THE INFLUENCE OF BIG FIVE PERSONALITY TRAITS ON FINANCIAL RISK TOLERANCE ACROSS GENERATIONS IN THE COLOMBO AREA

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Abstract

This study investigates the influence of the Big Five personality traits—openness, conscientiousness, extraversion, agreeableness, and neuroticism—on financial risk tolerance across generational cohorts in Sri Lanka. The aim is to understand how personality traits shape financial decision-making among Generation Z (12–27), Millennials (28–43), Generation X (44–59), and Baby Boomers (60–78). A quantitative survey was conducted with 400 participants, evenly distributed across the four generational groups. Correlation and regression analyses were applied to examine the relationships between personality traits and financial risk tolerance. The results reveal significant generational differences in financial risk tolerance and associated personality traits. Extraversion and neuroticism emerged as the most influential predictors. Extraversion was positively correlated with financial risk tolerance across all generations, while neuroticism showed a consistent negative correlation. Younger generations (Gen Z and Millennials) demonstrated higher openness and extraversion but reported lower levels of financial risk tolerance. In contrast, older generations (Gen X and Baby Boomers) exhibited higher conscientiousness and lower risk tolerance. The findings confirm that personality traits, particularly extraversion and neuroticism, significantly influence financial risk tolerance across generations. These insights suggest the importance of incorporating personality and generational characteristics into financial advising, product design, and educational initiatives. Future research should explore additional psychological variables, such as financial literacy and self-control, and consider cultural influences on financial behaviour.

Keywords: Big Five personality traits, financial risk tolerance, generational difference

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Introduction

Financial management is central to everyday life, influencing the decisions of pensioners, professionals, and investors alike. As investment options grow increasingly complex (Filbeck et al., 2005), evaluating financial risk tolerance the willingness to accept risk for potential returns, has become vital. Risk tolerance is shaped by demographic, social, and cognitive factors, with personality emerging as a key determinant. Prior research suggests generational experiences can moderate these relationships (Exley et al., 2021; Rodrigues & Gopalakrishna, 2023). Building on this foundation, the present study investigates how the Big Five personality traits Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism influence financial risk tolerance across four Sri Lankan generational cohorts: Baby Boomers, Generation X, Millennials, and Generation Z. (Kuzniak & Grable, 2017). Recognising such differences is crucial for both individual investors and financial advisors to support informed investment decisions (Dickason & Ferreira, 2018).

In Sri Lanka, investment choices are influenced by risk tolerance, demographics, and cognition. Few local studies examine how the Big Five personality traits affect generational differences, especially in Colombo, where digitalisation shapes investment, highlighting the need for tailored financial strategies. The research problem in Sri Lanka is that individuals' investment decisions across stocks, real estate, and bank deposits are influenced by risk tolerance, which is shaped by personality traits and varies across generational cohorts. The research question guiding this study asks how the Big Five personality traits openness, conscientiousness, extraversion, agreeableness, and neuroticism affect financial risk tolerance among Millennials, Generation X, and Baby Boomers in Colombo. The study aims to examine relationships between personality traits and risk tolerance, identify generational differences, and provide recommendations for financial planning, policymaking, and educational programs tailored to each cohort's characteristics. In 2023, Sri Lanka's labour force participation was 62.6%, with investments contributing 31.1% to GDP, indicating that most investments are made by this workforce. Colombo, as a financially literate hub, is an ideal setting to study financial behaviour. This study focuses on personality traits as predictors of financial risk tolerance, while excluding factors like income, literacy, and technology adoption. A cross-sectional design limits capturing changes over time. Although international research shows personality significantly affects risk-taking (Filbeck et al., 2005; Grable, 2000; Grable & Joo, 2004), empirical research in Sri Lanka remains limited. Some studies have examined risk tolerance and investment behaviour (Heenkenda, 2015), yet few have investigated the combined effect of the Big Five personality traits and generational differences on financial risk tolerance. This gap limits understanding of how personality shapes financial decisions across age cohorts, emphasising the need for targeted behavioural finance research in the Sri Lankan context.

Literature Review

Financial risk tolerance refers to an individual's willingness to accept uncertainty in financial decisions. Since attitudes toward risk vary widely, understanding the role of personality in shaping financial behaviour is crucial, particularly across generational cohorts who face distinct economic contexts. The Big Five personality traits, Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism, represent a widely accepted framework for explaining differences in behaviour, including financial choices. This section reviews theoretical and empirical studies, emphasising how these traits influence financial risk tolerance across generations and establishing the hypotheses guiding this study.

Risk

Financial risk is broadly defined as the possibility of loss due to market volatility, interest rate fluctuations, or economic downturns. It is relevant for individuals, firms, and governments alike and lies at the core of financial decision-making. Managing such risk is essential for financial stability and long-term planning.

Risk tolerance

Risk tolerance refers to the degree of uncertainty an individual is prepared to accept in pursuit of returns. Wanyana (2011) classified risk tolerance into low, medium, and high levels, noting that demographic, psychological, and situational factors influence where individuals fall along this spectrum.

Several studies demonstrate that personality strongly affects financial choices. Sadiq and Amna (2019) showed that personality traits significantly influence investment behaviour, while Falahati and Paim (2012) highlighted differences in risk tolerance across gender and age groups. Kanadhasan (2015) found that younger investors are more likely to accept higher risks, often because they lack experience or perceive greater time to recover from losses. Cognitive biases such as overconfidence, anchoring, and herd behaviour also distort decision-making under uncertainty (Laing, 2010; Oehler & Wedlich, 2018). Zaleskiewicz (2001) and Bye & Lamvik (2007) similarly emphasised the critical role of individual attitudes and personality traits in shaping risk-taking.

Beyond personality, other determinants also matter. Zakaria et al. (2017) noted that risk tolerance directly drives investment behaviour. Bayar et al. (2020) identified financial literacy, education, and income as positive predictors of higher tolerance, while women and older individuals generally exhibit more risk-averse tendencies. Anastasia and Basana (2021) found that risk-tolerant millennials favour high-risk, high-return investments such as equities and derivatives, reflecting their different financial perspectives compared with older generations.

Personality traits and financial risk tolerance

The Big Five model developed by Costa and McCrae (1992) remains the dominant framework for categorising personality into five broad traits:

Openness: Creativity, curiosity, and willingness to embrace novelty. High openness is linked to greater financial risk tolerance, with individuals more inclined toward innovative, uncertain investments (Nandan & Saurabh, 2016; Nga & Ken Yien, 2013).

Conscientiousness: Reflects discipline, prudence, and responsibility. Conscientious individuals generally avoid risk, preferring low-risk assets like bonds or deposits.

Extraversion: Sociability, assertiveness, and energy. Extroverts are more comfortable with risk and drawn to high-return assets, while introverts tend to be more risk-averse (Mayfield et al., 2008; Sadi et al., 2011).

Agreeableness: Cooperation, trust, and empathy. Agreeable individuals are often risk-averse and rely on advisors in financial decision-making (Halder et al., 2010).

Neuroticism: Emotional instability and anxiety. High neuroticism is associated with strong risk aversion (Pak & Mahmood, 2015).

Hamza and Arif (2019) further linked agreeableness, extraversion, and openness positively with financial literacy, while neuroticism was negatively associated. This suggests that personality traits, when combined with education, strongly shape investment decisions.

Prospect theory

Prospect Theory, developed by Kahneman and Tversky (1979), challenges the rational assumptions of Expected Utility Theory. It argues that individuals are risk-averse for gains but risk-seeking when facing losses. This duality explains why people with similar financial conditions may adopt different investment strategies. When combined with personality traits, Prospect Theory provides a strong basis for understanding variations in financial risk tolerance.

Empirical review

Research shows Big Five traits influence financial risk tolerance, with generational differences - Baby Boomers, Generation X, Millennials, and Generation Z -shaping financial behaviour.

Extraversion: Positively associated with higher risk tolerance; extroverts prefer high-risk, high-return assets (Mayfield et al., 2008; Rai, Gupta, & Tyagi, 2021).

Neuroticism: Negatively associated with risk tolerance; anxious individuals avoid risky investments (Pak & Mahmood, 2015).

Openness: Encourages exploration of innovative opportunities and higher risk-taking (Nandan & Saurabh, 2016; Nga & Ken Yien, 2013).

Agreeableness & Conscientiousness: Generally linked to risk aversion and cautious decision-making (Gunkel et al., 2010; Halder et al., 2010).

In the Sri Lankan context, younger investors show higher financial risk tolerance than older generations, who tend to adopt more conservative investment strategies (Heenkenda, 2015). These findings confirm that extraversion and openness increase financial risk tolerance, while neuroticism, agreeableness, and conscientiousness generally reduce it, consistent across both global and local studies.

2.6 Hypotheses Development

H1: *Openness has an impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H2: *Openness has no impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H3: *Conscientiousness has an impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H4: *Conscientiousness has no impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H5: *Extraversion has an impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H6: *Extraversion has no impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H7: *Agreeableness has an impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H8: *Agreeableness has no impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H9: *Neuroticism has an impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

H10: *Neuroticism has no impact on risk tolerance among Baby Boomers, Generation X,Y,Z.*

Methodology

This study employed a quantitative cross-sectional survey to investigate the influence of the Big Five personality traits openness, conscientiousness, extraversion, agreeableness, and neuroticism on financial risk tolerance across generational cohorts in Sri Lanka, including Generation Z, Millennials, Generation X, and Baby Boomers. Guided by a positivist approach, the research used structured questionnaires and validated psychometric scales to ensure objective and reliable measurement. The Big Five traits served as independent variables, financial risk tolerance as the dependent variable, and generational cohort as a moderating factor. A total of 384 participants were selected using stratified cluster random sampling to ensure equal representation across cohorts. Data were collected online via Google Forms, covering demographics, personality, and risk preferences. Analyses, including descriptive statistics, correlation, and regression, were conducted using SPSS and R. Ethical standards such as informed consent, confidentiality, and transparency were strictly maintained throughout the study.

Results and Analysis

Descriptive analysis

Table 1
Descriptive analysis

Age = 12-27		Openness	Consciousness	Extraversion	Agreeableness	Neuroticism	Risk tolerance
N	Valid	96	96	96	96	96	96
	Missing	0	0	0	0	0	0
Mean		4.0104	3.3333	3.8681	2.5451	2.6250	2.1458
Std. Deviation		.65686	.85293	.66223	.84066	1.02854	.47898
Skewness		-.786	-.685	-.478	.209	-.003	.093
Std. Error of Skewness		.246	.246	.246	.246	.246	.246
Kurtosis		1.475	-.568	.495	-.596	-1.111	-.838
Std. Error of Kurtosis		.488	.488	.488	.488	.488	.488

(Source: Authors' Compilation)

Table 2
Descriptive analysis

Age = 28-43		Openness	Consciousness	Extraversion	Agreeableness	Neuroticism	Risk tolerance
N	Valid	96	96	96	96	96	96
	Missing	0	0	0	0	0	0
Mean		3.6771	3.3646	3.5694	2.6875	2.6875	1.9152
Std. Deviation		.75619	.81517	.86507	.90717	.92378	.52256
Skewness		.099	-.671	-.277	-.115	-.151	.439
Std. Error of Skewness		.246	.246	.246	.246	.246	.246
Kurtosis		-.545	.456	-.525	-.888	-.904	-.565
Std. Error of Kurtosis		.488	.488	.488	.488	.488	.488

(Source: Authors' Compilation)

Table 3
Descriptive analysis

Age = 44-59		Openness	Consciousness	Extraversion	Agreeableness	Neuroticism	Risk tolerance
N	Valid	96	96	96	96	96	96
	Missing	0	0	0	0	0	0
Mean		3.4965	3.3611	3.3472	2.5451	2.4861	1.7158
Std. Deviation		.82787	.82599	.79312	.81667	.87715	.52458
Skewness		-.490	-.352	-.060	.324	.673	.817
Std. Error of Skewness		.246	.246	.246	.246	.246	.246
Kurtosis		.033	-.426	-.522	-.911	.202	.042
Std. Error of Kurtosis		.488	.488	.488	.488	.488	.488

(Source: Authors' Compilation)

Table 4
Descriptive analysis

Age = 60-78		Openness	Consciousness	Extraversion	Agreeableness	Neuroticism	Risk tolerance
N	Valid	96	96	96	96	96	96
	Missing	0	0	0	0	0	0
Mean		3.2431	3.4722	3.1806	2.6875	2.6458	1.4911
Std. Deviation		.74218	.75806	.77673	.80468	.78407	.39915
Skewness		-.387	-.235	-.023	.127	.285	.962
Std. Error of Skewness		.246	.246	.246	.246	.246	.246
Kurtosis		.137	-.486	-.245	-.444	-.337	.173
Std. Error of Kurtosis		.488	.488	.488	.488	.488	.488

(Source: Authors' Compilation)

Generational differences were evident in descriptive results. Generation Z recorded the highest scores for openness (M = 4.01) and extraversion (M = 3.87) but relatively low financial risk tolerance (M = 2.15). Millennials reported similar but slightly lower levels of openness and extraversion, with moderate neuroticism and risk tolerance (M = 1.92). Generation X showed reduced openness and extraversion but produced the highest model fit in regression analysis. Baby Boomers scored lowest in openness and extraversion and displayed the lowest financial risk tolerance (M = 1.49).

Correlation analysis

The correlation results revealed that financial risk tolerance is significantly associated with several personality traits, with patterns varying across generations. Extraversion and openness showed strong positive correlations with risk tolerance, particularly among younger cohorts. For Millennials, extraversion demonstrated the strongest relationship ($r = 0.665$, $p < .001$), while Generation Z also reported notable positive correlations with both extraversion and openness. In contrast, neuroticism displayed a consistent negative relationship across all cohorts, with the strongest effect among Baby Boomers ($r = -0.612$, $p < .001$). Conscientiousness showed weak or negative correlations in younger groups, whereas agreeableness exhibited no significant relationship across generations. Overall, the results suggest that extraversion and openness increase risk-taking tendencies in younger generations, while neuroticism reinforces risk-averse behaviour in older cohorts.

Regression analysis

Age 12–27: The model reveals a strong relationship ($R = 0.729$), with 53.2% of the variance in financial risk tolerance explained ($R^2 = 0.532$) and an adjusted R^2 of 0.506. The standard error is 0.33680, suggesting good predictive accuracy. The Durbin-Watson value (1.926) confirms no autocorrelation.

Age 28–43: This group shows a moderately strong relationship ($R = 0.694$), with R^2 at 0.482 and an adjusted R^2 of 0.453. The standard error is slightly higher at 0.38633, but still acceptable. The Durbin-Watson statistic (2.133) indicates no autocorrelation.

Age 44–59: The strongest model is seen in this group ($R = 0.783$), explaining 61.4% of the variance ($R^2 = 0.614$) and an adjusted R^2 of 0.592. The standard error (0.33500) is low, and the Durbin-Watson value (1.957) confirms the model's reliability.

Age 60–78: The model is moderate in strength (R = 0.638), with $R^2 = 0.407$ and adjusted $R^2 = 0.374$. Although the model explains less variance, the standard error is low (0.31589), and the Durbin-Watson statistic (1.938) confirms no autocorrelation.

Coefficient

Ages 12–27: Extraversion ($\beta = 0.441$, $p < .001$) significantly increases risk tolerance, while conscientiousness ($\beta = -0.193$, $p = .016$) reduces it. Other traits show no significant effects. High VIFs for agreeableness (2.911) and neuroticism (3.497) suggest collinearity.

Ages 28–43: Extraversion ($\beta = 0.511$, $p < .001$) is the strongest predictor. Other traits are non-significant. Moderate VIFs for neuroticism (2.769) and agreeableness (2.416) indicate some collinearity.

Ages 44–59: Extraversion ($\beta = 0.473$, $p < .001$) positively predicts risk tolerance, while neuroticism ($\beta = -0.323$, $p = .002$) negatively affects it. VIFs indicate moderate collinearity.

Ages 60–78: Neuroticism ($\beta = -0.408$, $p = .007$) is the only significant trait. Others show no notable influence. High VIFs for agreeableness (3.600) and neuroticism (3.367) suggest collinearity.

ANOVA results

ANOVA tests confirmed statistically significant generational differences in openness ($F = 19.506$, $p < .001$) and extraversion ($F = 14.041$, $p < .001$). However, no significant differences were observed for conscientiousness, agreeableness, or neuroticism across cohorts. This suggests that openness and extraversion are the most influential differentiators of financial risk tolerance between generations.

Diagnostic Tests

Tests of normality and residual analysis confirmed that the assumptions of regression were not violated. Multicollinearity and heteroscedasticity tests further supported the robustness of the models, strengthening the validity of the results.

Discussion

The findings reveal that the Big Five personality traits significantly influence financial risk tolerance across generational cohorts in Colombo. Extraversion and openness strongly predict higher risk-taking, particularly among younger investors, reflecting their sociability, assertiveness, and willingness to explore novel opportunities. Neuroticism negatively affects risk tolerance, especially in older generations, indicating more cautious financial behaviour. Conscientiousness slightly reduces risk tolerance in younger groups, while agreeableness shows no significant effect. Generational differences are evident, with younger cohorts demonstrating higher openness and extraversion, whereas older cohorts exhibit lower openness, higher neuroticism, and lower risk tolerance. These patterns suggest that personality and generational factors interact to shape investment behaviours.

Conclusion

This study confirms that personality traits, particularly extraversion and neuroticism, are key determinants of financial risk tolerance across generations in Colombo. Younger investors tend to embrace higher-risk investments due to higher extraversion and openness, whereas older generations prefer conservative approaches aligned with higher neuroticism and lower openness. Conscientiousness has a minor negative effect, and agreeableness is largely irrelevant. These insights highlight the value of integrating personality assessments into financial advisory services and policymaking. Tailoring investment strategies and educational programs to generational traits can enhance decision-making and support more effective, personality-informed financial planning.

References

Anastasia, N., & Basana, S. R. (2021). Financial risk tolerance of millennials and their investment choices. *International Journal of Economics and Financial Issues, 11*(2), 1–10.

Bayar, Y., Sezgin, H. F., & Öztürk, Ö. (2020). Financial literacy and financial risk tolerance of individuals in emerging markets. *Journal of Capital Markets Studies, 4*(2), 213–227.

Bye, H. H., & Lamvik, T. (2007). Risk-taking attitudes and personality traits among investors. Scandinavian *Journal of Psychology, 48*(2), 160–170.

Costa, P. T., & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual. Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (2012). *NEO inventories: Professional manual*. Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (2015). *The NEO inventories as instruments of psychological theory*. In Oxford handbooks online. https://doi.org/10.1093/oxfordhb/9780199352487.013.10

Dickason, Z., & Ferreira, S. (2018). Risk tolerance of South African investors. *Investment Management and Financial Innovations, 15*(2), 140–150.

Exley, J., Mavrinac, M., & Tufano, P. (2021). Generational differences in financial attitudes and behavior. *Journal of Economic Behavior & Organization,* 190, 453–469.

Filbeck, G., Hatfield, P., & Horvath, P. (2005). Risk aversion and personality type. *Journal of Behavioral Finance, 6*(4), 170–180. https://doi.org/10.1207/s15427579jpfm0604_1

Grable, J. E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology, 14*(4), 625–630.

Grable, J. E., & Joo, S. (2004). Environmental and biopsychosocial factors associated with financial risk tolerance. *Journal of Financial Counseling and Planning, 15*(1), 73–82.

Gunkel, M., Schlaegel, C., & Engle, R. (2010). Personality and investment decisions: A cross-cultural analysis. *Journal of Behavioral Finance, 11*(1), 11–25.

Halder, S., Misra, T., & Paul, S. (2010). Agreeableness and investment decision-making: An empirical review. *Journal of Behavioral Studies in Finance, 5*(2), 45–53.

Hamza, S. M., & Arif, I. (2019). Impact of Big Five personality traits on financial literacy: Evidence from Pakistan. *International Journal of Management, Accounting and Economics, 6*(5), 347–360.

Heenkenda, S. (2015). Determination of financial risk tolerance among different household sectors in Sri Lanka. *Asian Journal of Empirical Research, 5*(11), 206–220.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*(2), 263–291.

Kanadhasan, M. (2015). Retail investor's behavioral biases: A qualitative study from India. *Qualitative Research in Financial Markets, 7*(1), 88–108.

Kuzniak, S., & Grable, J. (2017). Generational differences in financial risk tolerance. *Journal of Financial Planning, 30*(6), 52–61.

Laing, T. (2010). Behavioural finance and cognitive biases in investment decisions. *Journal of Economic Psychology, 31*(1), 1–7.

Mayfield, C., Perdue, G., & Wooten, K. (2008). Investment management and personality type. *Financial Services Review, 17*(3), 219–236.

Nandan, T., & Saurabh, K. (2016). Personality traits and financial risk tolerance: A study of Indian investors. *Asia-Pacific Journal of Management Research and Innovation, 12*(3–4), 223–230.

Nga, J. K. H., & Ken Yien, L. (2013). The influence of personality traits and demographics on financial decision making among young adults. *Singapore Management Review, 35*(2), 1–33.

Oehler, A., & Wedlich, F. (2018). The impact of cognitive biases on investment decisions. *Review of Behavioral Finance, 10*(1), 85–102.

Pak, O., & Mahmood, M. (2015). Impact of personality on risk tolerance: A contemporary review. *Journal of Behavioral and Experimental Finance*, 5, 79–85.

Rai, K., Gupta, A., & Tyagi, A. (2021). Personality traits lead to investor's financial risk tolerance: A structural equation modelling approach. *Management and Labour Studies, 46*(4), 422–437.

Rodrigues, R., & Gopalakrishna, S. (2023). Generational differences in financial behavior and risk tolerance. *Journal of Behavioral Finance, 24*(2), 150–165.

Sadi, R., Asl, H. G., Rostami, M., Gholipour, M., & Gholipour, A. (2011). Personality traits, risk attitudes and investment decisions. *Middle-East Journal of Scientific Research, 8(*6), 805–812.

Sadiq, M., & Amna, H. (2019). The relationship between personality traits and investment decisions: The moderating role of risk tolerance. *Journal of Finance and Accounting Research, 1*(1), 23–43.

Wanyana, B. (2011). Risk tolerance levels: An empirical analysis. *International Journal of Economics and Finance, 3*(4), 130–138.

Zakaria, N., Isa, N., & Ahmad, Z. (2017). Financial literacy and risk tolerance among investors. *Journal of Finance, 6*(2), 240–249.

Zaleskiewicz, T. (2001). Beyond risk seeking and risk aversion: Personality and risky decisions. *Polish Psychological Bulletin, 32*(4), 251–258.