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Impact Of Overconfidence And Loss Aversion Biases On Crypto Currency Investment Decisions: Evidence From The University Of Haripur

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ABSTRACT

The high growth of digital currencies has attracted the attention of numerous investors and youngsters. Nevertheless, cognitive and psychological disposition affect investors and the youth decision-making in investment in digital currencies like crypto currencies. The biases that interfere with investment decision-making are overconfidence bias, loss aversion bias and numerous other factors, such as risk perception, social influence and financial literacy. The main objective of this paper is to determine the effects of overconfidence bias on crypto currency investment decisions and to determine the effects of loss aversion bias on crypto currency investment decision making. This research is quantitative and simple random sampling is used to achieve the objectives of the study since the questionnaire is filled by 384 students at the University of Haripur in Khyber Pakhtunkhwa, Pakistan. The results validated the reliability of the variables; and proposed the OLS method to investigate the effect of overconfidence bias, loss aversion bias, risk perception, financial literacy and social influence on crypto currency investment decision. This paper found that the overconfidence bias positively influences the decision to invest in crypto currency with a statistically significant impact. In addition, the loss aversion bias is a negative and significant influence on the crypto currency investment decision which means that individuals with low risk logic of loss and with dislike of risk incur significantly less money in a fluctuating currency like crypto currency. Also, there is the presence of financial literacy, risk perception, and social influence that have statistically significant effect on the investment in crypto currency. This paper recommends that policymakers should offer avenues where investors may get informed on the behavioral finance to understand how to identify the biases of overconfidence and loss aversion when investing in the crypto currency. Investors have no other option than to select the most suitable investment strategies which may involve periodically reviewing their portfolio and concentrating on long-term returns so that they do not fear losing their money because of short-term fluctuations in prices.

Keywords: Overconfidence Bias, Loss Aversion, Crypto Currency Investment, Risk Perception, Social Influence



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INTRODUCTION

Financial investment has undergone numerous changes and developments in recent decades, Transitioning from simple investments in common stocks, bonds, and mutual funds to more advanced financial derivatives such as forwards, options and futures (Ayedh et al., 2021). Many Crypto currencies have gained popularity among the people, as a result of their success with Bitcoin. Crypto money is essentially electronic money. These online possessions help individuals to be able to easily control their finances without the interference of the banks and have greater financial freedom and availability of financial services (Parate et al., 2023). Crypto currency is made up of two components: crypto and 'currency'. Whereas crypto simply means cryptography to guard user information and transactions, currency is merely a value of exchange. In addition, crypto currencies cannot be regulated by any specific country (Madey, 2017). The use of crypto currencies has been brought about by the development of the crypto currencies an investment instrument. The crypto currencies like stocks are usually preferred investments because of their varying worth. The crypto currencies are also becoming popular among the investors younger generation, many of which regard it as one of their investment instruments with hope of making high returns (Rijinto & Utinami, 2024). Other than the popularity of crypto currency, crypto investment is affected by a number of factors. As humans, we are incessantly elicited by unreasonable actions and prejudices with the intention to maximize profit and evade risk. There are big numbers of individuals who make attempts in doing risks according to their tolerance levels and there are others who attempt to avoid them. People have always been affected by emotions and prejudices when it comes to their life and investment decisions. At times, people will over-value their knowledge without knowing its worth and quality, which might be disastrous.

Behavioral finance deals with the way investors act and the manner in which they make investment decisions. Untrustworthy behavior of the investors, however, results into erroneous investment forecasting decisions. Investment decisions may be influenced by many behavioral finance factors such as psychological factors. These are overconfidence, loss aversion and mental accounting psychological variables determining financial behavior (Nursalimah et al., 2022). Hassan et al. (2025) conducted a study on investment decision-making as a complex process that is often affected not only by financial considerations, but also by psychological factors. Overconfidence in finance and investment decisions constitutes a prominent cognitive bias where investors exaggerate their knowledge and forecasting capabilities. It happens where investors feel that they possess an exaggerated degree of confidence regarding their investment choices and market predictions. Overconfident investors often make trades because they believe that their superior knowledge and timing methods would give them superior investment returns. Such actions often lead to excessive risk-taking, as investors tend to underestimate investment losses and defy market uncertainty. These actions include, among others, overemphasizing investment in a particular investment asset despite market diversification due to confidence in predicting its success. Furthermore, overconfidence can lead to a failure to adjust strategies in response to changing market conditions, as these investors are too committed to their initial decisions. Investor overconfidence in something is known as overconfidence their decisions (Ainun, 2019). Such investors will overconfident in their investment distort their knowledge and information and hope that it will lead to increased profits (Pradikasari and Isbanah, 2018).

The financial sector, especially in the case of the world, is making drastic changes due to



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crypto currency developing countries. Some of the crypto currencies are finite in number, and this can play out as a hedge against inflation. Conversely, the traditional currencies are manipulated by the central bank policies (Allen et al., 2022). As time goes by, crypto currency is gaining more and more popularity. It is a digital technology that has been embraced in different countries. In Pakistan, however, this technology remains illegal. Opportunities that appeal to the investors and possess an existence are numerous effects to Pakistani economy, and other obstacles, which Pakistani investors experience in case of using crypto currency. The findings indicate that crypto currency offers opportunities for profitability, secure technology, and economic development. However, there are a few barriers to this technology, such as a lack of government support. Government can play an important role in lowering barriers (Noor, 2024). Pakistan and other emerging countries would have to accept and legalize crypto currency and related technologies. The state of any country may not regulate crypto currency due to its nature, but it can regulate the block chain and crypto currency exchanges. Furthermore, crypto currency is classified as an asset rather than a currency. As a result, there should be specific financial and taxation laws governing crypto currency, and any gains from crypto currency should be taxed in the same way that realized income is (Waheed, 2022).

Although there are studies that assess the impact of behavioral biases, such as overconfidence bias on investor financial decisions (Hasnain and Subhan, 2022). Overconfidence and loss aversion biases have been studied separately, but rarely in conjunction with factors such as financial literacy, social influence, and risk perception, all of which have a significant impact on crypto currency investment (Budiman et al., 2021; Tom et al., 2024). Furthermore, very little attention has been paid to young investors, particularly university students, who frequently engage in crypto currency investment and trading and are easily influenced by social media and behavioral and cognitive biases (Aditya et al., 2022). However, the researchers were unable to find any studies that examined the impact of overconfidence bias and loss aversion bias on crypto currency investment decisions in conjunction with other factors influencing crypto investment, such as financial literacy, social influence, and risk perception.

The remaining study is organized as following the literature review is discussed in the second section of the study. The third section discusses data, variables, and methodology, while the fourth section presents results and discussion. The final section brings the study to the conclusion.

Literature review

The previous Scholars have contributed much to the comprehension of the effects of the overconfidence bias and loss aversion on the crypto currency investment choices. Chohan (2017) states that crypto currencies are digital currencies that were developed digitally and crypto graphed through the use of sophisticated cryptography methods. Crypto currencies can be used as an exchange medium in financial transactions, which are controlled by the crypto currency's own network. Hashemi Joo et al. (2020) discuss crypto currency as an online worldwide digital payment system. The investors trade and invest in crypto currency. Transactions are completed at once, on the international levels, with protection and security (Ausop & Aulia, 2018). Further studies indicate that the State Bank of Pakistan has banned crypto currencies and continue to be banned. The Government of Pakistan is however moving to redefine its decisions since crypto currency is a life changer to developing nations such as Pakistan owing to its development to its hype and popularity amongst the youths. The first coin was launched in Pakistan under the name Pakcoin, but due to a lack of government regulation, it was



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refused by the State Bank of Pakistan and FBR due to illegal international and local trades (Syed et al., 2021).

According to Kaur and Sood (2004), overconfidence has a significant impact on crypto currency investment decisions. The study used a questionnaire survey with 473 respondents and SmartPLS to analyze the results. For example, FOMO, herding, loss aversion, and overconfidence biases all have a significant impact on crypto currency investors' investment decisions. Trejos et al. (2019) define overconfidence bias as the tendency to make biased decisions based on an overestimation of one's ability despite the fact that they are not unskilled. According to Toma et al. (2021), the most common bias is overconfidence bias, which creates the illusion that investor knowledge is more accurate than it actually is. Literature provides evidence that investors' decisions are frequently influenced by behavioral biases when making investment decision which contradicts conventional theories that suggest investors are rational and make logical investment decisions (Hirshleifer & Shumway, 2003; Statman et al., 2006). Furthermore, many researchers have discovered the impact of overconfidence bias on investment decisions, demonstrating that people with overconfidence bias trade more in the stock market, make high-risk investments, and even high-level managers such as CEOs make risky investments and financial decisions, contributing to enormous economic outcomes (Barber & Odean, 2001; Broihanne et al., 2014; Malmendier & Tate, 2005; Yin et al., 2019). However, the impact and relationship between overconfidence and crypto currency is still being studied.

According to Pradhana (2018), the loss aversion bias caused people to avoid losses rather than seek greater gain. Winata and Rinofah (2025) concluded that loss aversion has a significant influence on crypto currency investment decisions. It aimed at establishing the influence of psychological biases overconfidence, loss aversion, risk tolerance and mental accounting. on the crypto currency investment choice among the Generation Z in Yogyakarta City. The study collected data from 100 investors. The results of the study indicate that the impact of loss aversion on crypto currency, however confirm the fact that loss aversion positively affects it. Rather, the present study demonstrates that the loss aversion has a negative and significant effect on crypto currency. This means that crypto currency investment is not popular among investors as they fear such a volatile investment losses. Hriday Chandna et al., (2024) established that investor's make conclusions due to the bias of loss aversion retain securities which are being lost, with a view of losing them, which it would be better to sell the security option. Also, examines the impact of behavioral biases as a cause of failed investments. The authors found that the loss aversion bias is statistically significant on investment portfolio choice and decisions. More studies show that the fear of loss can demoralize the investors out of investing; though the decisions made are good and yield high returns. A study found that risk averse investors are those who have the risk aversion bias (Suvarna & Shrivatsava, 2025).

Suvarna and Shrivatsava (2025) studied that financial literacy can be one of the key factors in lessening the effect of behavioral and cognitive factors on financial decision making. People with good financial knowledge can make sound investment decisions that yield long-term returns. Astiti et al. (2019) and Kristanto and Hendry (2020) show that financial attitudes have a positive and significant impact on investment decisions. Atmaningrum et al. (2021) supported the conclusion that financial literacy has a significant impact on investment decisions. Miko et al. (2023) discovered that competency, information technology, risk perception, and financial literacy have a positive and significant impact on crypto currency investment decisions. These actors



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influence investors to increase the frequency of their investments. Additionally, Safdar et al., (2023) it is concluded that social influence is an important factor in crypto currency investment decisions. This study contributes to the literature by showing how behavioral and cognitive biases influence crypto-currency investment decisions.

Research Methodology

The research method followed here is questionnaire-based, which makes use of the deductive approach based on cross-sectional analysis. The study is conducted at the University of Haripur, using data collected from students from several departments to examine the impact of overconfidence bias and loss aversion bias influence investment decisions in crypto currencies. They employed financial literacy, social influence and risk perception as other variables. In order to calculate how many observations have been made, the Yamani formula is employed.

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

$$n = \frac{9500}{1 + 9500(0.05)^2}$$

$$n = 383.83 \cong \mathbf{384}$$

To ensure students from diverse backgrounds were included in the study, nearly 384 questionnaires were dispatched to varied academic departments. The study adopted a simple random sampling technique, targeting students with fundamental knowledge in financial decision-making or crypto currency investment. This study utilizes quantitative data, which was analyzed to draw inferences from study research conducted among respondents. The study adopted the use of this quantitative data to provide specific insight information in regard to crypto currency investment decisions and the link to overconfidence bias and loss aversion bias.

Table 1: Description of Variables

Variables	Abbreviation	Variable Type	Scale Type
Crypto currency investment decision	CID	Dependent Variable	Likert Scale
Overconfidence Bias	OCB	Independent Variable	Likert Scale
Loss Aversion Bias	LAB	Independent Variable	Likert Scale
Financial Literacy	FL	Independent Variable	Likert Scale
Risk Perception	RP	Independent Variable	Likert Scale
Social Influence	SI	Independent Variable	Likert Scale

This study employed SPSS software for analysis, incorporating linear regression and correlation techniques. Regression analysis is a common way to look at questionnaire data. It shows how one or more predictor variables affect the dependent variable, giving you a lot of information about how the data are related. Unstandardized coefficients (B) show how much the dependent variable is expected to change when the predictor changes by one unit, while controlling for other variables. Standardized coefficients (β) let you compare predictors that are measured on different scales (Field, 2018).

The correlation matrix shows the strength of the relationship between the dependent



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variable and its independent variable. In other words, a correlation matrix is used to determine whether there is a positive or negative relationship between crypto currency investment decisions, overconfidence bias, loss aversion bias, financial literacy, risk perception, and social influence. Cornbrash's Alpha was used to assess the internal consistency of the measurement scales based on 384 participant responses. A reliability test is necessary to ensure the consistency of a measuring instrument's components (Huck, 2007). Cornbrash's alpha is used to assess the consistency and reliability of questionnaire components. Cornbrash's Alpha is the most frequently used measure for internal consistency, and it is specifically appropriate for instruments with Likert-type scales (Whitley, 2002; Robinson, 2009). A reliability coefficient of 0.60 or greater is recommended for exploratory or pilot studies (Straub et al., 2004). Hinton et al. (2004) define four levels of reliability: excellent ($\alpha \geq 0.90$), high ($0.70 \leq \alpha < 0.90$), moderate ($0.50 \leq \alpha < 0.70$), and low ($\alpha < 0.50$). 0.600 was determined to be an acceptable minimum value. Cronbach's Alpha has a minimum value of 0.61, which is greater than 0.5. The internal consistency of overconfidence bias ($\alpha = 0.93$) is excellent, indicating the reliability and validity of the questionnaire.

Results and Discussion

This section explains the results obtained from responses, their interpretation and discussion. Table 2 explained the descriptive statistic for all variables in this study which is obtained from reconcondenses of 384 participants. It is use to describe and summarize different features of data set like number of responses, minimum value, maximum value, mean and Standard deviation of variables. The mean value is between 2.83 to 3.3 which reflect the moderate levels in areas such as crypto currency investment decision, overconfidence bias, loss aversion bias, financial literacy, risk preference and social influence. The mean value of risk perception is 3.361 which is highest value and the mean value of financial literacy is 3.31 which is second highest value, it indicates that respondents who have good knowledge about crypto currency consider crypto currency as risky investment. The lowest value of overconfidence bias which is 2.833 indicates the moderate level of self-assurance among participants. The highest value of standard deviation of overconfidence bias exhibit greatest dispersion ($SD=0.996$) which shows significant difference in confidence level of participants. On the other hand, loss aversion bias exhibits least dispersion ($SD=0.710$) which indicates the most consistent approach to losses.

Table 2: Descriptive Statistic

Variables	N	Minimum	Maximum	Mean	Std. Deviation
CID	384	1	4.7	2.888	0.796
OCB	384	1	4.9	2.833	0.996
LAB	384	1.5	4.5	3.169	0.710
FL	384	1	5.0	3.319	0.845
RP	384	1	4.8	3.361	0.729
SI	384	1	4.8	3.003	0.802

Table 3 of correlation matrix shows the direction of the relationship between crypto currency investment decision and its independent variables. CID demonstrates a positive significant relationship with overconfidence bias. The correlation between financial literacy (FL) with CID is moderately positive which indicates that having good financial knowledge encourages people to invest in crypto currencies. The finding shows that



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social influence (SI) and risk perception (RP) has weak but positive relation with CID, indicates that student's social network and risk awareness contributes to investment decision in supportive manner. The relationship between loss aversion bias and CID shows a weak positive correlation, indicating that the fear of losses has a minor direct impact on crypto currency investment behavior. The correlation results shows that overconfidence bias stands out as the most significant factor influencing crypto currency investment decisions, with financial literacy following closely behind. On the other hand, social influence, risk perception, and loss aversion bias have weaker but still positive relationships.

Table 3 Correlation

Variables	CID	OCB	LAB	SI	RP	FL
CID	1	--	--	--	--	--
OCB	0.785	1	--	--	--	--
LAB	0.165	0.249	1	--	--	--
SI	0.273	0.236	0.467	1	--	--
RP	0.238	0.123	0.451	0.220	1	--
FL	0.442	0.290	0.411	0.315	0.350	1

Table 4 shows the results of ANOVA which indicated that F-statistics are 182.239 and probability value is 0.000, which is less than the standard significance level of 0.01 which indicates that the regression result is significant, and the factors of overconfidence bias, loss aversion bias, financial literacy, risk perception, and social influence have played a significant part in the decisions regarding the investment in crypto currency.

Table 4: ANOVA Test

Model	F	Prob
Regression	182.239	.000*
Residual		

Note: * shows significant at 1%

Table 5 shows the regression result suggests that variables like overconfidence bias, loss aversion bias, financial literacy, risk perception, and social influence are either significant or insignificant in influencing crypto currency investment behaviors. The result shows that the overconfidence bias positively and significant effects crypto currency investment behaviors indicated by the coefficient value which is 0.584. The result establishes that investors who tend to overestimate their knowledge, skills, and achievements are prone to make investments in crypto currencies and are likely to take risks. The result is in line with similar research conducted by Budiman et al. (2021), Sutikno and Mery (2021), and Pradhana (2018), which revealed that overconfident investors tend to use their own judgments and are most likely to take risks. The results show that loss aversion bias has a negative and significant impact on investment decisions related to crypto currency, suggesting that loss apprehension prevents people from investing in crypto currencies. It can be assumed that they show less interest and enthusiasm in investing in a fluctuating market as they gain more information about the risk. It is also in vast agreement with the tenets of prospect theory, which states that



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people value losses more than comprehending financial principles are essential for making informed decisions regarding crypto currency.

The findings show that the perceived risk directly and significantly influences Crypto currency investment decision indicated by the coefficient value which is 0.158. This implies that the more knowledgeable and risk averse individuals are expected to take cautious decisions about their investments, rather than not participate in the stock market at all. This result is in line with the previous report from Lestari et al. (2022) and Slovic (2000) that reminds the relevance of cognitive risk assessment for investment. Risk assessment is really one of the most crucial things which need to be read if investors ever want to learn how to deal with crypto currency markets sensibly.

Social influence has a significantly positive relationship with investment decisions which indicates that involvement in the social environments to peers, influences and the social media can increase likelihood of investment decisions. This finding is in agreement with the study of Aditya et al. (2022), Artini et al. (2024), Kim et al. (2024), and Ulmi et al. (2022) emphasizing the importance of influencer credibility and social engagement. Merkley et al. (2023), too much focus on the role of social influence can have harmful strategic implications in the long run.

Table 4: Regression Analysis

Variables	Coefficients	Std. Error	T Stat.	Prob.
(Constant)	.465	.134	3.476	.001*
OCB	.584	.024	24.696	.000*
LAB	-.256	.040	-6.443	.000*
SI	.098	.032	3.087	.002*
RP	.158	.035	4.542	.000*
FL	.228	.030	7.531	.000*

Note: * shows significant at 1%

Conclusion and Recommendations

Many investors and young people are paying attention to the significant increase in the value of digital currencies. On the other hand, while investing in digital currencies such as crypto currencies, they are influenced by behavioral and psychological tendencies that influence the decisions that investors and young people make. A number of other factors, including risk perception, social influence, and financial literacy, also play a role in the decision-making process regarding investments. These include the possibility of overconfidence bias, loss aversion bias, and herding behavior. It is the purpose of this research to determine the influence that the overconfidence bias has on the decision to invest in crypto currency, as well as the influence that the loss aversion bias has on the decision to invest in coins. Yamani formula is used to calculate the number of observations taken from the university of Haripur students. For the data approximately 384 questionnaires were distributed across different academic departments to ensure the representation of students from different fields. Quantitative research methods were utilized for this study, and the objectives of the study were accomplished through the use of simple random sampling, as the study specifically targeted students who have basic knowledge or experience in crypto currency investment. For the purpose of determining the dependability of the variables, and ordinary least squares (OLS) regression was utilized in order to investigate the association between the variables. Based on results all variables have positive impact on crypto currency investment decision except loss aversion.



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This study thus infers that the overconfidence bias has a positive significant impact on an individual's decision-making under uncertainty to invest in crypto currency. Also, loss aversion bias exerts a negative and significant influence on the investment of crypto currency. That means those who are loss averse and risk-avoidant generally, will be much less inclined to participate in the crypto currency markets. A variable that is positively and statistically significantly correlated with investment into crypto currency is financial literacy. Risk perception and social dynamics are another factor. Social influence has positive and statistically significant effects on decisions to invest in crypto currency, suggesting that social interactions with peers, social media, and influencers increase the likelihood of investing. Risk perception positively and significantly affects decisions to invest in the crypto currency. Where by individuals who are more knowledgeable about risk as well as their ability to assess such tend to make very sensibly investment decision rather than totally staying away from the market. For investors to be able to recognize overconfidence and loss aversion bias when making investments in crypto currency, policymakers need to provide platforms for investors to receive information about behavioral finance. To avoid the fear of losing money due to fluctuations in prices over a short period of time, investors need to select the most effective investment strategies, such as reviewing their portfolio on a regular basis and concentrating on returns made over the long term. To enhance financial literacy among young people nationwide programs and training efforts should implement. Crypto currency platforms should offer clear insights regarding potential risks and returns to assist new investors. Lastly Universities should create student-centered investment advisory seminars that offer impartial and evidence-driven insights on digital asset and investment.

REFERENCES

- Chhatwani, M., & Parija, A. K. (2023). Who invests in cryptocurrency? The role of overconfidence among American investors. *Journal of Behavioral and Experimental Economics*, 107, 102107.
- Gates, H. R., Johnson, D. M., & Shoulders, C. W. (2018). Instrument validity in manuscripts published in the *Journal of Agricultural Education* between 2007 and 2016. *Journal of Agricultural Education*, 59(3), 185-197.
- Grohmann, A., Klihs, T., & Menkhoff, L. (2018). Does financial literacy improve financial inclusion? Cross country evidence. *World Development*, 111, 84–96.
- Hasnain, M. N., & Subhan, Q. (2022). Effect of herding behavior and overconfidence bias on investor's financial decisions: A case of investment in crypto currency in Pakistan. *Journal of Management Info*, 9(4), 519-541.
- Kaur, M., Jain, J., & Sood, K. (2024). "All are investing in Crypto, I fear of being missed out": examining the influence of herding, loss aversion, and overconfidence in the cryptocurrency market with the mediating effect of FOMO. *Quality & Quantity*, 58(3), 2237-2263.
- Lestari, D. M., Sadalia, I., & Silalahi, A. S. (2022, December). The effect of financial literacy, risk perception, overconfidence, and investment experience on cryptocurrency investment decision. In *19th International Symposium on Management (INSYMA 2022)* (pp. 158-164). Atlantis Press.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy. *Journal of Economic Literature*, 52(1), 5–44.
- Miko, N. U., Suyanto, S., & Nugroho, A. D. (2023). Financial literacy and interest in cryptocurrency investment. *Journal of Behavioral Finance*, 24(2), 210–221.



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- Miko, S., Atmaja, A. W. T., Mawardah, R., Zulfa, S. D., Siboro, F., & Marjuki, A. (2023). The impact of competitiveness, information technology, risk perception, and financial literacy on the intention to invest in cryptocurrency. *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, 5(1), 1-7.
- Noor, H. U. (2024). Exploring Opportunities and Barriers for Cryptocurrency in Pakistan (A Stakeholder Perspective). *International Journal of Social Science Archives (IJSSA)*, 7(2).
- Nurbarani, B. S., & Soepriyanto, G. (2022). Determinants of investment decision in cryptocurrency: Evidence from Indonesian investors. *Universal Journal of Accounting and Finance*, 10(1), 254-266.
- Rahyuda, H., & Candradewi, M. R. (2023). Determinants of cryptocurrency investment decisions (Study of students in Bali). *Investment Management & Financial Innovations*, 20(2), 193.
- Rijanto, B. P., & Utami, N. (2024). Financial technology, social media influencers, and experience of cryptocurrency investment decisions: Financial literacy's role. *Jurnal Manajemen Maranatha*, 23(2), 201-216.
- Safdar, Z., Malik, B. F., Ayub, H., & Ellahi, A. (2023). Investing in the future: a holistic examination of personal and behavioral influences on cryptocurrency investment, with a focus on social influence and crypto expert guidance. *Migration Letters*, 20(S12), 987.
- Slovic, P. (2000). *The perception of risk*. London: Earthscan Publications.
- Straub, D., Boudreau, M. C., & Gefen, D. (2004). Validation guidelines for IS positivist research. *Communications of the Association for Information systems*, 13(1), 24.
- Suvarna, V. S., & Shrivatsava, A. (2025). Analysing cognitive biases, fear of losses, and overconfidence on investment choices among investors. *EPR International Journal of Multidisciplinary Research (IJMR)*, 11(6), 249.
- Taherdoost, H. (2016). Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in a research. *International journal of academic research in management (IJARM)*, 5.
- Waheed, M., & U. Z. (2022). Legal insights of crypto-currency market and state of crypto-currency in Pakistan. *Superior Law Review*, 2(1).
- Winata, W., Hermuningsih, S., & Rinofah, R. (2025). The Effect of Overconfidence, Risk Tolerance, Loss Aversion, and Mental Accounting on Crypto Asset Investment Decisions of Generation Z in Yogyakarta. *JPEK (Jurnal Pendidikan Ekonomi dan Kewirausahaan)*, 9(1), 330-341.
- Yalin-Uçar, M., BAĞATARHAN, T., YAKIT, G., EKİCİ, M. B., AŞLI, E. R. O. L., & KIZILASLAN, H. N. (2024). Development of the reasoning ways scale: Validity and reliability study. *Kalem Education Human Science Journal*, 14(1), 129-153.
- Yilmaz, N. K., & Hazar, H. B. (2018). DETERMINING THE FACTORS AFFECTING INVESTORS' DECISION MAKING PROCESS IN CRYPTOCURRENCY INVESTMENTS. *PressAcademia Procedia*, 8(1), 5-8.
- Zhou, J. (2023). A review of the relationship between loss aversion bias and investment decision-making process. In *Proceedings of the 7th International Conference on Economic Management and Green Development (Vol. 27, No. 1, pp. 143-150)*.