (2010) extended this finding as self-esteem is also proportional to education level. The average level of post-purchase regret does not vary with the consumer's level of education (Armstrong, Abubakar, & Sikayena, 2017). But it can argue that there's still the possibility of moderation from the education level since this education contains language literacy, financial literacy, and computer literacy as well. As per Heenkenda and Chandrakumarv (2014), when financial literacy is high, the ability to accept the risk is higher. He also argued that the more the person experiences financial literacy, the more they tend to be risk-averse, and it essentially lowers the post-purchase regret. From this literature, the following hypotheses were developed in this study.

*H<sub>1c</sub>: The education level of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

*H<sub>2c</sub>: The education level of the consumer moderates the relationship between risk-aversion and Post-Purchase Regret at shopping malls in Sri Lanka.*

As per Jan and Ashraf (2007), unmarried women have high self-esteem, while unmarried women have low self-esteem. The number of dependents in a family increases with a marriage. But considering overall sectors of rural or urban in Sri Lanka, marital status does not influence risk aversion (Heenkenda & Chandrakumarv, 2014). Married women are more influenced by retail store factors than unmarried women (Ramprabha, 2018). Risk tolerating leads to an ability to accept risk. Unlike western countries, Asian countries tend to live with families. They shop as a family. So losing money over a product or having a post-purchase regret due to a forgone alternative does not severely affect as in Western countries. With these contrasting statements, the following hypotheses were developed to conclude a relationship in the Sri Lankan context.

*H<sub>1d</sub>: Marital Status of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

*H<sub>2d</sub>: Marital Status of the consumer moderates the relationship between risk-aversion and Post-Purchase Regret at shopping malls in Sri Lanka.*

According to Heenkenda and Chandrakumarv (2014), a person's career can affect the risk-tolerance level of that person. Further, the study proved that the risk aversion of government employees is lower. According to Jan and Ashraf (2007), women who are working have shown higher self-esteem. Working men and women can have different post-purchase regrets at shopping malls in Sri Lanka. Concerning that assumption, the following hypotheses were developed.

*H<sub>1e</sub>: The career of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

*H<sub>2e</sub>: The career of the consumer moderates the relationship between risk-aversion and Post-Purchase Regret at shopping malls in Sri Lanka.*

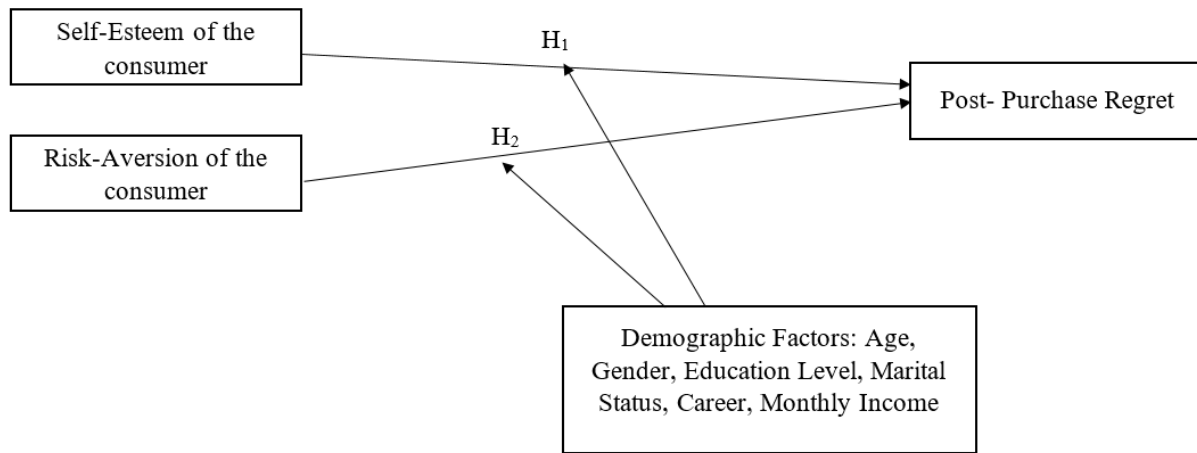
According to Pei (2015), high-income consumers tend to be dissatisfied with products easily and do returns frequently. The income level of both men and women in Sri Lanka does not have a considerable gap, other than the discrimination against women's salaries

(Thankom & Vani, 2011). But this income level can be influenced by mall shopping. With this assumption, the following hypotheses were developed.

*H<sub>1f</sub>: Monthly Income of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

*H<sub>2f</sub>: Monthly Income of the consumer moderates the relationship between risk-aversion and Post-Purchase Regret at shopping malls in Sri Lanka.*

According to the literature review, the developed hypotheses are proposed in a model as shown in Figure 1. The moderation effect of selected demographic variables is considered on is the relationship between post-purchase regret and self-esteem; risk-aversion.



**Fig 1.** Proposed model of the study

### 3. METHODOLOGY

The analysis of the demographic factors on self-esteem and risk-aversion relationship with post-purchase regret is discussed in this study. The study used the SPSS PROCESS Macro tool to identify moderating effect after fitting the regression model with self-esteem and risk aversion. In multiple linear regression, the default model does not carry interaction effects. When interactions are ignored, the resulting model is incorrectly specified. Research is sound when including interaction effects.



As the initial step of data collection, the convenience sampling method was followed to gather primary data from the targeted sample. Online Survey was conducted referred to a designed structured questionnaire, and the maximum reachable customers were chosen to minimize the error associated with the convenience sampling technique. Out of 475 collected responses, 349 responses were identified for this study after removing careless responses by calculating response biases. First, the reliability and validity tests were performed.

Respondent's socio-demographic details were analyzed to develop a sample profile. The final sample consisted of 43.6 % male respondents and 56.4% female respondents. In terms of respondent age, 49.9% belonged to the age category of 21-30. Only 3.3% were aged below 20 years. The majority were single, representing 55.6% of the sample, and 44.4% were married. 54.2% of respondents have gained the bachelor's degree qualification as the highest educational qualification during the data collection period, while 23.66% of respondents mentioned a post-graduate qualification. Among the respondents, the monthly income was less than Rs. 20,000 or using parents' money was recorded as 35%, while 13.6% had more than Rs 100,000 gain per month. The sample consisted of 30.1% of respondents who were students and 23% were public sector employees. The demographic profile is shown below in Table 1.

**Table 1.** Demographic Profile

Variable	Category	Amount	Percentage
Age (Years)	<20	12	3.3
	21-30	184	49.9
	31-45	56	15.2
	46-60	72	19.5
	>61	45	12.2
Gender	Male	161	43.6
	Female	208	56.4
Marital Status	Single	205	55.6
	Married	164	44.4
Education	High School	41	11.1
	Diploma	41	11.1
	Bachelor Degree	200	54.2
	Higher Education Degrees	87	23.6

Income Level (Rs.)	<20,000/ Parents' Money	129	35.0
	20,000-59,999	103	27.9
	60,000-99,999	87	23.6
	100,000 or more	50	13.6
Current Career	Student	111	30.1
	Unemployed	12	3.3
	Self-employed	26	7.0
	Private Sector Employee	84	22.8
	Public Sector Employee	85	23.0
	Business Owner	26	7.0
	Retired	25	6.8

The five-point Likert scale ranging from "strongly disagree" to "strongly agree" was used for each measuring item to gather information. The measurement scales for self-esteem and risk aversion were developed by referring to previously validated questionnaires. The designed questionnaire was translated to Sinhala (local language) and distributed to make it understandable for the community. A pilot test was carried out to find the respondents' understandability, and based on that, further alterations were made.

The development of measurement constructs was mainly based on past studies. For the variables post-purchase regret, measurement constructs were derived from the study carried out by Chen, Hui, & Wang (2015). A well-known scale developed by Rosenberg (1965) was used to construct measurements for self-esteem. Finally, the risk aversion construct was obtained from the study undertaken by Mandrik and Bao (2005).

## 4. RESULTS

### 4.1 Preliminary data analysis

As the initial step, the internal consistency of the sample was checked using Exploratory Factor Analysis (EFA) for all the measurement scales in the questionnaire. For the scale used, Principal Component Analysis was carried out via Promax rotation. It resulted in the availability of three dimensions in the sample. The lowest extraction weight was noted as 0.483. After verifying with the pattern matrix, Kaiser-Mayer-Olkin (KMO) value was observed to check the sampling adequacy. The result revealed that sampling adequacy is 0.748, which means 74.8% of solid sampling adequacy is present.

Further, the Bartlett test resulted in a significant value. The model has explained 56.54% total variance. Therefore, the reliability level was acceptable for all the variables studied. Testing the validity of the survey was done using Pearson Product Moment Correlations ( $r$ ) by correlating each question score with the total score. According to the Pearson Product Moment Correlation Coefficient table, all  $r_{xy}$  values showed a value more than the  $r$ -value of 0.097824. Through that, all the question items were identified as valid. Also, all the instruments were declared significant.

#### 4.2 Multiple regression analysis/testing normality assumption

As the first assumption, the residuals should be normally distributed. The normal probability plot was plotted using residuals, raw data, and estimated parameters to identify outliers and skewness. Further, since all points are following a straight diagonal line, the residual normality assumption was accepted.

The multicollinearity test to identify similarities between independent variables was employed using VIF values. Multicollinearity test is conducted referring to VIF values. As per Douglas, Elizabeth, & Geoffrey (2012), the tolerance value is the inverse of the VIF value. The VIF values resulting as given in Table 2. Based on the coefficient result of collinearity statistics, VIF values are less than 3, concluding the non-existence of multicollinearity.

**Table 2.** Multicollinearity test -VIF values

Model Parameter	Collinearity Statistics	
	VIEW	VIF
Self-Esteem (SE)	0.612	1.634
Risk Aversion (RA)	0.612	1.634

A scatter plot diagram was generated to identify the linear relationship between the independent variables and dependent variables, and the output was given in Figure 3. It resulted in a relationship between regressions standardized predicted value and standardized residuals.

It has shown that all the spots have no specific pattern. Thus, it concludes that the residuals are random. Further, the regression model had a linear relationship between the dependent variable and independent variables with constant variance.

Two cases were identified in casewise diagnostics and were ignored due to Cook's Distance value performing 0.065, which is lower than 1. The cases were noted as they are not influencing to predict output accurately.

### 4.3 Multiple linear regression model

As the initial step in model fitting, ANOVA was checked to determine whether the dependent variable depends on the independent variables considered. The test result has been shown in Table 3.

Hypothesis;

$H_0$ : All coefficients equal to zero ( $\beta_1 = \beta_2 = 0$ )

$H_1$ : At least one coefficient is not equal to zero ( $\beta_1 \neq \beta_2 \neq 0$ )

Significant level ( $\alpha$ ) = 0.05

**Table 3.** ANOVA Table

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	197.341	2	98.671	327.894	.000
	Residual	104.420	347	0.301		
	Total	301.762	349			

According to the ANOVA table, it is visible that the significant value is 0.000 ( $p < 0.05$ ). Therefore, the null hypothesis can be rejected at a 95% confidence level. It has been concluded that at least one of the independent variables can be used to predict the dependent variable.

The  $R^2$  value also explains the variance of the second variable. A relative value of 1 represents a better fit whereas an above value of 0.5 is considered a good fit. A strong  $R^2$  value (0.683) was identified, and it states that 68.3% of the total variation in consumer post-purchase regret in shopping malls can be explained by the independent variables Self-Esteem and risk-aversion. The Durbin Watson value of 2.117, which is around 2, indicates the non-existence of autocorrelation. Finally, the model coefficients were analyzed, and the results are presented in Table 4.

**Table 4.** Coefficients of the model variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.979	0.180		16.586	.000
	Self-Esteem	0.403	0.038	0.428	10.603	.000
	Risk-Aversion	-0.353	0.030	-0.469	-11.631	.000

Since all the coefficients were significant at a 95% confidence level, the following model was fitted considering the coefficients.

$$\text{Consumer Post-purchase Regret} = 2.979 + 0.403 (\text{Self-Esteem}) - 0.353 (\text{Risk Aversion})$$

There's a positive relationship between post-purchase regret and self-esteem with the fitted model and a negative relationship between post-purchase regret and risk aversion. The results indicated a moderating effect of career and the consumer's monthly income on the relationship between post-purchase regret and self-esteem. The demographics; age, gender, marital status, career, and monthly income of the consumer were found as moderators for the relationship between post-purchase regret and risk-aversion of the consumer.

#### 4.4 Moderating effects analysis

The SPSS PROCESS-Macro application is required to obtain a p-value less than 0.05 for the interaction value (Int\_1) and the moderator variable's coefficient to recognize the moderating effect. Process Macro Outputs Summary of Moderating effects are listed below in Table 5.

**Table 5.** Moderating results

	Moderator Variable	Int_1 (P-value)	Coefficient of X variable	Moderator P-value	Coefficient of moderator	R <sup>2</sup> -Change
Relationship between post-purchase regret and self-esteem of the consumer						
H <sub>1a</sub>	Age	0.0594	0.4945	0.5305	-0.0626	-
H <sub>1b</sub>	Gender	0.0440	0.7610	1.442	0.3294	-
H <sub>1c</sub>	Education Level	0.2428	0.8141	0.0482	0.2331	-
H <sub>1d</sub>	Marital status	0.0671	0.6088	0.5390	-0.1384	-
H <sub>1e</sub>	Career	0.0005	0.5293	0.0064	-0.1554	0.0162

H <sub>1f</sub>	Monthly income	0.0032	0.4729	0.0481	-0.2072	0.0117
Relationship between post-purchase regret and risk-aversion of the consumer						
H <sub>2a</sub>	Age	0.0000	-0.2586	0.0000	0.3449	0.0219
H <sub>2b</sub>	Gender	0.0418	-0.6118	0.0084	-0.4270	0.0054
H <sub>2c</sub>	Education Level	0.4624	-0.6204	0.4350	-0.0742	-
H <sub>2d</sub>	Marital status	0.0000	-0.4654	0.0000	0.7119	0.0144
H <sub>2e</sub>	Career	0.0004	-0.4199	0.0001	0.1635	0.0165
H <sub>2f</sub>	Monthly income	0.0007	-0.3587	0.0001	0.2971	0.0150

#### 45 Hypotheses testing

*H<sub>1a</sub>: The age of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

The PROCESS-Macro output showed p-values of more than 0.05 for both interaction term and moderator p-value. It is concluded that the consumer's age does not moderate the relationship between self-esteem and post-purchase regret.

*H<sub>1b</sub>: Gender of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

For the interaction term (Int\_1), a p-value of 0.0440, which is less than 0.05, clarifies that the interaction term is acceptable at a 95% confidence level. But the p-value of the moderator variable (gender) resulted as 1.442, which is higher than 0.05, resulting in a non-moderating effect from the gender on the mentioned relationship at a 95% confidence level.

*H<sub>1c</sub>: The education level of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

Even though the moderator variable has a significant p-value of less than 0.05, the interaction term for the mentioned relationship did not result in a significant value. It concludes that the education level was not performed as a moderator on the relationship between self-esteem and post-purchase regret at Sri Lankan shopping malls.

*H<sub>1d</sub>: Marital Status of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

The Moderator variable p-value (0.5390) and interaction term p-value (0.0671) concluded a non-moderating effect of the consumer's marital status on the relationship between self-esteem and post-purchase regret at shopping malls in Sri Lanka 95% level of confidence.

*H<sub>1e</sub>: The career of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

The PROCESS-Macro output showed p-values less than 0.05 for both interaction term and moderator p-value. It is concluded that the career of the consumer moderates the relationship between self-esteem and post-purchase regret.

*H<sub>1f</sub>: Monthly Income of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

P-values were less than 0.05 for both interaction terms, and the moderator concluded that the career of the consumer moderates the relationship between self-esteem and post-purchase regret.

*H<sub>2a</sub>: Age of the consumer moderates the relationship between risk-aversion and post-purchase Regret at shopping malls in Sri Lanka.*

For both the interaction term (Int\_1) and age, a p-value of 0.0000, which is less than 0.05, clarifies a significant relationship between the interaction variable (age x risk aversion) and post-purchase regret at a 95% confidence level. It concludes that the age of the consumer moderates the relationship between risk aversion and post-purchase regret at shopping malls.

*H<sub>2b</sub>: Gender of the consumer moderates the relationship between risk-aversion and post-purchase regret at shopping malls in Sri Lanka.*

For the interaction term (Int\_1), a p-value of 0.0418, which is less than 0.05, implies an interaction between considered variables. The p-value of the moderator variable (gender) resulting as 0.0084, which is lower than 0.05, indicates that gender was a significant moderator of risk-aversion in consumer post-purchase regret at shopping malls at a 95% confidence level.

*H<sub>2c</sub>: The education level of the consumer moderates the relationship between risk-aversion and post-purchase regret at shopping malls in Sri Lanka.*

For both the interaction term (Int\_1) p-value and the moderator p-value resulted in a value of more than 0.05, indicating that education level was not a significant moderator of the effect of risk-aversion on consumer post-purchase regret at shopping malls with a 95% level of confidence. It was concluded that the education level does not moderate the relationship between risk-aversion and post-purchase regret in mall shopping.

*H<sub>2d</sub>: Marital Status of the consumer moderates the relationship between risk-aversion and post-purchase regret at shopping malls in Sri Lanka.*

The analysis received a p-value of more than 0.05 for both the interaction term (Int\_1) and the moderator. Thus, marital status can be identified as a significant moderator of the effect of risk-aversion on consumer post-purchase regret at shopping malls 95% level of confidence.

*H<sub>2e</sub>: The career of the consumer moderates the relationship between risk-aversion and post-purchase regret at shopping malls in Sri Lanka.*

A p-value of 0.0004, which is less than 0.05, clarifies that the interaction term (Int\_1) was statistically significant. The p-value of the considered moderator variable (Career) is 0.0001, which is also less than 0.05, indicating that the consumer's career was a significant moderator of the effect of risk-aversion on consumer post-purchase regret at shopping malls with a 95% level of confidence.

*H<sub>2f</sub>: Monthly Income of the consumer moderates the relationship between Self-Esteem and Post-Purchase Regret at shopping malls in Sri Lanka.*

A p-value of 0.0007, for the interaction term (Int\_1) and a p-value of 0.0001 for the moderator variable (monthly income) indicated that the monthly income of the consumer was a significant moderator of the effect of risk-aversion on consumer post-purchase regret at shopping malls at a 95% level of confidence.

Since all the coefficients were significant at a 95% confidence level, the following model was fitted considering the coefficients.

*Consumer Post-purchase Regret = 2.979 + 0.403 (Self-Esteem) – 0.353 (Risk Aversion)*

There's a positive relationship between post-purchase regret and self-esteem with the fitted model and a negative relationship between post-purchase regret and risk aversion. The results indicated a moderating effect of career and the consumers' monthly income on the relationship between post-purchase regret and self-esteem. The demographics; age, gender, marital status, career, and monthly income of the consumer were found as moderators for the relationship between post-purchase regret and risk-aversion of the consumer.



## 5. DISCUSSION

There's a strong influence of cultural factors on self-esteem (Heine, Lehman, Markus, & Kitayama, 1999). Dietz (1996) noted that self-esteem decreases when a person gets older. According to the literature, there are many contradictions between age and self-esteem relationships. It varies through regions as well. As per Ogihara (2019) study, which was directed in Japan, self-esteem increases from young to middle age, and after the age of 50, there wasn't a justifiable drop in self-esteem. In European countries, self-esteem decreases around 50-60 (Pullmann, Allik, & Realo, 2009). But the current study agrees with the finding of Ogihara (2019) partially. The study concludes that age is not related to self-esteem, leading to post-purchase regret at shopping malls in Sri Lanka.

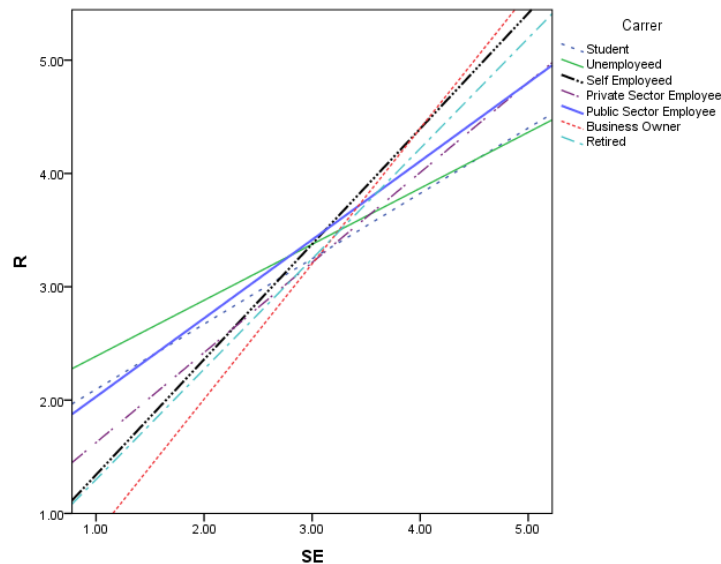
Gender is one of the critical traits that marketers use to market their products. Self-esteem positively affects post-purchase regret (Moakhar, Shafiqh, Zerafat, & Sohae, 2018). Hanks and Mattila (2014) suggest that when female consumers are in a good mood, they tend to have less guilt about the purchase, so marketers must make sure that female buyers are in a good mood. Females tend to have high loss aversion than males and easily regret (Arora & Kumari, 2015). According to the current study result, both males' and females' self-esteem level does not necessarily affect the post-purchase regret they experienced through mall shopping.

As per (Armstrong, Abubakar, & Sikayena, 2017), the average level of post-purchase regret does not vary with the consumer's level of education. But, education level is proportional to the level of self-esteem. In other words, when the education level increases, the level of self-esteem also increases (Aryana, 2010). Educated women tend to have more self-esteem than illiterate women (Jan & Ashraf, 2007). However, according to the current study, the moderating effect of education does not seem to affect the relationship between self-esteem and post-purchase regret. It is more likely to accept the finding of Armstrong et al. (2017), even in the Sri Lankan context. Moreover, the result is acceptable due to the respondents who participated in the survey. Since the survey was done online, the respondents might have a considerable education level than the general public.

Married women tend to have medium self-esteem, and unmarried or separated women have high self-esteem (Jan & Ashraf, 2007). They undergo fluctuation of feelings and up and downs about themselves. Khatib's (2013) study on Arab reveals that married students had

lower depressive symptoms than single students. Depressive symptoms derive from low self-esteem, which leads to dissatisfaction with themselves and self-blame. A single or married person may go through different levels of post-purchase regret. But it depends on the self-esteem of the person to handle the regret. For example, a married person can have high self-esteem and a high level of post-purchase regret. At the same time, both married and unmarried persons can also have the same level of self-esteem and post-purchase regret.

The career of the consumer moderates the relationship between self-esteem and post-purchase regret. The graphical illustration of the moderation is given in Figure 2.

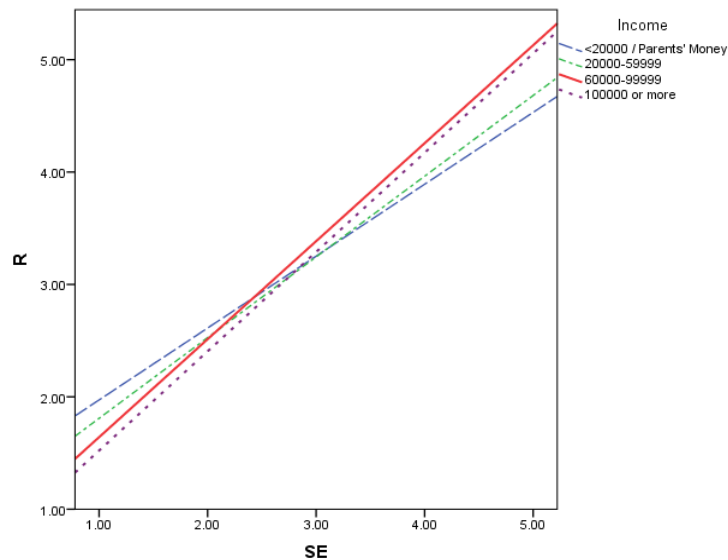


**Fig 2.** The moderation of career on the relationship between self-esteem and post-purchase regret

The graph above shows that the steepest slope occurs for business owners. In contrast, the flatter slope occurs for unemployed people. But for both, the higher the self-esteem, the higher the post-purchase regret. With the crossed lines, it can interpret that there's an interaction with the career of the consumer on the relationship between risk-aversion and post-purchase regret. Moreover, the post-purchase regret is highest for business owners and lowest for unemployed people when self-esteem is high. But, when self-esteem is low, post-purchase regret is higher among unemployed people.

Gardner, Wickramasinghe and Pierce (2018) once stated, “Personal-organizational value fit moderated by mediating relationship by organization-based self-esteem for social focus

values". Working women have high self-esteem than non-working women (Jan & Ashraf, 2007). Suppose a person is working at a well-known company and in a managerial position; that person's self-esteem can increase throughout the career. And also, the welcoming of the outside people is remarkable. In a shopping complex atmosphere, when a high-positioned person shops and regrets, self-esteem matters since they gain relief through self-esteem. This study also provided the aid for this explanation through the finding. From the monthly income perspective, the results showed that the career of the consumer moderates the relationship between self-esteem and post-purchase regret. The graphical illustration of the moderation is as follows in Figure 3.

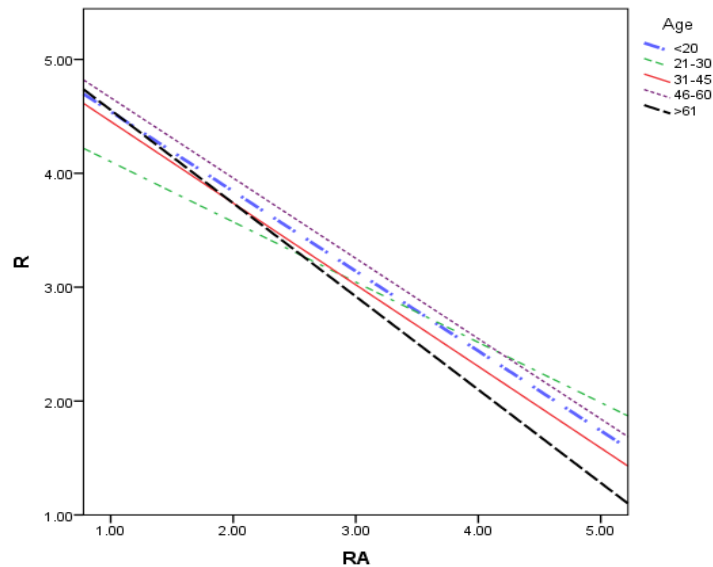


**Fig 3.** The moderation of income on the relationship between self-esteem and post-purchase regret

The figure shows a strong slope for consumers in the income group (Rs. 60,000- Rs. 99,999). The flatter slope occurs for young consumers aged between 21 and 30. Overall, the higher the self-esteem, the higher the post-purchase regret for the income group with less than Rs. 20,000 or the consumers who use their parent's money. With the crossed lines, it can interpret that there's an interaction between the consumer's monthly income (moderator) on the relationship between self-esteem and post-purchase regret. Moreover, the post-purchase regret is higher for people having a monthly income of less than Rs 20,000 or using their parent's money when self-esteem is low. But, when self-esteem is high, the post-purchase regret is higher for the income group (Rs. 60,000- Rs. 99,999).

### 5.1 Risk aversion and post-purchase regret

It resulted that the age of the consumer moderates the relationship between risk aversion and post-purchase regret at shopping malls. Through the R-Square value, 0.219% variance in the dependent variable, post-purchase regret can be explained by such interaction with the moderator effect of age with risk aversion. The following Figure 4 illustrates the interaction.



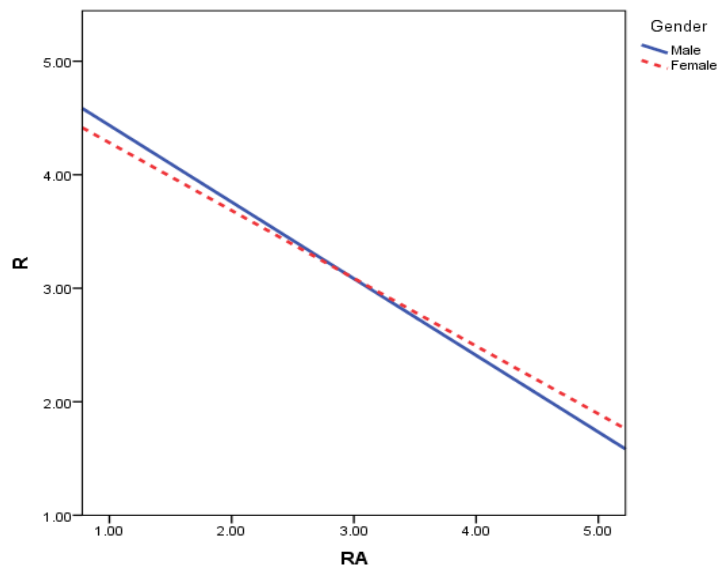
**Fig 4.** The moderation of age on the relationship between risk-aversion and post-purchase regret

As shown above, the most substantial slope occurs for older consumers. The flatter slope occurs between the young age of 21 to 30 consumers. Overall, the higher the risk aversion, the lower the post-purchase regret for all age groups. With the crossed lines, it can interpret that there's an interaction with the consumer's age (moderator) on the relationship between risk aversion and post-purchase regret. Moreover, the post-purchase regret is higher for elderly consumers than young consumers when risk aversion is low. But, when risk aversion is high, the post-purchase regret is higher for young consumers than for elderly consumers.

According to Heenkenda and Chandrakumarv(2014), young people are less risk-averse than elders in all sectors of urban, rural, and estates considered. But, he also suggested that at a time of age, people become risk-averse. This statement supports the current study finding that the age of the consumer moderates the relationship between risk-aversion and

post-purchase regret. This holds the reason responsibility appears with age. Middle-aged people, especially married ones, have the responsibility of saving money for their families. So they tend to be risk-averse. In Sri Lankan shopping malls, the prices are a bit higher than that of outside retail shops. So, when aging, people tend to spend less on luxury items but spend more on healthy and beneficial products. This is again due to the rising risk-averse with age. The more they age, the more the risk-averse and lesser the post-purchase regret. The findings of Arora and Kumari (2015) also tally with the present study finding that age interfaces the relationship between risk aversion and post-purchase regret.

The R-square change of 0.54% of the variance in post-purchase regret can be explained by interaction with the moderator effect of gender. The interaction is shown in below Figure 5.



**Fig 5.** The moderation of gender on the relationship between risk-aversion and post-purchase regret

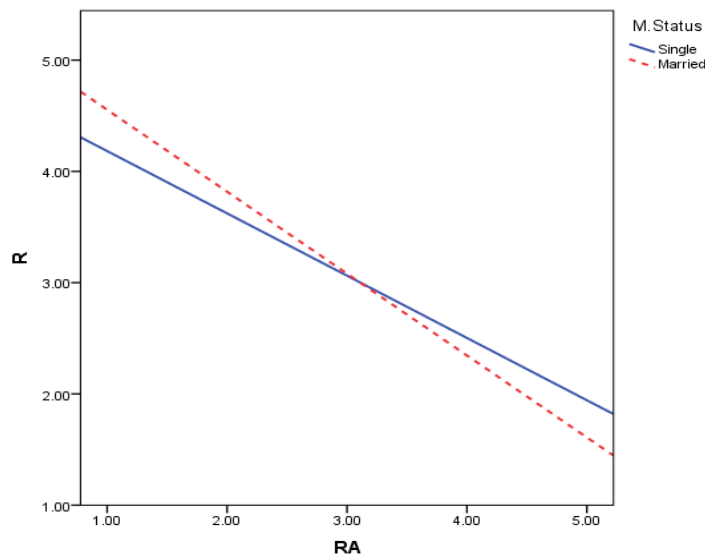
As shown in the graph above, the steepest slope occurs for males. In contrast, the flatter slope occurs for females. But for both males and females, the higher the risk-aversion, the lower the post-purchase regret. With the crossed lines, it can interpret an interaction with the gender (moderator) on the relationship between risk-aversion and post-purchase regret. Moreover, the post-purchase regret is higher for females than males when risk-aversion is high. But, when risk-aversion is low, post-purchase regret is higher for males.

Gender is a crucial factor in the mall shopping and as well as in traditional shopping places. As per Heenkenda and Chandrakumarv (2014), males are less risk-averse in rural areas and

estate areas. But in urban areas, gender does not impact severely. In the current study, the moderating effect of gender was significant. One reason can be raised under the respondent profile. Most of the respondents are females. Previous studies have concluded females tend to impulsively buy things at shopping malls. Regret can appear in that moment of dissatisfaction with a purchased product.

Education contains all the literacy levels of a consumer. It can be either verbal writing or an expression of understanding of literacy. Since this study was conducted on an online platform, respondents had at least basic computer knowledge, which indirectly resulted in respondents with a good education level. This result can be varied if the survey was done through other mediums as well.

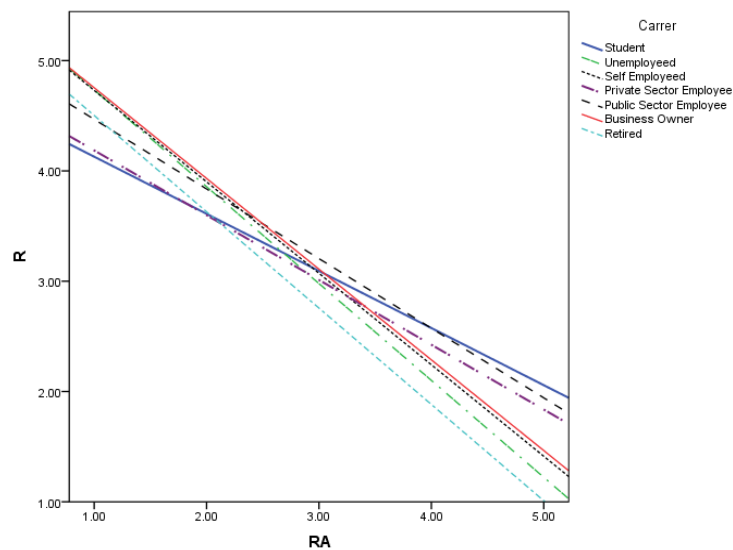
It was concluded that the marital status moderates the relationship between risk-aversion and post-purchase regret at shopping malls in Sri Lanka the interaction is shown in Figure 6 below.



**Fig 6.** The moderation of marital status on the relationship between risk-aversion and post-purchase regret

As shown in the graph above, the steepest slope occurs for married people. In contrast, the flatter slope is for single people. The crossed lines interpret an interaction with the marital status on the relationship between risk-aversion and post-purchase regret. Moreover, the post-purchase regret is higher for married than single ones when risk-aversion is high. But, when risk-aversion is low, post-purchase regret is higher for single people.

With a marriage of a person, the responsibility they'll carry increases. According to Heenkenda and Chandrakumarv (2004), there's a high-risk tolerance when there are few dependents in a family than having more dependents in the family in urban and rural areas. But in estates, when there are more dependents in the family, the higher the risk tolerance. That means risk aversion is less when there are few dependents in the family in urban and rural areas. At the same time, the risk aversion is low in estate areas when the number of dependents in the family is high. The current study resulted that marital status moderates the relationship between risk aversion and post-purchase regret. This can happen because this study focused on mall shopping. And estate people, who are less financially able, could not possibly afford the products at malls. This contradiction arises with the respondents who participated in the current study's survey. Most of the respondents are financially stable people. Therefore, this contradiction does not necessarily ignore the moderating effect of marital status on the relationship between risk-aversion and post-purchase regret. There's an R-square change of 1.65% due to the moderating effect of the respondents' careers. The interactions are as follows in Figure 7.



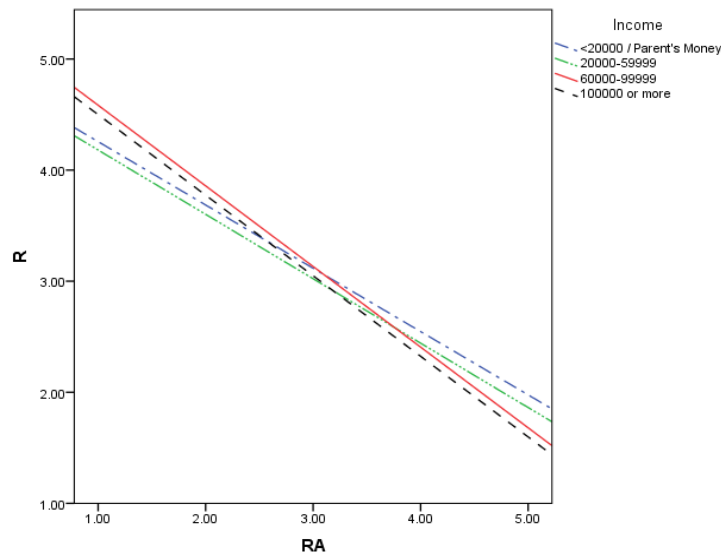
**Fig 7.** The moderation of career on the relationship between risk-aversion and post-purchase regret

As illustrated in the above graph, the sharpest slope occurs for self-employed people. The flatter slope occurs for students. Overall, the higher the risk aversion, the lower the post-purchase regret for all consumers. Moreover, when risk aversion is low, the post-purchase

regret is highest for the business owners and lowest for students. Consequently, when risk aversion is high, the post-purchase regret is highest for students and lowest for retired people.

As per Heenkenda and Chandrakumarv (2014), the career of the person determines his risk tolerance. In other words, the risk aversion varies with the person's occupation. They also concluded that government sector employees in Sri Lanka's urban areas are less risk-averse than in rural and sub rural areas. But no change in risk aversion in rural and estate areas. Accordingly, when a consumer has a more responsible/more professional career than other careers, those consumers tend to visit shopping malls less frequently. And they are willing to be risk-averse with purchase. On the other hand, a consumer with a low-standard career or self-employed thinks a lot about the purchase to be done. That leads to the risk aversion of the consumer. According to the satisfaction or dissatisfaction, the post-purchase regret rises. So that, the consumer takes the risk of paying a premium price than outside stores. But the person is naturally risk-averse. Thereby, the consumer leads to regret his purchase at the shopping mall if he faces dissatisfaction with the purchased product.

There was a 1.5% variation in the dependent variable post-purchase regret and risk-aversion with the moderating effect of monthly income. The interactions are as follows in Figure 8.



**Fig 8.** The moderation of income on the relationship between risk-aversion and post-purchase regret



As illustrated in the above graph, the sharpest slope is for the income group of Rs. 60,000-Rs.99,999 per month. The flatter slope occurs for the income group having parents' money or income less than Rs. 20,000 per month. Moreover, when risk aversion is low, the post-purchase regret is highest for the income group of Rs. 60,000-Rs.99,999 per month. Consequently, when risk aversion is high, the post-purchase regret is highest for the income group from parents' money or income less than Rs. 20,000 per month.

According to Heenkenda and Chandrakumarv (2014) study, risk tolerance has no significant change with income diversification. But it is not the same with risk-aversion. Accordingly, the relationship between risk aversion and post-purchase regret can be moderate by the consumer's income level, which supports the finding of this study. This is primarily because mall shopping is not so frequent among Sri Lankans. But when customers do so, they take a moment so cautiously. For instance, a student cannot spend money as they want to, because they don't own capital. In Sri Lanka, most children depend on their parent's money until they graduate from a university. So these students tend to be high risk-averse when they purchase something. On the other hand, retired people tend to spend on some good products at shopping malls as they have enough savings throughout their lifetime.

## 6. CONCLUSION

The findings of moderation analysis show that a consumer's career and monthly income moderate the relationship between self-esteem and post-purchase regret at shopping malls in Sri Lanka. However, the risk-aversion and post-purchase regret relationship was moderated by most of the demographic factors considered in the study. The consumer's age, gender, marital status, career, and monthly income resulted as moderators for risk-aversion and post-purchase regret relationship. These findings suggest that when evaluating post-purchase regret, employment and a person's monthly income must be considered well in shopping malls in Sri Lanka. Self-esteem cannot convert easily. The managers of malls must focus on arousal and a user-friendly atmosphere building at malls because an influence of a friendly atmosphere can alter a person's self-esteem, at least to some extent. Understanding the customer through age, gender, and marital status can avoid post-purchase regret by providing necessary directions.

Business owners usually have high self-esteem. When dealing with them, the mall shop staff must pay attention to providing the best shopping experience at the shop. It was noted that the people with a middle income (Rs. 60,000- Rs. 99,999) have high self-esteem. Post-purchase regret around the age of 46 to 60 years has a higher regret, and risk-aversion is low for elder people (age of 61 or above). Identifying the consumer's age provides aid for the manager to understand to what extent the customer can tolerate with risk of getting dissatisfaction. It necessarily lowers the post-purchase regret. There the females are found to be more risk-averse than males. Females consider quality, durability, and many more specifications before they purchase it. However, males tend to purchase products quicker than females, which leads to post-purchase regret easily. So the staff must provide necessary information for males with more attention than female customers.

A necessity of a married person is much more complex than a single person. As a result, a married person may easily catch with post-purchase regret. Staff must pay attention to providing past consumer reviews on products when a consumer buys something. It was noted that single consumers tend to be more risk-averse. Understanding these concepts at shopping malls in the Sri Lankan context leads to managing the post-purchase regret. Hence, the image of the mall in consumers' perception can be enhanced.

Demographics help managers to understand who would buy their products, while psychographics (in this study: self-esteem; risk-aversion) helps to understand the reason behind the buying. Demographics represent the outside attributes while psychographics represents the internal attributes. It also leads to the following the trend in risk-aversion. So that the shopping malls can identify which elements to give more focus on, whether it is income or age that relates to the risk-aversion.

On the other hand, the managers can identify the target market according to the trend through this research. And it will enable effective marketing campaigns. That will reach the business a critical winning edge. Changes in the economic environment can affect marketing decisions rapidly. Demographic factors such as income can vary drastically with the inflation of a country. The ability to handle expenses can deviate from the trend in risk-aversion. Because at a time of inflation, such necessities are outlined by a consumer in that particular country. During a period like that, it can be recommended to focus on

demographic factors like age. Because, today's demographic environment is dynamic with age structure, population shifts, and better education.

After all, managers need to give attention to key details in demographic trends and shifts. It will lead to a successful long-term marketing strategy. Additionally, it will result in building strong relationships in the external environment.

However, since more cognitive factors link with post-purchase regret, the model can be extended further. It is suggested to apply behavioral elements as well. On the other hand, specific regional and service industry-based studies can provide more clear output for the marketers. The study used a convenient sampling method, and a probabilistic sampling method can give a more accurate value. This study was completed during the COVID-19 period, and data were gathered from the customers who engaged in mall shopping over the last two years. However, there were some restrictions on returns due to COVID-19. So the risk aversion level can be changed over other years. So it is suggested to repeat this research after some years

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