

The Impact of Investor Resilience and Locus of Control on Investors' Risk Attitude

Deepti Prakash*, Divya Verma, Twinkle Arora

University School of Management Studies, Guru Gobind Singh Indraprastha University, New Delhi, India

Received: March 13, 2023 ▪ Reviewed: April 7, 2023

▪ Accepted: May 5, 2023 ▪ Published: June 30, 2023

Abstract:

The study focuses on understanding the features of a resilient investor as it is a quality that helps in sustainable investments. A structured questionnaire was designed and administered to 150 respondents. The investor resilience level was calculated on the basis of 25 statement score sheet on a five-point Likert scale using SPSS. Investors who have high resilience have better ability to manage shocks and are less scared of volatility in the market. Regression results show that females are more resilient than males. Married people are more resilient than the single. There is a negative relationship between age and resilience. Locus of Control is positively related to an investor's resilience. The study contributes to the existing literature of behavioral finance and investment, which can help potential researchers in their future work in the same field. For successfully creating long-term investment plans and aligning them with life goals, resilience is required. Our study is helpful in predicting various alternatives that investors can adopt as per their resiliency.

Keywords: investor, resilience, risk attitude, locus of control.

投资者韧性和控制点对投资者风险态度的影响

摘要:

该研究的重点是了解有弹性的投资者的特征，因为它是一种有助于可持续投资的品质。为 150 名受访者设计并管理了一份结构化问卷。投资者的弹性水平是根据社会科学统计包的五分李克特量表的 25 份陈述评分表计算得出的。韧性高的投资者应对冲击的能力更强，对市场波动的恐惧感更小。回归结果表明，女性比男性更有弹性。已婚人士比单身人士更有弹性。年龄和弹性之间存在着相关关系。控制点与投资者的韧性呈正相关。该研究对现有的行为金融学和投资文献做出了贡献，可以帮助潜在的研究人员在未来从事同一领域的工作。为了成功制定长期投资计划并将其与人生目标保持一致，需要有韧性。我们的研究有助于预

Corresponding Author: Dr. Deepti Prakash, University School of Management Studies, Guru Gobind Singh Indraprastha University, New Delhi, India; email: deeptiprakash@gmail.com

测投资者根据其弹性可以采用的各种替代方案。

关键词：投资者、韧性、风险态度、控制点。

1. Introduction

“When surprises are the new normal, resilience is a new skill” (Kanter, 2013). Like epidemics, economic crises tend to spread and surprise everyone! For any nation, the economy is the lifesaver of the nation and they cannot bear the cost of unfortunate changes and undesirable fluctuations. Unfortunately, economic cycles are disgracefully hard to forecast and the only way to survive the fluctuations of economic cycles is to take action with a well-conceived plan.

The business cycles are being dealt with by public authority and financial strategies have been used by lawmakers to make an impact on the economy (Al-Thaqeb & Algharabali, 2019). These business cycles are dealt with by the government and lawmakers by making fiscal policies and financial strategies to impact the economy.

Even with great policies in place; all countries experience regular ups and downs in their economic cycles (Nikitas et al., 2021). These “downs” are often depicted as transient events. Nonetheless, an ample number of monetary writings and existing literature shows that results of high unemployment, decreased financial movement, and falling livelihoods can have long-term outcomes (Wang et al., 2023). For instance, large associations may opt to cut out or resist their spending on activities concerning Research & Development (Baran & Wosnyj, 2020). Moreover, the less availability of jobs and continuous downfall in wages of families can have an impact on their children's education. Also, the creation of small/micro-businesses can be hampered due to frozen credit markets and a decrease in customer spending. In each of the mentioned cases, dependable damage can be prompted to the monetary circumstances of individuals and to the economy due to the financial slump (Abbas et al., 2022). In such situations, all financial experts advise designing your portfolio to be balanced enough to benefit from periods of growth before it happens while being resilient during those unavoidable periods of volatility (Wilcox et al., 2022).

Daniel Kahneman, the Nobel prize-winner behavioral economist, sees that our agony of misfortune is twice as exceptional as the joy from a comparable increase. Along these lines, it is very well perceived that the proper technique depends to a huge degree on the versatility of the individual investor. Stockholm Resilience Centre has defined resilience as the ability of an individual, city or even an economy to adapt to changes (Dalby, 2020). Additionally, it is about considering every change not only as an opportunity but also as a conversion for better development and taking advantage of it as early movers or early adaptors.

Resilience is the capacity of an individual to withstand and skip back after an unfriendly and

unpredictable event (Conz & Magnani, 2020). In the monetary setting, it is the assortment of policies & strategies, infrastructure framework, and planning that position governments/policy makers to resist financial calamities. Getting ready for flexibility and resilience at the individual, organizational or government level can prevent devastating monetary misfortunes, losses and fatalities. Being resilient is to envision and get ready for unsettling influence and adjust whenever the situation allows. On the other hand, the long-term investor believes that the more you invest, the more you are risk-free and can sustain in low market periods. Such investors do not believe in adaption (skill within the self-internal factor) but wait for the market to stabilize (external factor). It makes sense to understand your investments and create a long-term plan that aligns with your life and financial goals. But if you are not adaptable in the short term, you are doomed in the distant future. Investors who have a risk-taking attitude are more willing to accept potential losses in exchange for the possibility of higher returns (Zhang et al., 2021). They are willing to invest in assets that may be volatile, such as stocks, mutual funds, and real estate. These investors tend to have a higher tolerance for uncertainty and are unafraid to take calculated risks. They understand that there is no such thing as a risk-free investment and are willing to do their due diligence and research before making any investment decisions. A risk-taking attitude can lead to greater potential rewards, but it also carries the potential for greater losses (McCleskey & Gruda, 2021). As such, it is important for investors to have a clear understanding of their risk tolerance and to develop a well-diversified investment portfolio that aligns with their investment goals and objectives. However, risk-taking attitude can differ for different investors depending upon their personality type. Research has shown that certain personality traits are associated with a greater willingness to take risks (Śmieja et al., 2023). For example, individuals who are highly extroverted and open to new experiences tend to be more comfortable with taking risks, whereas those who are more introverted and cautious may be more risk-averse. Moreover, an investor's level of self-confidence can also influence their risk-taking behavior. Individuals who are highly confident in their abilities may be more likely to take risks, while those who lack confidence may be more hesitant. Therefore, an investor's personality is a complex mix of factors that can influence their risk-taking attitude. One such important aspect of individuals' personality and mindset is the locus of control. It is an individual's belief about the extent to which they have control over events and outcomes in their life. It can have a significant impact on their risk attitude and investment decisions. Investors

with a high internal locus of control tend to regulate their investment decisions with their actions, and those with an external locus of control put more stress on external situational factors. However, it is worth noting that the locus of control is not a black-and-white concept, and individual investors may exhibit varying degrees of internal or external locus of control depending on the situation. Therefore, understanding an investor's locus of control is equally important to assess their risk-taking attitude and investment decisions in times of uncertainty.

The purpose of the study is to understand investor resilience level and relate it to their demographics, risk attitude, return expectation, resilience, locus of control, and investment pattern. The study contributes to the existing literature of behavioral finance and investment, which can help potential researchers in their future work in the same field. It also suggests policy recommendations and parameters to become resilient investors and make sustainable investments.

The following sequence has been adopted for this paper. After the introductory part, the second section discusses a review of existing and related literature followed by section three, which explains the methodology, section four clarifies analysis and understanding of results, and segment five concludes the study.

2. A Review of Literature

Resilience means the capacity of an individual to adapt and attain good outcomes in situations of adversity. It plays a significant role in contemporary social science concepts at different levels; individuals, families, communities, and organizations (Van Breda, 2018). The study of resilience has not been limited to the field of ecology but has evolved in various other disciplines, namely behavioral science, psychology, economics, global environment, and disaster management. Therefore, resilience is a "multiple interrelated dimension, which fluctuates over time". It is best described as a dynamic process that focuses on adaptability rather than stability. The resilience-level evolves which can be improved with continuous learning. In financial markets, there is a high rate of uncertainty and risk which gives more focus on individual investor resilience levels (Salignac et al. 2019). Most individual investors show a common pattern with regard to their investing activities because when some of the investors buy (sell), other groups of investors do the same thing. Thus, it implies the co-movement inducement among them. As per their findings, Kelly-Scholte et al. (2018) in a J.P. Morgan Asset Management Report studied resilience for an individual investor and found that a gradual shift can be seen in the market risk while dealing with recessionary environments and their investment decisions tend to become individual centric. This has given rise to more

market-based savings and the increasing role of defined contribution plans, which comparatively have lesser guarantees in the context of retirement savings. This has set a trend of approaching mutual funds more than equity and bond exposures. Strategies like allocating assets in a more balanced way through TDFs and DCs have helped in building resilience in downturns for retirement savings. Dynamic management and allocation can help reduce the stress of investors regarding their portfolio characteristics, especially in downturns. Furthermore, it can help mitigate the cycles in household investing. Thus, in stressful situations like in recessions, each investor has his own risk-bearing capacity because an increase in experience and age has led to becoming more risk takers. The report concluded that downturns can have different effects on different investors and the intensity also varies, but survival in such situations is only possible when one has complete understanding and knowledge of recessionary environments. Only then can an individual mitigate its effects and survive for longer and better.

The availability of appropriate resources and their easy access can impact the level of resilience because resources always evolve and are dynamic. So, their approachability by investors is essential. Resources can be either internal, which are related to one's own personal qualities, or external, which help in managing ever-changing environments and unwanted threats. A statistically meaningful relationship can be seen between aversion-based behavioral finance bias and level of resilience (Hamurcu, 2019). The author has used different methods and suggested that resilience competency can be learned and developed. Several disruptions have been made by the recent coronavirus pandemic all over the world. It has radically affected the social and economic aftermath since the Great Depression, as said by the IMF chief (Chaudhary et al., 2020). Liu et al. (2020) in their investigation expressed the role of digital resiliency and financial literacy & decision making during the 1990 financial market turmoil and reported that technology has helped investors in this financial crisis by providing Robo-Advisors (RAs) users with fewer losses and misfortunes as they held less risky portfolios (Ndiege et al., 2023). Accordingly, they had the option to maintain their performance advantage because the RA system has alleviated misfortunes and created financial resilience for its users. Besides technological and financial expertise, emotional stability also plays a role to play in an individual's resilience ability in the times of a pandemic. Subsequently, positive experience of emotion has been related to the capacity of handling any type of crisis viably (Kuntz, 2022; Ahmed et al., 2023).

Financial and household investors have widely contributed to security exchanges and stock markets because of which it is important to understand the determinants and factors of their respective venture

conduct. Recent studies and investigations have helped in understanding the role of financial literacy in portfolio decisions and choices because investors always have the feeling of failure and get cheated while purchasing any stock. Also, their participation in stock markets is highly influenced by their peers participating. The attractiveness of these markets is majorly dependent upon the “social interactions” among social groups. Thus, individuals possessing less knowledge of stock markets tend to participate less, so the concept of financial literacy cannot be taken for granted (Van Rooij et al., 2011). Not only financial literacy but also personality aspects of an individual investor have a significant influence on his/her stock market participation, as indicated in several studies. Nandan and Saurabh (2016) examined the relevance and effect of personality in the context of economic activities and majorly highlighted the non-cognitive aspect of one's aptitude. However, these traits tend to change over time due to investment results and gained experience (Almlund et al., 2011). When stocks are difficult to value, investors make larger mistakes because of overconfidence and disposition bias, and these are often taken as an opportunity by those investors who possess better information. Moreover, men hold larger and more diverse portfolios and do somewhat larger trades as compared to women, but they did not find any contrast in the exhibition of sexual orientations with respect to investment behaviors in stock markets Feng and Seasholes (2008). However, according to their study, both men and women exhibited similar investment behaviours. As indicated by Talsepp (2010), portfolio results are better for female investors and the old age group of investors. As per their findings, more trading intensity leads to lower and less profitable returns. Also, male financial investors tend to increase the size of their portfolio with an increase in their age on the belief that one should try to grow their wealth before retiring. However, a completely different perception can be traced for female investors because their portfolio size rather shows a diminishing pattern as they reach their 50s because of lack of confidence, which eventually in turn helps them to get moderate returns. Conventional Portfolio Theory provides a base for understanding the resilience of a portfolio linking it with a risk-return trade off. It is a principle that states “one can get higher returns from portfolios for which high risk is associated” (Mangram 2013). As per the findings of Friedman (1962; 1970), most organizations' core purpose is to maximize their shareholder value. For this, they provide incentives for adapting resilient behavior and use it as a competitive advantage for the mid-long term, and Neoclassical Economic Theory (NET) has served as the motivation source behind this strategic move. It has been proclaimed through a study of an insurance company that having financial knowledge and proficiency helps in adapting resilient behavior because investors become more aware and

confident about their portfolios and their returns (Hira and Căzilia, 2005). Financial consideration and incorporation cultivate the pay level of needy individuals. Thus, it has provided a more prominent probability of getting jobs, which will somehow influence their degree of financial resilience in the near future Bruhn and Love (2014).

Financial literacy and resilience elevate the risk-taking attitude of investors. It is the risk-taking propensity of individuals either to engage or avoid risk in decision making (Ahmad, 2020). The risk-taking propensity varies according to individual risk appetite and personality traits. Broadly, risk-taking attitude is classified into two main categories; passive and active. Passive investors seek secured investment options and avoid risk; however, active investors are keener to make risky investments that promise high returns. Ahmad (2020) analyzed personality and cognitive traits of men and women and found that women are more risk-averse than men. Moreover, positive emotions tend to regulate risk-taking propensity. However, investors with negative emotions are more anxious and prefer to invest in low-risk choices. Risk propensity is dependent on age, gender, and career-related risk objectives and is strongly rooted in individual personality. Additionally, Kaplanski et al. (2015) showed that noneconomic factors have a significant influence in shaping the risk and return expectations of investors. Specifically, they found that good mood and favorite sports results have a positive influence on individual return expectations, whereas investors suffering from seasonal affective disorders have expectations signifying low returns in autumn than in other seasons. Thus, one can presume that the level of risk-taking attitude moderates the association between personality traits and biases. In personality studies, one of the most important factors that influence decision making among individuals is the locus of control. It reflects the tendency of an individual to cater to the surrounding external and internal environment.

The locus of control is a psychological concept that states that whether the outcome of an individual is affected by one's own actions or external factors. Some individuals believe they have full control of their actions and take full charge of their outcomes indicating an internal locus of control, and some believe it is controlled by others indicating an external locus of control. The concept of locus of control in behavioral finance literature has been the subject of numerous studies. Arifin (2017) stated that financial information and the locus of control affect financial behavior, but income does not have the same effect. The individual's internal locus of control is seen as a significant determinant beyond issues such as investment in equality, economic preferences risk, and time preferences), and socioeconomic characteristics (Salamanca et al., 2013). In recent studies, the authors have confirmed that the locus of control affects

financial behavior and that the locus of control plays an important role in increasing financial behavior (Radianto et al., 2021).

The above discussion has highlighted the importance of resilience specifically in unforeseen and uncertain times. It is important that portfolio managers should not only consider the financial and income capacity of an investor but also analyze their resilience level in order to cope with difficult situations. Therefore, research is needed to more comprehensively understand this gap in analyzing and building the resilience of investors through their internal and external behavioral characteristics.

3. Methodology

Gaining an in-depth understanding of resilient investors and their all-related aspects was the main objective of this study. A structured questionnaire was designed, and the data were collected in both offline and online modes. The questionnaire was distributed to 250 investors in India and only 150 full-fledged responses were received and hence considered for the study. Convenience sampling under the nonprobability sampling technique was used for the same. The questionnaire had 25 statements to measure the resilience level of investors. After studying extensive literature, five variables, namely; adaptability, optimism, self-sufficiency, self-control, and persistence, were considered. Five statements from different perspectives were prepared for each variable on a five-point Likert scale. Cronbach alpha was found to be 0.7. Similarly, face validity was obtained from two senior academicians from the finance and organizational behavior fields that approved the validity of the scale in terms of concept coverage, and after that, two portfolio managers were also involved in preparing the final 25 statements. Structural Equation Modelling (SEM) using Smart PLS software is used. Figure 1 explains the methodology followed in the study.

1. H9: To establish a structural model between resilience, Locus of Control, and risk attitude
2. Literature Review
3. Formulation of Hypothesis
4. Defining research Design
5. The selection of Sample Frame and Sampling Technique
6. Data Collection
7. Data Interpretation and Analysis
8. Discussion and Conclusion
9. Implication and Limitation

Figure 1. Research design of the study

3.1. Hypotheses

H1: There was a significant difference in the resilience level of males and females.

H2: Married people are more resilient than unmarried people.

H3: Investors who work in finance - related sectors are more resilient investors.

H4: There is a significant difference in the resilience

level of people of different age groups.

H5: Level of resilience increases with more work experience.

H6: There is a significant difference in the resilience level of people with respect to income.

H7: There was a significant difference in resilience level based on the educational qualifications of respondents.

H8: Resilient investors invest less than non-resilient investors.

4. Results and Analysis

Table 1 shows demographics-wise classification of investor resilience and their chi-square results. 52.70 % were males and 47.30 % females. 54 percent investors have high resilience level and 46 percent investors have low resilience levels. 56 percent respondents were single and 44 percent were married. 41.50 percent respondents work in non-finance related activities and 58.50 percent have finance work profile. 58.70 percent of sample respondents belong to age group of 20-35 years, 31.30 percent belong to 36-50 years of age group. 46.70 percent respondents have done post-graduation and 44 percent are graduates.

Comparing the demographic variables with respect to the resilience level of respondents, it was found that females have higher resilience levels 57.70 percent females and 50.60 percent males have high resilience levels. Chi-square tests showed not significant results. Thus, the level of resilience has no variance with respect to gender. Therefore, null hypothesis H1 is rejected as the result shows insignificant difference between males and females.

54.80 percent of respondents who are single have high resilience levels and 53 percent of married respondents have high resilience. The chi-square results are insignificant, which shows that marital status and resilience levels have no significant difference between them. Thus, alternate hypothesis H2 is rejected as the results are insignificant.

When compared with respect to work place activity, 62 percent of finance professionals have high resilience levels compared with 42.60 percent of non-finance work professionals who have high resilience. The chi-square result was 8.924 highly significant at 5 percent level of significance. Thus, it signifies that there is a significant difference in the resilience level of finance and non-finance professionals.

Age-wise classification of resilience level shows that 59.10 percent of investors within age group of 20-35 years have high resilience. Investors in the age group 51-60 years of age have the highest level of resilience, i.e., 64.30 percent. The chi-square results are non-significant, which shows that the resilience levels of investors of different age groups do not have any significant difference between them. So H4 is rejected.

Table 1 shows the results of work experience a wise

difference of resilience levels. 66.30 percent investors with work experience of 1-5 years have a high resilience level. With work experience of 15 years and above 73.30 percent, investors have high resilience levels. The chi-square value of 19.89 is highly

significant, which shows that work experience significantly affects investor resilience levels. Thus, alternative hypothesis H5 is not rejected, and it can be concluded that as experience increases, resilience level also increases.

Table 1. Demographics-wise classification of investor resilience

			Investor Resilience			Pearson Chi-Square
			Low Resilience	High Resilience	Total (percent total)	
Gender	Male	N	39	40	79	0.762 (0.383)
		Percentage	49.40%	50.60%	52.70%	
	Female	N	30	41	71	
			Percentage	42.30%	57.70%	47.30%
Marital status	Total	N	69	81	150	
		Percentage	46.00%	54.00%	100.00%	
	Single	N	38	46	84	0.002(0.963)
			Percentage	45.20%	54.80%	56.00%
Workplace Activity	Married	N	31	35	66	
		Percentage	47.00%	53.00%	44.00%	
	Non-Finance	N	36	30	66	8.924 (0.03)*
			Percentage	57.40%	42.60%	41.50%
Age	Finance	N	32	49	79	
		Percentage	38.00%	62.00%	58.50%	
	20-35 years	N	36	52	88	5.168 (0.16)
			Percentage	40.90%	59.10%	58.70%
	36-50 years	N	27	20	47	
		Percentage	57.40%	42.60%	31.30%	
	51-60 years	N	5	9	14	
			Percentage	35.70%	64.30%	9.30%
Work Experience	60 years and above	N	1	0	1	
		Percentage	100.00%	0.00%	0.70%	
	1-5 years	N	27	53	80	19.689 (0)*
			Percentage	33.80%	66.30%	53.30%
	5-10 years	N	33	13	46	
		Percentage	71.70%	28.30%	30.70%	
	10-15 years	N	5	4	9	
			Percentage	55.60%	44.40%	6.00%
Annual family income	15 years and above	N	4	11	15	
		Percentage	26.70%	73.30%	10.00%	
	Less than 10 Lakhs	N	25	24	49	2.264 (0.322)
			Percentage	51.00%	49.00%	32.70%
	10-20 Lakhs	N	20	33	53	
		Percentage	37.70%	62.30%	35.30%	
	More than 20 Lakhs	N	24	24	48	
			Percentage	50.00%	50.00%	32.00%
Education	Below Higher	N	5	1	6	10.750 (0.013)*
		Percentage	83.30%	16.70%	4.00%	
	Secondary	N	23	43	66	
			Percentage	34.80%	65.20%	44.00%
	Graduation	N	31	39	70	
		Percentage	44.30%	55.70%	46.70%	
	Post Graduation	N	2	6	8	
			Percentage	25.00%	75.00%	5.30%
Total		N	69	81	150	
		Percentage	46.00%	54.00%	100.00%	

Annual family income-wise differences in resilience level do not show significant results, which signify that null hypothesis H6 is rejected as we found no significant difference in investor resilience of investors with different income classes. Education-wise differences in resilience levels show that 65.20 percent of respondents who are graduates have high resilience levels. 55.70 percent of respondents who have postgraduation also have high resilience levels, and 75 percent of respondents who have higher qualifications

than postgraduation also have high resilience. The results of chi-square are highly significant at 5 percent level of significance, which shows that there is a significant difference between investor resilience levels based on the educational qualification. Thus, alternative hypothesis H7 is not rejected and as education qualification increases, resilience level also increases.

The investors were asked about their investment levels; on an average, the investors in India invest 44.47 percent of their income with a standard deviation of

18.39. These investment levels of respondents were shown in Table 2. classified based on resilience levels and the results are

Table 2. Investment % of the respondents

		Investment Percentage	ANOVA		
		Mean	Std. Deviation	F	Sig.
Resilience	Low Resilience	50.348	21.6019	13.52	0*
	High Resilience	39.469	14.3728		

The average investment of low resilient investors is 50.348 percent and that of high resilient investors is 39.46 percent. The results of ANOVA are highly significant, which depicts that there is a significant difference in the amount of money invested by investors who have high and low resilience levels (H8 is accepted).

Another variable considered for study was the Locus of Control, which has been classified into two groups. The ANOVA result is highly significant, which shows a significant difference in investments of two groups with

different loci of control.

Table 3 shows the investment pattern of sample respondents. The results show that all investors invest in savings bank accounts, fixed deposits, and insurance plans. Above 80% of investors have invested in government securities, provident funds, and gold. 50% investors have invested in real estate. In equity shares 50 percent investors have invested up to an average of 30.6 percent investment. 76.6 percent investors invest in mutual funds and their average investment is 25.96 percent.

Table 3. Investment patterns of the respondents

Investment Instrument	The percentage of Investors	Mean	Std. Deviation	Minimum	Maximum
Savings bank account	100.00	26.467	24.126	0	85
Fixed deposit	100.00	16.7	18.9562	0	95
Government securities (KVP, NSC , etc)	84.67	7.205	8.5369	0	30
Provident Fund	83.33	4.16	6.3097	0	40
Insurance Plans	100.00	6.733	6.5279	0	20
Gold	85.33	5.156	7.0414	0	40
Mutual funds	76.67	25.957	27.5131	0	80
ETFS	49.33	1.486	4.5125	0	20
Real Estate	50.67	2.105	5.4932	0	30
Bonds/Debentures	44.67	0.373	3.0542	0	25
Equity Shares	50.00	30.6	29.6142	0	80
Derivative instruments	46.67	0.357	1.297	0	5

Table 4 presents the risk return expectation of resilient investors. 54 percent of investors with high resilience levels have high return expectations from the

market compared with 46 percent of investors with low resilience levels.

Table 4. Risk and return classification of investors' resilience

			Investor Resilience		
			Low Resilience	High Resilience	Total
Return Expectation	Low Returns	N	27	22	49
		Percentage	55.10%	44.90%	32.70%
	High Returns	N	42	59	101
		Percentage	41.60%	58.40%	67.30%
	Total	N	69	81	150
		Percentage	46.00%	54.00%	100.00%
Risk Attitude	Conservative	N	15	3	18
		Percentage	83.30%	16.70%	12.00%
	Balanced	N	51	69	120
		Percentage	42.50%	57.50%	80.00%
	Aggressive	N	3	9	12
		Percentage	25.00%	75.00%	8.00%
	Total	N	69	81	150
		Percentage	46.00%	54.00%	100.00%

With respect to risk attitude, 75 percent of high resilient investors are aggressive and 57.50 percent of investors having high resilience are balanced, whereas 83.30 percent of low resilient investors are conservative.

To understand the relationship between demographic

variables and investor resilience, the data were analyzed using multiple regression analysis (Table 5). The model has an adjusted R square value of 26.1 percent, which shows the explanation power of the model, which is good and significant. The risk attitude significantly affects investor resilience, and highly resilient investors

take high risks. With respect to gender also, it shows that females are more resilient than males. Marital status also significantly loads with investor resilience, which signifies that married people are more

resilient than the single. Age negatively loads on the model, which indicates that when the age of a person increases his resilience level goes down. Education qualification significantly affects investor resilience.

Table 5. Regression results

Coefficients	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error	Beta	T	Sig.
(Constant)	2.072	0.303		6.847	0
Risk Attitude	0.045	0.02	0.184	2.201	0.029
Gender	0.135	0.082	0.141	1.659	0.049
Marital status	0.139	0.09	0.144	1.55	0.123
Age	-0.156	0.067	-0.217	-2.339	0.021
Education	0.057	0.06	0.079	0.947	0.145
Dependent Variable: Investor Resilience					
R Square	0.293	F	2.601		
Adjusted R Square	0.261	Sig.	0.039		
Std. Error of the Estimate	0.47023	Durbin-Watson	0.819		

4.1. Resilience Measurement Model: Formative Scale

Using the redundancy analysis (Chin, 1998), we obtained an R square of 0.88, which confirms concurrent validity of the resilience measurement model. Table 6 shows the linearity analysis (VIF) of the formative scale of resilience.

Table 6. Collinearity test (VIF) of resilience formative scale

	VIF
LOC	1.000
adapres02	1.010
adapres05	1.117
adapres09	1.259
adapresres10	1.138
Adaptability	1.652
contres20	1.121
contres23	1.235
contres24	1.108
optimism	2.054
optres08	1.116
optres12	1.025
optres15	1.100
persistence	1.451
persres07	1.102
persres22	1.108
persres25	1.028
Riskcat	1.000
Selfcontrol	1.720
Selfsufficiency	1.891
suffres04	1.152
suffres14	1.081
suffres18	1.126

All values of independent indicators are less than three, which confirms that the measurement model has no collinearity issues (Hair et al., 2011). Since there is no multicollinearity between them, this proposed model shows a high level of predictive relevance.

Figure 2 explains the structural model of the formative resilience scale with the risk attitude (reflective) of investors.

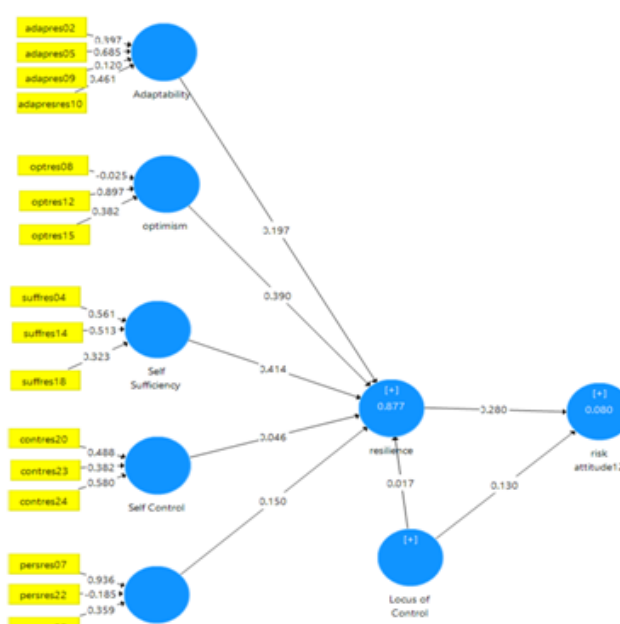


Figure 2. PLS-Path analysis model diagram for resilience and risk attitude (developed with SmartPLS utilizing)

The locus of the control construct has been added as a moderator variable in the model. As per the established model, the LOC and resilience level of investors have a positive relationship. Our model implies that as a moderator variable, LOC affects the relationship between resilience, which is a dependent variable, and risk attitude of investors (independent variable).

The model also tries to study the relationship between the locus of control and risk attitude directly. Table 7 summarizes the model summary and path coefficients. A significant relationship exists between the impact of resilience as an independent variable and risk attitude as a dependent variable. The adjusted R square of risk attitude as explained by resilience is 8 percent, and the path coefficient between them is 28 percent. The path coefficient from the locus of control to resilience is 13 percent. The structural model has a good model fit with SRMR of 0.04 as the values should

be less than 0.10 or 0.08, respectively (Haye et al. 2014). NFI values also show good model fit with a value of 0.937 and values above 0.9 represent model acceptable fit (Hair1 et al., 2017). Thus, our proposed tested model can be considered valid. The effect size

has also been measured. Self-sufficiency and optimism have a large effect on resilience and adaptability has a medium effect, and persistence has a small effect on resilience.

Table 7. Model summary and path coefficients

	Resilience	Risk attitude	Significant F Square with Resilience (Effect Size)
Adaptability	0.197		0.18 (Medium Effect)
Locus of Control	0.017	0.130	
Persistence	0.150		0.13 (Small Effect)
Self-Control	0.046		
Self Sufficiency	0.414		
Optimism	0.390		0.76 (Large Effect)
Resilience		0.280	
R Square Adjusted		Model Fit	Estimated Model
Resilience	0.877	SRMR	0.040
Risk attitude	0.080	NFI	0.937

5. Discussion

To gain good returns from the market, it is important that an investor follows the market behavior and analyzes it to make effective investment decisions. The risk attitude of an investor plays an important role in determining the investment pattern and return expectations of the investor; the capacity to be risk averse and risk seeker will be dependent upon the investor's resilience. Investor resilience is an inherent ability of an investor to quickly recover from unfavorable situations that the market poses. The results of this study depict that gender, age, marital status, and educational qualification significantly impact the resilience level of investors. It was found that females are more resilient than males. People younger in age are found to be more resilient than older investors. Married people are more resilient than the single. The results of regression indicate that the demographics of an investor significantly impact their resilience levels and ultimately their behavior in the stock market.

The study further reveals using the structural model, relationship between resilience and risk attitude. The Locus of the control construct has been added as a moderator variable in the model. Investors with internal locus of control have more resilience, and high resilience leads to a risk-seeking attitude. The study proposes a model that explains five important components of the formative scale of the resilience construct, including adaptability, optimism, self-sufficiency, self-control, and persistence. Self-sufficiency and optimism have a large effect on resilience and adaptability has a medium effect, and persistence and self-control have a small effect on resilience. Optimism and self-sufficiency along with an internal locus of control make an investor survive bad times in the market. Most of us believe in the concept of self-sufficiency and thus seek to fulfill our own needs without any external help. To become self-sufficient; investors should feel unshakable confident in their own informed decisions about their own money. A resilient

investor will also have good adaptability to changed market scenarios and will change his investment strategy accordingly. The crisis and shocks of the market will come and go, an investor will enter the market knowing his risk attitude, and a highly resilient investor will be able to handle shocks of the market and stay in the market for the long term.

6. Conclusion

Investors who have high resilience have better ability to manage shocks and are less afraid of volatility in the market. This helps them sustain in the market for long term.

This study indicates the importance of demographics in shaping the resilience level of investors. The study also emphasizes the role of investor resilience in investment behavior, including the risk attitude of investors. The markets will behave more efficiently if investors with high resilience exist. Proper education, guidance, and handholding by portfolio managers can be helpful for building investor resilience. Higher investor resilience levels and the locus of control can play an important role in determining the risk attitude level of investors. For successfully creating long-term investment plans and aligning them with life goals, resilience is required. Our study concludes that the three parameters, optimism, self-sufficiency, and adaptability, will make a resilient investor. The strategic portfolio allocation of individual investors highly influences their resilience level. Policies can be promoted by financial institutions and investment firms where their portfolio managers can be trained to understand the behavioral and resilience aspects of their potential clients. This will help predict various alternatives that investors can adopt as per their resiliency. Additionally, financial incentives can be introduced to promote a resilience system and meet mandatory standards while planning any investment taking resilience into consideration.

6.1. Limitations and Scope of Future Research

Other internal and external variables of resilience such as coping ability, self-efficacy, intellectual competence, and competent connections other than those taken in this study can be further examined. Future researchers can also study the role of resilient leaders and managers in an organization for training and guiding investors during uncertain times. Moreover, because of the sampling procedure, the results cannot be generalized as it is difficult to cover the entire nation. Therefore, future studies can try to involve participants from all regions for more generalized results in the same field.

Acknowledgments

Authors should present a list of acknowledgments at the end. Any financial or non-financial support for the study should be acknowledged.

Authors' Contributions

Conceptualization, methodology and writing draft- Deepti Prakash.

Software validation, formal analysis and writing draft- Divya Verma.

Data collection and writing draft: Twinkle Arora.

All authors have read and agreed to the final version of the manuscript.

References

- [1] ABBASS, K., BEGUM, H., ALAM, A.F., AWANG, A.H., ABDELSALAM, M.K., EGDAIR, I.M.M., & WAHID, R. (2022). Fresh insight through a Keynesian theory approach to investigate the economic impact of the COVID-19 pandemic in Pakistan. *Sustainability*, 14(3), art. 1054. <https://doi.org/10.3390/su14031054>
- [2] AHMADI MARZALEH, M., BASSIRI, E., HEIDARI, E., & NOROUZINIA, R. (2018). The Relationship between Resilience and Locus of Control in Students of Alborz University of Medical Sciences in 2017. *Sadra Medical Sciences Journal*, 6, pp. 67-76. Retrieved from https://smsj.sums.ac.ir/article_43959.html?lang=en
- [3] AHMED, T., KARMAKER, C.L., NASIR, S.B., MOKTADIR, M.A., & PAUL, S.K. (2023). Modeling the artificial intelligence-based imperatives of industry 5.0 towards resilient supply chains: A post-COVID-19 pandemic perspective. *Computers & Industrial Engineering*, 177, art. 109055. <https://doi.org/10.1016/j.cie.2023.109055>
- [4] ALMLUND, M., DUCKWORTH, A.L., HECKMAN, J.J., & KAUTZ, T.D. (2011). Personality psychology and economics. *NBER Working Paper*, 16822. <https://doi.org/10.1016/B978-0-444-53444-6.00001-8>
- [5] AL-THAQEB, S.A., & ALGHARABALI, B.G. (2019). Economic policy uncertainty: A literature review. *The Journal of Economic Asymmetries*, 20, art. e00133. <https://doi.org/10.1016/j.jeca.2019.e00133>
- [6] ANAND, A., IRVINE, P., PUCKETT, A., & VENKATARAMAN, K. (2013). Institutional trading and stock resiliency: Evidence from the 2007–2009 financial crisis. *Journal of Financial Economics*, 108, pp. 773–797. <https://doi.org/10.1016/j.jfineco.2013.01.007>
- [7] BARAN, B.E., & WOZNYJ, H.M. (2020). Managing VUCA: The human dynamics of agility. *Organizational Dynamics*, art. 100787. <https://doi.org/10.1016/j.orgdyn.2020.100787>
- [8] BRUHN, M., & LOVE, I. (2014). The Real Impact of Improved Access to Finance: Evidence from Mexico. *Journal of Finance*, 69(3), pp. 1347–1376. <https://doi.org/10.1111/jofi.12091>
- [9] BUIKSTRA, E., ROSS, H., KING, C.A., BAKER, P.G., HEGNEY, D., MCLACHLAN, K., and ROGERS-CLARK, C. (2010). The components of resilience — perceptions of an Australian rural community. *Journal of Community Psychology*, 38(8), pp. 975–991. <https://doi.org/10.1002/jcop.20409>
- [10] CHAUDHARY, M., SODANI, P.R., & DAS, S. (2020). Effect of Covid-19 on Economy in India: Some Reflections for Policy and Programme. *Journal of Health Management*, 22(2), pp. 169-180. <https://doi.org/10.1177/0972063420935541>
- [11] CONZ, E., & MAGNANI, G. (2020). A dynamic perspective on the resilience of firms: A systematic literature review and a framework for future research. *European Management Journal*, 38(3), pp. 400-412. <https://doi.org/10.1016/j.emj.2019.12.004>
- [12] CUMMINS, R.A. (2010). Subjective wellbeing, homeostatically protected mood and depression: A synthesis. *Journal of Happiness Studies*, 11(1), pp. 1–17. <https://doi.org/10.1007/s10902-010-9235-5>
- [13] DALBY, S. (2020). Resilient earth: Gaia, geopolitics and the Anthropocene. In D. CHANDLER, K. GROVE, & S. WAKEFIELD (Eds.) *Resilience in the Anthropocene* (pp. 22-36). Routledge.
- [14] FRIEDMAN, M. (1962). *Capitalism and Freedom*. University of Chicago Press.
- [15] FRIEDMAN, M. (1970). A Friedman doctrine - The Social Responsibility of Business Is to Increase Its Profits. *NY Times*. Retrieved from <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html>
- [16] HAIR, J.F., SARSTEDT, M., HOPKINS, L., & KUPPELWIESER, V.G. (2014). Partial least squares structural equation modeling (PLSSEM): An emerging tool in business research. *European Business Review*, 26(2), pp. 106-121. <https://doi.org/10.1108/EBR-10-2013-0128>

- [17] HAIR, J.F., HULT, RINGLE, C.M., & SARSTEDT, M. (2016). *A primer on partial least squares structural equation modelling (PLS-SEM)*. Sage Publications.
- [18] HALLEGATTE, S. (2014). Economic resilience: Definition and measurement. *Policy Research Working Paper*, 6852. Retrieved from <https://ideas.repec.org/p/wbk/wbrwps/6852.html>
- [19] HAMURCU, C. (2019). Does resilience affect aversion based behavioral finance biases? *Journal of Accounting, Finance and Auditing Studies*, 5(1), pp. 254-268. Retrieved from <https://www.um.edu.mt/library/oar/handle/123456789/38177>
- [20] HECKMAN, J.J., STIXRUD, J., & URZUA, S. (2006). The effects of cognitive and noncognitive abilities on labor market outcomes and social behavior. *Journal of Labor Economics*, 24, pp. 411-482. Retrieved from <http://jenni.uchicago.edu/papers/Heckman-Stixrud-Urzua JOLE v24n3 2006.pdf>
- [21] HENSELER, J., DIJKSTRA, T.K., SARSTEDT, M., RINGLE, C.M., DIAMANTOPOULOS, A., STRAUB, D.W., & CALANTONE, R.J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann. *Organizational Research Methods*, 17(2), pp. 182-209. <https://doi.org/10.1177/1094428114526928>
- [22] HIRA, T.K., & CÄZILIA, L. (2005). Understanding the Impact of Employer-provided Financial Education on Workplace Satisfaction. *The Journal of Consumer Affairs*, 39(1), pp. 173-194. <https://doi.org/10.1111/j.1745-6606.2005.00008.x>
- [23] HOLLING, C.S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*, 4, pp. 1-23. <https://doi.org/10.1146/annurev.es.04.110173.000245>
- [24] HONG, H., KUBIK, J.D., and STEIN, J.C. (2004). Social interaction and stock-market participation. *The Journal of Finance*, 59, pp. 137-163. <https://doi.org/10.1111/j.1540-6261.2004.00629.x>
- [25] JANSSEN, M.A., SCHOON, M.L., KE, W., & BORNER, K. (2006). Scholarly networks on resilience, vulnerability and adaptation within the human dimensions of global environmental change. *Global Environmental Change*, 16, pp. 240-252. <https://doi.org/10.1016/j.gloenvcha.2006.04.001>
- [26] KANTER, R.M. (2013). *Surprises Are the New Normal; Resilience Is the New Skill*. Harvard Business Review. Retrieved from <https://hbr.org/2013/07/surprises-are-the-new-normal-r>
- [27] KELLY-SCHOLTE, S. (2018). *Building investor resilience in a downturn*. Investment & Pensions Europe. Retrieved from <https://www.ipe.com/reports/special-reports/perspectives-2019/building-investor-resilience-in-a-downturn/10028256.article>
- [28] KUMAR, A. (2009). Hard-to-Value Stocks, Behavioral Biases, and Informed Trading. *Journal of Financial and Quantitative Analysis*, 44(6), pp. 1375-1401. <https://doi.org/10.1017/S0022109009990342>
- [29] KUMAR, A., and LEE, C.M.C. (2006). Retail Investor Sentiment and Return Comovements. *The Journal of Finance*, 61(5), pp. 2451-2486. <https://doi.org/10.1111/j.1540-6261.2006.01063.x>
- [30] KUNTZ, J.C. (2020). Resilience in times of global pandemic: steering recovery and thriving trajectories. *International Association of Applied Psychology*, 70(1), pp. 188-215. <https://doi.org/10.1111/apps.12296>
- [31] LUI, C.W., YANG, M., & WEN, M.H., (2020). *Resilience in the storm: Adaptive Robo-Advisors outperform Human Investors during the covid-19 Financial Market Turmoil*. Semantic Scholar. <https://doi.org/10.2139/ssrn.3737821>
- [32] MANGRAM, M.E. (2013). A simplified perspective of the Markowitz Portfolio Theory. *Global Journal of Business Research*, 7, pp. 59-70. Retrieved from <https://ssrn.com/abstract=2147880>
- [33] MCCLESKEY, J., & GRUDA, D. (2021). Risk-taking, resilience, and state anxiety during the COVID-19 pandemic: A coming of (old) age story. *Personality and Individual Differences*, 170, art. 110485. <https://doi.org/10.1016/j.paid.2020.110485>
- [34] MCDANIELS, T., CHANG, S.E., COLE, D., MIKAWOZ, J., & LONGSTAFF, H. (2008). Fostering resilience to extreme events within infrastructure systems: Characterizing decision contexts for mitigation and adaption. *Global Environmental Change*, 18, pp. 301-318. <https://doi.org/10.1016/j.gloenvcha.2008.03.001>
- [35] NANDAN, T., & SAURABH, K. (2016). Big-five personality traits, financial risk attitude and investment intentions: study on Generation Y. *International Journal of Business Forecasting and Marketing Intelligence*, 2(2), pp. 128-150. Retrieved from <https://ideas.repec.org/a/ids/ijbfmi/v2y2016i2p128-150.html>
- [36] NDIEGE, J.R.A., MWAURA, L.M., & CHRISTOPHER, F. (2023). Technology for resilience amid COVID-19 pandemic: Narratives from small business owners in Kenya. *The Electronic Journal of Information Systems in Developing Countries*, art. e12272. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1002/isd2.12272>
- [37] NIKITAS, A., TSIGDINOS, S., KAROLEMEAS, C., KOURMPA, E., & BAKOGIANNIS, E. (2021). Cycling in the era of COVID-19: Lessons learnt and best practice policy recommendations for a more bike-centric future. *Sustainability*, 13(9), art. 4620. <https://doi.org/10.3390/su13094620>

- [38] NORRIS, F.H. (2010). *Behavioral science perspectives on resilience*. CARRI Research Report 10. Community and Regional Resilience Institute. Retrieved from <https://merid.org/wp-content/uploads/2019/09/Behavioral-Science-Perspectives-on-Resilience.pdf>
- [39] ORTAS, E., MONEVA, J., BURRITT, R., & TINGEY-HOLYOAK, J. (2013). Does Sustainability Investment Provide Adaptive Resilience to Ethical Investors? Evidence from Spain. *Journal of Business Ethics*, 124, pp. 297-309. <https://doi.org/10.1007/s10551-013-1873-1>
- [40] PANT, R., BARKER, K., & ZOBEL, C.W. (2014). Static and dynamic metrics of economic resilience for interdependent infrastructure and industry sectors. *Reliability Engineering & System Safety*, 125, pp. 92-102. <https://doi.org/10.1016/j.ress.2013.09.007>
- [41] SALIGNAC, F., MARJOLIN, A., REEVE, R., & MUIR, K. (2019). Conceptualizing and Measuring Financial Resilience: A Multidimensional Framework. *Social Indicators Research*, 145, pp. 17-38. <https://doi.org/10.1007/s11205-019-02100-4>
- [42] ŚMIEJA, J., ZALESKIEWICZ, T., SOBKOW, A., & TRACZYK, J. (2023). Imagining Risk Taking: The Valence of Mental Imagery Is Related to the Declared Willingness to Take Risky Actions. *PsyArXiv*. <https://doi.org/10.31234/osf.io/kyv4p>
- [43] TALPSEPP, T. (2010). Does Gender and Age Affect Investor Performance and the Disposition Effect? *Research in Economics and Business: Central and Eastern Europe*, 2(1), pp. 76-93. Retrieved from <http://rebcee.eu/index.php/REB/article/viewFile/25/24>
- [44] VAN ROOIJ, M., LUSARDI, A., & ALESSIE, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, 60, pp. 401-448. <https://doi.org/10.1016/j.jfineco.2011.03.006>
- [45] WANG, J., CUI, M., & CHANG, L. (2023). Evaluating economic recovery by measuring the COVID-19 spillover impact on business practices: evidence from Asian markets intermediaries. *Economic Change and Restructuring*, 56, pp. 1629-1650. <https://doi.org/10.1007/s10644-023-09482-z>
- [46] WILCOX, J., BODIE, Z., & DI BARTOLOMEO, D. (2022). *Lean Advice for New Investors*. SSRN. <https://dx.doi.org/10.2139/ssrn.4003544>
- [47] ZHANG, C., YANG, C., & LIU, C. (2021). Economic policy uncertainty and corporate risk-taking: Loss aversion or opportunity expectations. *Pacific-Basin Finance Journal*, 69, art. 101640. <https://doi.org/10.1016/j.pacfin.2021.101640>
- [48] ZOBEL, C. W. (2011). Representing perceived tradeoffs in defining disaster resilience. *Decision Support Systems*, 50, pp. 394-403. <https://doi.org/10.1016/j.dss.2010.10.001>

参考文献:

- [1] ABBASS, K., BEGUM, H., ALAM, A.F., AWANG, A.H., ABDELSALAM, M.K., EGDAR, I.M.M., 和 WAHID, R. (2022). 通过凯恩斯主义理论方法的新见解来调查巴基斯坦新冠肺炎大流行的经济影响。可持续性, 14(3), 第 1054 条. <https://doi.org/10.3390/su14031054>
- [2] AHMADI MARZALEH, M., BASSIRI, E., HEIDARI, E., 和 NOROUZINIA, R. (2018). 厄尔布尔士医科大学 2017 年学生心理韧性与控制点的关系. 萨德拉医学科学杂志, 6, 第 67-76 页. 从 ... 获得 https://smsj.sums.ac.ir/article_43959.html?lang=en
- [3] AHMED, T., KARMAKER, C.L., NASIR, S.B., MOKTADIR, M.A., 和 PAUL, S.K. (2023). 模拟基于人工智能的工业 5.0 对弹性供应链的要求: 新冠肺炎后大流行的观点. 计算机与工业工程, 177, 文章 109055. <https://doi.org/10.1016/j.cie.2023.109055>
- [4] ALMLUND, M., DUCKWORTH, A.L., HECKMAN, J.J., 和 KAUTZ, T.D. (2011). 人格心理学和经济学. 国家经济研究局工作文件, 16822. <https://doi.org/10.1016/B978-0-444-53444-6.00001-8>
- [5] AL-THAQEB, S.A., 和 ALGHARABALI, B.G. (2019). 经济政策的不确定性: 文献综述. 经济不对称杂志, 20, 文章 e00133. <https://doi.org/10.1016/j.jeca.2019.e00133>
- [6] ANAND, A., IRVINE, P., PUCKETT, A., 和 VENKATARAMAN, K. (2013). 机构交易和股票弹性: 来自 2007-2009 年金融危机的证据. 金融经济学杂志, 108, 第 773-797 页. <https://doi.org/10.1016/j.jfineco.2013.01.007>
- [7] BARAN, B.E., 和 WOZNYJ, H.M. (2020). 管理“波动性不确定性复杂性歧义”: 敏捷的人类动力学. 组织动力学, 文章 100787. <https://doi.org/10.1016/j.orgdyn.2020.100787>
- [8] BRUHN, M., 和 LOVE, I. (2014). 改善融资渠道的真正影响: 来自墨西哥的证据. 金融杂志, 69(3), 第 1347-1376 页. <https://doi.org/10.1111/jofi.12091>
- [9] BUIKSTRA, E., ROSS, H., KING, C.A., BAKER, P.G., HEGNEY, D., MCLACHLAN, K., 和 ROGERS-CLARK, C. (2010). 复原力的组成部分——对澳大利亚农村社区的看法. 社区心理学杂志, 38(8), 第 975-991 页. <https://doi.org/10.1002/jcop.20409>
- [10] CHAUDHARY, M., SODANI, P.R., 和 DAS, S. (2020). 新冠肺炎对印度经济的影响: 对政策和计划的一些思考. 健康管理杂志, 22(2), 第 169-

- 180 页. <https://doi.org/10.1177/0972063420935541>
- [11] CONZ, E., 和 MAGNANI, G. (2020). 公司弹性的动态视角：系统的文献回顾和未来研究的框架。欧洲管理杂志, 38(3), 第 400-412 页. <https://doi.org/10.1016/j.emj.2019.12.004>
- [12] CUMMINS, R.A. (2010). 主观幸福感、稳态保护情绪和抑郁：综合。幸福研究杂志, 11(1), 第 1-17 页. <https://doi.org/10.1007/s10902-010-9235-5>
- [13] DALBY, S. (2020). 有弹性的地球：盖亚、地缘政治和人类世。在 D. CHANDLER、K. GROVE 和 S. WAKEFIELD (编辑) 人类世的韧性 (第 22-36 页) 中。劳特利奇。
- [14] FRIEDMAN, M. (1962). 资本主义与自由。芝加哥大学出版社。
- [15] FRIEDMAN, M. (1970). 弗里德曼学说——企业的社会责任是增加利润。纽约时报。从...获得 <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html>
- [16] HAIR, J.F., SARSTEDT, M., HOPKINS, L., 和 KUPPELWIESER, V.G. (2014). 偏最小二乘结构方程建模：商业研究中的新兴工具。欧洲商业评论, 26(2), 第 106-121 页. <https://doi.org/10.1108/EBR-10-2013-0128>
- [17] HAIR, J.F., HULT, RINGLE, C.M., 和 SARSTEDT, M. (2016). 偏最小二乘结构方程建模入门。圣人出版物。
- [18] HALLEGATTE, S. (2014). 经济弹性：定义和测量。政策研究工作论文, 6852。取自 <https://ideas.repec.org/p/wbk/wbrwps/6852.html>
- [19] HAMURCU, C. (2019). 弹性会影响基于厌恶的行为金融偏差吗？会计、金融和审计研究杂志, 5(1), 第 254-268 页。从...获得 <https://www.um.edu.mt/library/oar/handle/123456789/38177>
- [20] HECKMAN, J.J., STIXRUD, J., 和 URZUA, S. (2006). 认知和非认知能力对劳动力市场结果和社会行为的影响。劳动经济学杂志, 24, 第 411-482 页。从...获得 <http://jenni.uchicago.edu/papers/Heckman-Stixrud-Urzua JOLE v24n3 2006.pdf>
- [21] HENSELER, J., DIJKSTRA, T.K., SARSTEDT, M., RINGLE, C.M., DIAMANTOPOULOS, A., STRAUB, D.W., 和 CALANTONE, R.J. (2014). 关于偏最小二乘法的共同信念和现实：对伦科和埃弗曼的评论。组织研究方法, 17(2), 第 182-209 页. <https://doi.org/10.1177/1094428114526928>
- [22] HIRA, T.K., 和 CĂZILIA, L. (2005). 了解雇主提供的金融教育对工作场所满意度的影响。消费者事务杂志, 39(1), 第 173-194 页. <https://doi.org/10.1111/j.1745-6606.2005.00008.x>
- [23] HOLLING, C.S. (1973). 生态系统的恢复力和稳定性。生态学和系统学年度回顾, 4, 第 1-23 页. <https://doi.org/10.1146/annurev.es.04.110173.000245>
- [24] HONG, H., KUBIK, J.D., 和 STEIN, J.C. (2004). 社会互动和股市参与。金融杂志, 59, 第 137-163 页. <https://doi.org/10.1111/j.1540-6261.2004.00629.x>
- [25] JANSSEN, M.A., SCHOON, M.L., KE, W., 和 BORNER, K. (2006). 关于全球环境变化人类层面的恢复力、脆弱性和适应性的学术网络。全球环境变化, 16, 第 240-252 页. <https://doi.org/10.1016/j.gloenvcha.2006.04.001>
- [26] KANTER, R.M. (2013). 惊喜是新常态：韧性是新技能。哈佛商业评论。从...获得 <https://hbr.org/2013/07/surprises-are-the-new-normal-r>
- [27] KELLY-SCHOLTE, S. (2018). 在经济低迷时期建立投资者的韧性。欧洲投资与养老金。从...获得 <https://www.ipe.com/reports/special-reports/perspectives-2019/building-investor-resilience-in-a-downturn/10028256.article>
- [28] KUMAR, A. (2009). 难以估价的股票、行为偏差和知情交易。金融与定量分析杂志, 44(6), 第 1375-1401 页. <https://doi.org/10.1017/S0022109009990342>
- [29] KUMAR, A., 和 LEE, C.M.C. (2006). 散户投资者情绪和回报联动。金融杂志, 61(5), 第 2451-2486 页. <https://doi.org/10.1111/j.1540-6261.2006.01063.x>
- [30] KUNTZ, J.C. (2020). 全球大流行时期的韧性：引导复苏和繁荣的轨迹。国际应用心理学协会, 70(1), 第 188-215 页. <https://doi.org/10.1111/apps.12296>
- [31] LUI, C.W., YANG, M., 和 WEN, M.H., (2020). 风暴中的弹性：在新冠肺炎金融市场动荡期间，自适应机器人顾问的表现优于人类投资者。语义学者. <https://doi.org/10.2139/ssrn.3737821>
- [32] MANGRAM, M.E. (2013). 马科维茨投资组合理论的简化视角。全球商业研究杂志, 7, 第 59-70 页。从...获得 <https://ssrn.com/abstract=2147880>
- [33] MCCLESKEY, J., 和 GRUDA, D. (2021). 新冠肺炎大流行期间的冒险、韧性和状态焦虑：一个（老年）时代的故事。人格与个体差异, 170, 文章 110485. <https://doi.org/10.1016/j.paid.2020.110485>
- [34] MCDANIELS, T., CHANG, S.E., COLE, D., MIKAWOZ, J., 和 LONGSTAFF, H. (2008). 在基础设施系统中培养对极端事件的恢复能力：表征缓解和适应的决策环境。全球环境变化, 18, 第 301-318 页. <https://doi.org/10.1016/j.gloenvcha.2008.03.001>

- [35] NANDAN, T., 和 SAURABH, K. (2016). 大五人格特质、财务风险态度和投资意向：是世代研究。国际商业预测和营销情报杂志, 2(2), 第 128-150 页。从 ... 获得 <https://ideas.repec.org/a/ids/ijbfmi/v2y2016i2p128-150.html>
- [36] NDIEGE, J.R.A., MWAURA, L.M., 和 CHRISTOPHER, F. (2023). 新冠肺炎大流行中的弹性技术：来自肯尼亚小企业主的叙述。发展中国家信息系统电子杂志, 文章 e12272。从...获得 <https://onlinelibrary.wiley.com/doi/abs/10.1002/isd2.12272>
- [37] NIKITAS, A., TSIGDINOS, S., KAROLEMEAS, C., KOURMPA, E., 和 BAKOGIANNIS, E. (2021). 新冠肺炎时代的自行车运动：经验教训和最佳实践政策建议，以实现更加以自行车为中心的未来。可持续性, 13(9), 第 4620 条。 <https://doi.org/10.3390/su13094620>
- [38] NORRIS, F.H. (2010). 关于弹性的行为科学观点。社区和区域恢复力研究所研究报告 10。社区和区域恢复力研究所。从 ... 获得 <https://merid.org/wp-content/uploads/2019/09/Behavioral-Science-Perspectives-on-Resilience.pdf>
- [39] ORTAS, E., MONEVA, J., BURRITT, R., 和 TINGEY-HOLYOAK, J. (2013). 可持续发展投资是否为道德投资者提供适应性弹性？来自西班牙的证据。商业道德杂志, 124, 第 297-309 页。 <https://doi.org/10.1007/s10551-013-1873-1>
- [40] PANT, R., BARKER, K., 和 ZOBEL, C.W. (2014). 相互依存的基础设施和工业部门经济弹性的静态和动态指标。可靠性工程与系统安全, 125, 第 92-102 页。 <https://doi.org/10.1016/j.ress.2013.09.007>
- [41] SALIGNAC, F., MARJOLIN, A., REEVE, R., 和 MUIR, K. (2019). 财务弹性的概念化和衡量：一个多维框架。社会指标研究, 145, 第 17-38 页。 <https://doi.org/10.1007/s11205-019-02100-4>
- [42] ŚMIEJA, J., ZALESKIEWICZ, T., SOBKOW, A., 和 TRACZYK, J. (2023). 想象冒险：心理意象的效价与宣布的采取冒险行动的意愿有关。心理档案。 <https://doi.org/10.31234/osf.io/kyv4p>
- [43] TALPSEPP, T. (2010). 性别和年龄会影响投资者业绩和处置效应吗？经济与商业研究：中欧和东欧, 2(1), 第 76-93 页。从 ... 获得 <http://rebcee.eu/index.php/REB/article/viewFile/25/24>
- [44] VAN ROOIJ, M., LUSARDI, A., 和 ALESSIE, R. (2011). 金融知识和股票市场参与。金融经济学杂志, 60, 第 401-448 页。 <https://doi.org/10.1016/j.jfineco.2011.03.006>
- [45] WANG, J., CUI, M., 和 CHANG, L. (2023). 通过衡量新冠肺炎对商业行为的溢出影响来评估经济复苏：来自亚洲市场中介机构的证据。经济变革与重组, 56, 第 1629-1650 页。 <https://doi.org/10.1007/s10644-023-09482-z>
- [46] WILCOX, J., BODIE, Z., 和 DI BARTOLOMEO, D. (2022). 给新投资者的精益建议。社会科学研究网。 <https://dx.doi.org/10.2139/ssrn.4003544>
- [47] ZHANG, C., YANG, C., 和 LIU, C. (2021). 经济政策不确定性和企业冒险：损失规避或机会预期。太平洋盆地金融杂志, 69, 文章 101640。 <https://doi.org/10.1016/j.pacfin.2021.101640>
- [48] ZOBEL, C. W. (2011). 代表在定义灾难恢复力时的感知权衡。决策支持系统, 50, 第 394-403 页。 <https://doi.org/10.1016/j.dss.2010.10.001>