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An Empirical Study on Investment Strategies and Behavioral Biases of Individual Investors in Goa

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ABSTRACT

Behavioral finance deals with what goes in the mind of a person whenever he takes an investment decision. Individuals' investments in various financial assets are based on a number of information sources that include financial advisors, family, friends and the strategies adopted by him to invest. However, investors may over emphasize or discount information that may lead to wrong investment strategies and irrationality while investing. Irrationality is a bias, which affects an investor while taking investment decisions. Although the established finance theory assumes that investors are well informed and careful and have little difficulty in making financial decisions, it is usually not the case as investors are affected by various biases while investing. The paper attempts to relate the investment strategies adopted by respondents with the herding, anchoring, regret aversion and loss aversion biases. Using primary data, from 63 investors across the state of Goa and statistical tools such as Correlation, Analysis of variance test and Independent T-test, the relationship between investment strategies, the socio demographic factors-annual income, gender and biases is studied. The Analysis found correlation between anchoring bias and investment strategy score. With an exception of herding bias, the remaining three biases tested significant, confirming the existence of relationship between anchoring, regret aversion and loss aversion bias with annual income. There exist no significant difference in gender and the studied biases.

Keywords: behavioral bias; individual investors; investment strategies; demographic factors.

Introduction

Every investor considers information for his investment decision from varied sources. Irrationality may occur due to misunderstanding of information or wrong interpretation with inconsistent investment decisions. Behavioural finance focuses on how an investor understands and takes steps based on the

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information to make an informed investment decision, so while taking this decision he may not always act rational and unbiased. Even though traditional finance assumes that people, institutions, and even markets act rationally, it may not be so, as the investors are influenced by his behavioural traits and preferences while making investment decisions.

The manner in which an investor reacts to the information available to him and the decision he takes, can be applied to stereo type him based on many well established behavioural biases. These are the biases that investors may show in spite of full information available to them that may lead to markets being inefficient. Even though every participant has the information, the participant may not take the same decision as other market participants and this is exactly where personal biases and behaviour of individual investors affect the market efficiency.

Behavioural finance theories attempt to explain the behavioural aspects of investment decisions, the selections made under risk and uncertainty. While observing the investor's investment behaviour, it was found that most of the investment decisions are done doubtfully and with difficulty. The need to simplify the decision making process through a clear understanding of the irrationalities and biases that shape the behavioural dimensions in investment decisions was found necessary (Hayat, 2016). Awan (2019) discussed about investors using fundamental analysis, technical analysis and tracking market opinions to arrive at investment decisions. However, many investors use one or all to enhance optimum decision making but the usage will depend on goals and objectives for investments.

The present study considers four different behavioural biases to study the relationship between investment strategies and socio demographic factors. These behavioural biases are Herding bias, Anchoring Bias, Regret aversion Bias and Loss Aversion Bias.

Herding is an investment information source as often investors look at friends and family while taking financial investment decisions. However one of the effects considered occurring from herd behaviour is the stagnation of information accumulation (Tuominen, 2016). However, Topol (1991) explained that to gain some more information, it is rational for the investor to adjust his prices to some other agent's prices which may contain information which is not yet available to him. Information needs are the prime reasons why an investor would decide to herd.

Anchoring bias happens when an investor will constantly compare the current price of the investment to the reference point to determine if he is in profit or loss. Also an investor may hold a reference point based on information from unofficial sources (Singh 2012) and not on company's historical data (Kaustia, Alho, & Puttonen, 2008)

Regret aversion bias is investor's anticipating regret if they make a wrong choice and they take this anticipation into consideration when making decisions Ganesan (2013). This bias also looks into sentiment that an investor may experience due to wrong purchase decision. So, when his investments are into losses he still holds on to them so as to evade the awkwardness of reporting a loss (Pareto, 2020) and (Jagongo & Mutswenje 2014).

Loss Aversion Bias is wherein an investor considers gains from investments more than losses, and therefore while taking investment decision he considers the arising gains as more significant than the arising losses. If an investor is given two alternatives, both being alike, presented as possible gains and other possible losses; the possible gains will be considered by the investor. The Prospect theory

(Kahneman & Tversky, 1979) relates to an individual's strong desire to avoid losing rather than **longing** for making gains. The pain of losing money is felt more than the gain of same amount.

Review of Literature

Individual investors have different background, experience and motives while investing. Based on the influence of many human attributes individual investments are emotional, fast and automatic (Charles&Kasilangan, 2016). Given the varied and diverse background of individual investors, exploring the predictability of decision behaviours using demographic characteristics in different decision stages, the need to potentially value investor behavior exists (Lan, Xiong, He, & Ma, 2018). Besides, investor sentiment, overreaction and under reaction, over confidence and herd behaviour also significantly affect investment decisions. (Hassan et al., 2018)

Scharfstein & Stein (1988) analysed the forces that lead to herd behaviour wherein he found that managers/investors who care about their reputation will herd whereas those who care about profits will not. A study by Baddeley (2010) found that the influence to use the same investments as other investors is due to purpose and sentiments. Herding financial decision-making reflects a societal learning method which is influenced sentiments. Prosad, Kapoor, & Sengupta, (2012) using secondary data, found herding being prominent in the Indian stock market especially during the bullish phase but not during the bearish phase. Alquraan, Alqisie, & Al Shorafa (2016) investigated the factors of investment decision making and concluded that Risk Perception, Loss Averse and Overconfidence are relevant on investment decision making.

Anchoring is the most researched bias. Every investor has a price in mind before making an investment decision. To understanding the role of anchoring bias in investment decisions a number of studies are available. (Zaiane 2015) and (Saraswati 2015), found positive linear connection between anchoring bias and financial decision making. Studies found the anchoring bias affect investment decisions, and were solely determined by years of experience as an investor (Usman, Muturi, & Memba, 2017) and (Dolreen, 2014). (Cen, Hilary, & Wei, 2013) and (Fernandes, Matsumoto, Chagas, & Ferreira, 2014) found anchoring bias affecting investment decision making. Jahanmiri (2018) studied information and anchoring bias, found with an increase in information uncertainty, investors make greater use of anchoring in decisions about buying and selling and investing in the stock. Studies on regret aversion and investment decisions reveal in certain cases, respondents are not influenced by this bias. (Sukamulja, Meilita, & Senoputri, 2019) and (Kumar, Samir, Barua, Jacob, & Varma, 2013).

Every investor is skeptical about the loss arising from an investment more than the gain from the same investment, making him extremely averse to losses (Isidore R & Christie, 2019). Polman (2012) conducted an investigative study, to find whether individual's choices for decision making for self and for other differ. Using loss aversion as the measure for decision making, found when decisions are taken for other, this bias lessened. However, few studies have shown investment decisions as affected by loss aversion bias. (Mbaluka, Muthama, & Kalunda, 2012) and (Alquraan et al., 2016)

Investment strategies and Behavioural Biases

Many investors consider certain investment strategies while investing. He may adopt time and tested investment strategies like buy and hold, technical analysis or fundamental analysis. Many follow passive investment strategies for a long time horizon and fail to exit from an investment despite potential

gains. (Ricciardi et al., 2017) When rationality is considered to be most important in investor decision making so is the use of fundamental analysis, technical analysis and intuitions (Ogunlusi & Obademi, 2019). Singh (2012) found that certain behavioral biases including loss aversion bias cause the current security prices to move away from fundamental values. Onsomu (2018) found a relation between behavioural biases and investment strategies using primary data of stock market investors. According to Gupta, Preetibedi, & Mlakra (2014) investors while examining financial statements, create an image of the company which they will consider including in their portfolio.

Technical Analysis as an investment strategy makes use of charts and past market data. However, use of this strategy should not be the principal focus of high returns and a past reference. The assumption of past performances is repeated again in the economy should not be considered as the basis for investment decisions. (Konstantinidis, Katarachia, & Borovas, 2012).

Socio Demographic factors and Behavioural Biases

Agrawal, Singhal, & Swarup (2016) studied demographic factors using the Causal Loop Diagram and found that herding exists in the Indian stock market due to lack of financial literacy, market image of market leader and social factors. The authors also confirmed that demographic factors like age and investment period has negative cause towards herding bias. Lee et al (2013) analysed the portfolio performance of male and female students, the study established that females and males show different behavioural biases which finally shape investment decisions. The paper also confirmed that females are less risk tolerant than males; (Shaikh, Karim, Kalhor, & Kamal, 2019). A study by Nair, Balasubramanian, & Yermal (2017) found that male investors portray less herding bias than female investors. However, a study of investors in Oman by Jamil & Khan, (2016) gender of an investor is not affected by herding bias.

Studies have shown that with increasing income the degree of biases reduces. (Sarkar & Sahu, 2018) confirmed that annual income do have a significant influence on biases. Isidore R & Christie (2019) used gender as independent variable to find if female investors behaved differently in secondary equity market and found female investors were more prone to biases. Beblo, Beniger, & Markowsky (2017) studied anchoring bias using an experiment found that level of education and not gender influences the anchoring value.

The review of literature shows that behavioural biases do have a relation to an investment decisions and investment strategies. There is a tendency of investors to be affected by biases while taking investment decision and adopting investment strategies. Also socio-demographic factors of income and gender shows mixed association with certain behavioural biases. Whether this holds true for the current sample is what motivates this study.

Objectives of the Study

The objectives of this study are

1. To study the relationship between individual investments strategies and the behavioural biases.
2. To study whether behavioural biases are influenced by the individual investor income.
3. To analyse the relationship between gender and behavioural biases in investment decision making.

Hypotheses of the Study

- H₁: There is no significant relationship between the individual investment strategies and behavioural biases.
- H₂: There is no significant difference in behavioural bias and individual investor's income in formulating investment strategies.
- H₃: Investment decisions are not influenced by gender of an investor and his behavioural biases

Research Methodology

The present study considers only four behavioural biases namely, herding, anchoring, regret aversion and loss aversion. The first hand data was collected on the basis of convenience sampling through a non disguised structured closed ended questionnaire, divided into three sections. The sections covered questions on respondent's demographics; investment strategies and his behavioral biases. The data was collected from 63 respondents across Goa from June 2019 to December 2019 using Google forms. This data was processed using SPSS. Using Correlation Analysis, the relationship between investment strategies and biases was determined. Statistical tools of Anova, and Independent T-test measured the relationship between behavioral biases and socio-demographic factors namely income and gender.

Table 1: Demographic Profile of the Respondents

Variable	Description	Percentage
Age	18 years to 40 years	76
	41 years to 60 years	22
	61 years and above	2
Gender	Male	48
	Female	52
Qualification	Up to Graduation	3
	Graduation	14
	Post Graduation	78
	Professional	5
Annual Income	Up to Rs 2,50,000	24
	Rs 2,50,001 to 5,00,00	21
	Rs 5,00,001 to 10,00,000	38
	Rs 10,00,001 and above	19
Investment Period	Less than 5 years	76
	More than 5 years	24

Analysis and Discussion

Relation between Behavioral Bias and Investment Strategies

The data about the biases was collected through nine statements in the third section of the questionnaire. The features of the biases were used for framing the questions. Based on the investment strategy identified by respondents, relation between investor strategies and biases was explored.

Table No 2 : Results of Correlation

		Herding	Anchoring	Regret Aversion	Loss Aversion	INVESTMENT STRATEGY SCORE
Herding	Pearson Correlation	1	.447	.085	.068	.058
	Sig. (2-tailed)		.000	.510	.595	.651
	N	63	63	63	63	63
Anchoring	Pearson Correlation	.447	1	-.041	.097	.319
	Sig. (2-tailed)	.000		.749	.448	.011*
	N	63	63	63	63	63
Regret Aversion	Pearson Correlation	.085	-.041	1	.240	-.200
	Sig. (2-tailed)	.510	.749		.058	.117
	N	63	63	63	63	63
Loss Aversion	Pearson Correlation	.068	.097	.240	1	-.075
	Sig. (2-tailed)	.595	.448	.058		.560
	N	63	63	63	63	63
INVESTMENT STRATEGY SCORE	Pearson Correlation	.058	.319	-.200	-.075	1
	Sig. (2-tailed)	.651	.011	.117	.560	
	N	63	63	63	63	63

Source: Primary data Significant at * 0.05 level

In order to determine the relationship between the investment strategies and biases, the Pearson correlation test was carried out and the result is presented in Table 2. The correlation matrix reveals that the Herding bias has a non significant and weak correlation of 0.058 ; Anchoring has a positive relation of .319 and Regret Aversion and Loss Aversion biases are negatively related with -.200 and -.075 respectively.

However, a positive correlation between investment strategies score and anchoring bias is seen, which is statistically significant with Pearson Correlation of 0.319, n=63, p=0.11, at 5% level of significance. This depicts the existence of correlation of anchoring bias and investment strategies adopted by respondents and the dependence on investment strategies increases as anchoring bias increase. The finding reveals that while using investment strategies in the process of investment decision, the anchoring bias is prevalent. It is reasonable for any middle class individual investor the price of the script and its security is of utmost importance. He is more conservative and interested in the price, return and security of his investments.

Relationship between Annual Income and behavioural Biases

The data collected through Google forms were sorted according to the income brackets of the respondents namely up to Rs 2,50,000; Rs 2,50,001 to Rs 5,00,000; Rs 5,00,001 to Rs 10,00,000 and Rs 10,00,001 and above. The data had investors with highest income that is 38 percent in annual income bracket of Rs 5, 00,001 to Rs 10, 00,000. The responses to the biases based on the questions asked using Likert scale was categorized into Herding, Anchoring, Regret bias and Loss Aversion Bias. The relationship linking the annual income and the biases displayed by the respondents is explored using Analysis of Variance.

Table 3: ANOVA between Annual Income and Biases

BIASES	F	Sig.
Herding	5.238	.003*
Anchor	1.031	.386
Regret	.245	.864
Loss	.552	.649

Source: Primary Data Significant at * 0.05 level

The above table shows the outcomes of analysis of variance. The results depicts that herding bias has no significant difference between annual incomes as this bias has a p-value less than 0.05. This indicates that irrespective which bracket of annual income the investors belong, herding bias exist, while taking investment decisions.

The remaining biases, that is, anchoring, regret aversion and loss aversion have a p-value greater than 0.05 representing the existence of significant difference between these biases and annual income. The following table explains the relationship between income and the biases.

Table 4: Annual Income and Biases

Income Level	Anchoring Bias <i>Mean</i>	Regret Aversion Bias <i>Mean</i>	Loss Aversion Bias <i>Mean</i>
Up to Rs 2,50,000	3.36	3.46	3.20
Rs 2,50,001 to Rs 5,00,000	3.74	3.61	3.61
Rs 5,00,001 to Rs 10,00,000	3.41	3.65	3.39
Rs 10,00,001 and above	3.14	3.33	3.08
Total	13.65	13.65	13.28

Source : Primary Data

In the above table, respondents with high mean in annual income bracket of Rs 2, 50,001 to Rs 5, 00,000 exhibit the presence of Anchoring bias and Loss aversion bias. High mean in annual income bracket of Rs 5, 00,001 to Rs 10, 00,000 indicate the presence of Regret Aversion bias. As per the above analysis, the lowest mean is in the annual income bracket of 'Rs 10, 00,001 and above' is relevant for all biases. This indicates that as income increase the investors are less prone to biases. These results are in tune with previous studies which confirm that investors with higher income use the services of financial advisors, have high level of financial literacy, have access to relevant information which helps (Michael, 2012) (Burke & Hung, 2015) (Isidore R & Christie, 2019) in reducing biases while taking investment decisions.

Relationship between Gender and Behavioural Biases

In order to understand the impact of biases on the males and females an Independent sample test was conducted.

Table 5: Biases and Annual Income

	GENDER	N	Mean	Std. Deviation	Std. Error Mean					
HERDING	males	30	2.8083	.50337	.10833					
	females	33	3.0000	.62812	.10934					
ANCHORING	males	30	3.4000	.84605	.15447					
	females	33	3.4242	.91410	.15912					
REGRET AVERSION	males	30	3.3333	1.24106	.22659					
	females	33	3.7273	.97701	.17008					
LOSS AVERSION	males	30	3.2333	1.22287	.22326					
	females	33	3.4242	1.03169	.17959					
		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
HERDING	Equal variances assumed	.572	.453	-1.242	61	.219	-.19167	.15434	-.50030	.11696
	Equal variances not assumed			-1.245	60.903	.218	-.19167	.15392	-.49946	.11613
ANCHOR	Equal variances assumed	.390	.533	-.109	61	.914	-.02424	.22260	-.46935	.42087
	Equal variances not assumed			-.109	60.977	.913	-.02424	.22177	-.46770	.41921
REGRET AVERSION	Equal variances assumed	2.044	.158	-1.406	61	.165	-.30304	.28011	-.95406	.16618
	Equal variances not assumed			-1.390	55.047	.170	-.39394	.28331	-.96170	.17382

Source: Primary data Significant at 5% level

The T- test observes the p- value being greater than 0.05 for all biases. This means that none of the biases are significant. This confirms the existence of no significant difference between the gender and behavioural biases. Thus biases do not seem to impact any gender during investment decisions. This result is dependable and is consistent with the studies of (Bashir, 2013),(Shadi 2018) and (Mahapatra & Mehta, 2015). However relevant studies of Rekik & Boujelbene(2013), (Onsomu 2018) and (Kudryavtsev & Cohen, 2011) found significant difference between biases and gender.

Discussion

There exists a correlation between behavioural biases and investment strategies. In the studies of Onsomu (2018) and Coffie(2013) an evidence of relations between behavioural biases and investment strategies was found. The present study found a positive correlation between anchoring bias and investment strategies. Anchoring Bias is depending on reference points while taking an investment decision. As an investment strategy, the investors may depend on published financial data or on historical charts as reference points while making investment decisions. The findings reflect that while using investment strategies be it technical, fundamental or any other, the impact of anchoring bias is irrelevant in the process of investment decisions.

Using the same data to test the impact of biases on socio demographic factors of annual income and gender. statistical tools of Anova and Independent sample test were used. The annual income and the biases were tested at 5% level of significance. Only herding bias was found to be not significant, the remaining biases namely anchoring, regret aversion and loss aversion bias were found significant with relation to annual income. This study also showed that as income increased the impact of biases decreased; confirming that as annual income increase the investors are less prone to biases. (Isidore R & Christie, 2019)

With regards to gender, the study found no significant difference for all biases and gender, confirming with the studies of Velumoni (2017) and Mishra & Metilda (2015).

Conclusion

Investment strategies are used to make investment decisions which are influenced by behavioural biases. The relation of behavioural biases with investment strategies, annual income and gender is explored in this pilot study. The study ably points out; investment strategies adopted by investors are correlated to anchoring bias. This bias, of having wrong reference point to make an investment decision can weaken the whole investment process and thereby defeat the investment goals. With regards to annual income and behavioural biases, the results are in tune with Isidore R & Christie (2019); the conclusion, which is widely researched and accepted fact, that with an increase in income the investors are less prone to biases as they have access to financial advisors and other relevant information sources. The study tested no significant difference between the four biases and gender in the financial decision making.

Future Research

The analysis of behavioural biases and investment decision is a well researched area. It is in focus among the researchers as it motivates them to understand why investors deviate from established rationalities and theories and why they keep repeating the same mistake. This study is carried out as a pilot study with sample size of 63 respondents. There are 23 biases (Lee et al 2013) which are documented

and researched. The future direction would be to conduct a comprehensive analysis all these biases to truly understand which bias has a profound impact on investment decision making process.

References

- A, C., & R, K. (2016). Impact of Selected Behavioural Bias Factors on Investment Decisions of Equity Investors. *ICTACT Journal on Management Studies*, 2(2), 297-311. <https://doi.org/10.21917/ijms.2016.0039>
- Agrawal, D., Singhal, T., & Swarup, K. S. (2016). Role of Herding Behavior in Influencing Investor Decision Making in India. *Indian Journal of Research in Capital Markets*, (December), 43-48.
- Alquraan, T., Alqisie, A., & Al Shorafa, A. (2016). Distinguishing Informational Cascades from Herd Behavior in the Laboratory Author (s): Bođaçhan Çelen and Shachar Kariv Source/ : The American Economic Review , Vol . 94 , No . 3 (Jun ., 2004), pp . 484-498 Published by/ : American International Journal of Contemporary Research, 6(3), 159-169. Retrieved from www.ajcernet.com
- Awan, H. M. (2019). *An Evaluation of Investment Behavior of Individual Investors and its Impact on Investment Decision making University of Wah An Evaluation of Investment Behavior of Individual Investors and its Impact on Investment Decision making*. (July).
- Baddeley, M. (2010). Herding, social influence and economic decision-making: Sociopsychological and neuroscientific analyses. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 365(1538), 281-290. <https://doi.org/10.1098/rstb.2009.0169>
- Beblo, M., Beniger, D., & Markowsky, E. (2017). It's education, not gender: A research note on the determinants of an anchoring bias in experimental WTA elicitation. *Journal of Behavioral Economics for Policy*, 1(2), 51-55.
- Cen, L., Hilary, G., & Wei, K. C. J. (2013). *The Role of Anchoring Bias in the Equity Market: Evidence from Analysts' Earnings Forecasts and Stock Returns Author (s): Ling Cen , Gilles Hilary and John Wei Published by/ : Cambridge University Press on behalf of the University of Washington School*. 48(1), 47-76.
- Coffie, W. (2013). *Behavioural Finance Theories Effecting on Individual Investor's Decision-Making*.
- Dolreen, M. (2014). The Effect of Anchoring on Investment Decision Making by Individual Investors in Kenya. *University of Nairobi*, 86.
- Fernandes, J., Matsumoto, A., Chagas, P., & Ferreira, I. (2014). Behavioral Finance: a Study of Affect Heuristic and Anchoring in Decision Making of Individual Investors. *Journal of International Business and Economics*, 14(1), 59-64. <https://doi.org/10.18374/jibe-14-1.5>
- Finance, M. E., Metawa, N., Hassan, M. K., Metawa, S., Safa, M., Hospital, E., & Banking, T. I. (2018). *Impact of behavioral factors on investors' financial decisions: case of the Egyptian stock market International Journal of Islamic and Middle Eastern Finance and Management Article information/ : (June 2019)*. <https://doi.org/10.1108/IMEFM-12-2017-0333>

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- Gupta, E., Preetibedi, P., & mlakra, P. (2014). Efficient Market Hypothesis V/S Behavioural Finance. *IOSR Journal of Business and Management*, 16(4), 56–60. <https://doi.org/10.9790/487x-16445660>
- Hayat, A. (2016). Impact of Behavioral Biases on Investment Decision; Moderating Role of Financial Literacy. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2842502>
- Isidore R, R., & Christie, P. (2019). The relationship between the income and behavioural biases. *Journal of Economics, Finance and Administrative Science*, 24(47), 127–144. <https://doi.org/10.1108/JEFAS-10-2018-0111>
- Jagongo, A., & Mutswenje, V. S. (2014). A Survey of the Factors Influencing Investment Decisions: The Case of Individual Investors at the NSE. In *International Journal of Humanities and Social Science* (Vol. 4).
- Jahanmiri, M. (2018). Anchoring Bias a Criterion for Explain Profitability of 52-Weeks High and Momentum Strategies. *Pacific Business Review International*, 10(7), 115–124.
- Jamil, S. A., & Khan, K. (2016). Does gender difference impact investment decisions? Evidence from Oman. *International Journal of Economics and Financial Issues*, 6(2), 456–460.
- Kahneman, D., & Tversky, A. (n.d.). *E C O N Ometrica I C I Volume 47 March, 1979 Number 2 Prospect Theory: An Analysis Of Decision Under Risk*.
- Kaustia, M., Alho, E., & Puttonen, V. (2008). How much does expertise reduce behavioral biases? The case of anchoring effects in stock return estimates. *Financial Management*, 37(3), 391–412. <https://doi.org/10.1111/j.1755-053X.2008.00018.x>
- Konstantinidis, A., Katarachia, A., & Borovas, G. (2012). From Efficient Market Hypothesis To Behavioural Finance: Can Behavioural Finance Be the New Dominant Model for Investing? *Scientific Bulletin : Economic Sciences*, 11(2), 16–26.
- Kudryavtsev, A., & Cohen, G. (2011). Behavioral Biases in Economic and Financial Knowledge: Are They the Same for Men and Women? In *Advances in Management & Applied Economics* (Vol. 1). online) International Scientific Press.
- Kumar, S., Samir, A., Barua, K., Jacob, J., & Varma, J. R. (2013). *Financial Literacy among Working Young in Urban India Indian Institute Of Management Ahmedabad-380015 India Financial Literacy Among Working Young In Urban India*.
- Lan, Q., Xiong, Q., He, L., & Ma, C. (2018). *Individual investment decision behaviors based on demographic characteristics / : Case from China*. 1–16.
- Lee, K., Miller, S., Velasquez, N., & Wann, C. (2013). *THE EFFECT OF INVESTOR BIAS AND GENDER ON*. 7(1), 1–16.
- Mahapatra, M. S., & Mehta, S. (2015). Behavioral Finance / : A Study on Gender Based Dilemma in Making Investment Decisions. *SUMEDHA Journal of Management*, 4(1), 4–17.
- Mbaluka, P., Muthama, C., & Kalunda, E. (2012). *Prospect Theory / : Test on Framing and Loss Aversion Effects on Investors Decision-Making Process At the Nairobi Securities Exchange , Kenya*. 3(9), 31–42.

- Michael, J. (2012). Financial advice: A substitute for financial literacy? In *Financial Services Review; Winter* (Vol. 21). Retrieved from <http://ssrn.com/abstract=2046227>
- Mishra, K. C., & Metilda, M. J. (2015). A study on the impact of investment experience, gender, and level of education on overconfidence and self-attribution bias. *IIMB Management Review*, 27(4), 228–239. <https://doi.org/10.1016/j.iimb.2015.09.001>
- Nair, M. A., Balasubramanian, & Yermal, L. (2017). Factors influencing herding behavior among Indian stock investors. *2017 International Conference on Data Management, Analytics and Innovation, ICDMAI 2017*, 326–329. <https://doi.org/10.1109/ICDMAI.2017.8073535>
- Ogunlusi, O. E., & Obademi, O. (2019). The Impact of Behavioural Finance on Investment Decision-making: A Study of Selected Investment Banks in Nigeria. *Global Business Review*, (August 2019), 0–17. <https://doi.org/10.1177/0972150919851388>
- Onsomu, Z. (2018). Behavioral Biases, Demographics, Investment Strategy and Portfolio Performance of Individual Investors at the Nairobi Securities . Retrieved from <http://erepository.uonbi.ac.ke:8080/handle/11295/104386>
- Pareto, C. (2019, May 17). Understanding Investor Behavior. Retrieved January 30, 2020, from <https://www.investopedia.com/articles/05/032905.asp>
- Polman, E. (2012). Self-other decision making and loss aversion. *Organizational Behavior and Human Decision Processes*, 119(2), 141–150. <https://doi.org/10.1016/j.obhdp.2012.06.005>
- Prosad, J. M., Kapoor, S., & Sengupta, J. (2015). Theory of behavioral finance. In *Handbook of Research on Behavioral Finance and Investment Strategies: Decision Making in the Financial Industry* (pp. 1–24). <https://doi.org/10.4018/978-1-4666-7484-4.ch001>
- Rekik, Y. M., & Boujelbene, Y. (2013). *Determinants of Individual Investor s ' Behaviors/ : Evidence from Tunisian Stock Market*. 8(2), 109–119.
- Ricciardi, V., Science, S., & Baker, H. K. (2017). *Behaviour*. (March 2014).
- Saraswati, A. R. (2015). *the Effect of Anchoring and Adjustment Bias and Conservatism Bias on Investment Decision Making*. (1970).
- Sarkar, A. K., & Sahu, T. N. (2018). Analysis of Investment Behaviour of Individual Investors of Stock Market/ : A Study in Selected Districts of West Bengal. *Pacific Business Review International*, 10(7), 7–17. Retrieved from http://www.pbr.co.in/2018/2018_month/Jan/1.pdf.
- Scharfstein, D. S., & Stein, J. S. (1988). 2062- 88. (August).
- Shaikh, G. M., Karim, N., Kalhoro, M., & Kamal, Y. (2019). *Do behavioral biases in gender differences affect investment decisions* 23(4), 326–336. <https://doi.org/10.15406/sij.2019.03.00194>
- Singh, S., & Dean, A. (2012). *Investor Irrationality and Self-Defeating Behavior/ : Insights from Behavioral Finance*. 8(1), 116–122.
- Sukamulja, S., Meilita, A. Y. N., & Senoputri, D. (2019). Regret Aversion Bias, Mental Accounting, Overconfidence, and Risk Perception in Investment Decision Making on Generation Y Workers in Yogyakarta. *International Journal of Economics and Management Studies*, 6(7), 102–110. <https://doi.org/10.14445/23939125/ijems-v6i7p116>

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- Topol, R. (1991). Bubbles and Volatility of Stock Prices: Effect of Mimetic Contagion. *The Economic Journal*, 101(407), 786. doi: 10.2307/2233855
- Tuominen, N. (2017). A Basic Theory of Rational Herd Behavior and Informational Cascades Does it apply to Financial Markets? . Retrieved from <https://aaltodoc.aalto.fi/handle/123456789/27215>
- Usman, D. I., Muturi, W. M., & Memba, F. S. (2017). Influence Of Anchoring Bias On Investors ' Decision Making In Property Market In Plateau State. *International Journal of Management and Commerce Innovations*, 5, 2348-75(1), 49-59.
- Velumoni, D. (2017). Analysis of prospect theory on equity investment decision making-A behavioural perspective. *Indian Journal of Science Research*, 14(1), 211-215.
- Zaiane, S. (2015). Behavioral Biases of Individual Investors: The Effect of Anchoring. *Eurasian Journal of Social Sciences*, 3(1), 13-19. <https://doi.org/10.15604/ejss.2015.03.01.002>