



“IMPACT OF INDIVIDUAL INVESTMENT BEHAVIOR ON INVESTMENT DECISION AND INVESTMENT PERFORMANCE DIVERSIFY WITH MARKET FACTORS & SATISFACTORY LEVEL OF INVESTMENT IN PAKISTAN STOCK MARKET”

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ABSTRACT

Market variables play a significant moderating function in stock investment decisions and performance. The object of this research is to explore the variables that affect individual Investor's behavioural in the Karachi stock market while moderating effect of market variables. Analyze the impact of behavioral biases on the Pakistan stock market investing performance and decisions of individual investors. The findings demonstrate that characteristics related to individual investment behaviour have a considerable significant influence on stock investment performance and decision-making for individuals residing in Karachi city. To examine the hypotheses in this study, quantitative methodology and adopted questionnaires survey is utilized to gather information from 250 investors who trade on the Karachi stock market. The proposed hypotheses were tested using Smart PLS 4. This field has a widely researched gap. It aids in finding the behavioural aspects that influence investment performance and decision-making most strongly Researching behavioural traits and how they influence human investment decisions in Karachi might be fascinating.

Keywords: Behavioral finance, Behavioral biases, investor's decisions, Investment performance, Market factor and Satisfaction level.



INTRODUCTION

The research of behavioural finance, in especially the behavioural aspects driving individual's financial decisions in Asia, has numerous practical consequences (Dang & Tran, 2019; Nguyen & Tran, 2019). Finance theory remains a young subject and hasn't drawn much notice from financial analysts, despite being abused for years. The research plans to provide more light on how financial behaviour affects financing choices and how it affects investment outcomes (Minh Man CAO¹, Nhu-Ty NGUYEN², Thanh-Tuyen TRAN³ 2021). A variety of factors affect the choice to investment. Individual investor governs value prices and the stockmarket. In order to learn more about how individuals perceive their finance, several researchers have examined people's investor behaviour. It is well established the factors including gender, profession, religion, investment experience, and others have a significant impact on the way individuals investment. Understanding behavior of investors is crucial. Diversity, in contrast extreme, is the cornerstone of contemporary portfolio management (Fabozzi, et. al., 2002; Markowitz, 1952; Markowitz, 2014). As per behaviour asset valuation models, where volatility also isn't evaluated using beta as well as the rate of return on investment is chosen by larger than for the concern, the interest rate is decided by higher than that of the hazard (Statman, 2014). These activity has an impact on investment decisions, including selection of investment portfolio, and the timing of share buying and selling (Thaler & Ganser, 2015; Statman, 2014; Barberis & Thaler, 2003). For better comprehend way consumers determine about the stock markets, researchers were focusing increasingly on the subject of investor behaviour. Market efficiency claims that people make irrational decisions statically (Statman, 2014). Advocates of behavioural finance contend that a range of factors were affect investors' decisions (Baker & Nofsinger, 2002, 2010; Baker & Ricciardi, 2014).

Wermers (1999) and Grinblatt et al. (1995) conducted a range of significant research. Shareholders focus more attention to recent data than historical facts. Contrarily, individuals are more likely to take lesser risk when going bankrupt. As per Odean and Barber (2002), Similarly, finance theory, which analyzes the psychological consequences of finance professionals' actions, is a growing area of interest. Behaviour finance entails the study as to how financial experts' actions and thought patterns affect the price. The subject of study known as behavioral finance could also be known as investor behavior. The psychological perspective of the behavioral analysts is used to study how people make decisions in the economy (Belsky and Gilovich, 1999).

Multiple researches of investment behavior both from financial and behavioural viewpoints have been drawn to behavioural economics (Chong & Lai, 2011). The research is beneficial to equity investments mostly on Pakistan Stock Exchange since it conducts an empirical investigation of the variables that affect company choice in addition to the outcomes of technical or fundamental research. This report particularly assesses whether individuals' choices for financial and economic characteristics affect their selection of particular equities when selecting investments. Because investors' perceptions of the parameter estimates play a key role on overall choice of shares, it is expected that these variables have a significant impact on individual decision-making. Thus, the inference is that economic forces are significant predictors of market performance in Pakistan if indeed the independent variable are demonstrated to have influenced variances in stock markets It assumes that shareholder personal prejudices can influence share price behaviour; which contrasts significantly also with efficient markets (EMH) supposition the holds that share prices are primarily influenced by everyone existing facts. The main tenet of EMH would be that new knowledge seems to be the only factor that affects equity market values. According to Fama (1965), the much more statistically independent a currency market stock

values are, more the productive that becomes. In fact, a key concept of this theory is that traders really aren't irrational. This study may improve our knowledge of how behavioral economics influences investing choices. According to the reasoning, the efficient marketplace concept did not adequately account for shareholders' individual behaviour in individual stocks and trade, which have a major effect on stock In this regard, Merikas et. al., (2004), Shiv, Loewenstein, et. al., (2005), Chong et. al, (2011). the research will be valuable to the authorities who oversee the Pakistani financial markets, including the Stock exchange and Pakistani Stock Exchange.

Goal of this research is to better understand financial behavior and behaviour factors, while also examining how its factors affect a investment choice and investment performance to buy or sell stocks. Shareholder decisions are influenced by economic conditions, therefore these mistakes have an effect on share prices as well as yields and finally contribute to efficient market. For shareholders to take into account and evaluate the demand trends while selecting the best investments selections, the study is now a reliable source of information on individuals investing behaviour. The examination offers a fantastic chance to gain both professional and academic knowledge regarding share price movements and financial planning.

Current volatility on the Pakistani stock market have led most individuals to suspect that investment firms are swaying the market. Stock holdings for the short to mid term carry greater risk. Past few years have seen a surge in interest insecurities marketplace and real estate investment. More and more individuals are making investments in property and shares. This has been carried out in order to cover expenses for upcoming needs. But in light of the present global recession, choosing investments has turned into a crucial task in the daily lives. Understanding the various reasons why investment managers make there own investment plans is essential to achieving this goal. The goal of this study is to pinpoint some crucial factors that affect shareholders' willing to buy.

LITERATURE REVIEW

Behavioral finance is a positive philosophical perspective on the allocation of economic resources that does not presuppose complete rationality of market participants (Simon, 1955). Behavioral finance studies also have provide the assumption (Halko et al., 2012), asset prices and market behaviour, which seem to be the result of collective activity by market players, are variable and dynamic, guided by the above theoretical assumption of human behaviour. Probably a combination between market forces, human behaviour bias impacts asset values, resulting in market inefficiency (Schneider and Lappen, 2000). The complex and volatility of investors and market behaviour are better represented and recognised in a dynamic network (Mitroi and Oproiu, 2014). In complex systems controlled by genuine human behaviour, it is critical to maintain investors, asset values, and the marketplace in synchronization (Ahmad and Ibrahim, 2017). Mayfield et. al., (2008) Indicated that attractive people want to develop short-term investment behavior. Experts are taking an increasing interested in the area is investor behavior so order to better understand why consumers form financial sector judgments (Shyan-Rong, 2011). Influence consumers' decisions (Baker & Nofsinger, 2002, 2010; Baker & Ricciardi, 2014), Generating investment decisions requires careful consideration of many different factors that follows particular set of steps (Doya, 2008). If an individual should select an option in an uncertain environment because they don't know how their choice will affect others or have enough knowledge to reach a choice (Shanmugsundaram & Balakrishnan, 2011; Tversky & Kahneman, 1974). According to Sultana and Pardhasaradhi in 2012, stated that the Individual investment decision-making strategies are profitability theory. Psychological, emotional, and economic aspects affect how an investment behaviours (Pak & Mahmood, 2015; Sivaramakrishnan, Srivastava, & Rastogi, 2017; Tauni et al., 2017).

Individual Investment Behaviour

According to Sultana and Pardhasadhi (2012), the share investment's choice to buy shares was affected by it's firm's image, feeling of morality, capacity to reduce volatility, involvement of a state or future value. Chang et al. (2015) provided a concise explanation of how shareholders make judgments when considering several options, particularly inside an ambiguous environment Knowing any country's infrastructure like a shareholders has such a big impact on your investing choices. Shefrin asserted in 2000 how market efficiency recognises that influence of the a person's emotions on their judgement as an investment and financially counsellor. Emotional disorders include lack of self-assurance, affects from attitudes, group behaviour, the philosopher's illusion, as well as the main ballhandler falsehood. Chen, et al., 2007; Nofsinger, 2016). Lifestyle symptoms have a big role in stock market performance. (Islam, 2012). Investing choices are affected the demographic variables including income status, age, maturity level, market intelligence, region, career, intellectual ability, household structure, and so more, claim Cohen & Kudryavtsev (2012).

Market Factors

Market factors including price movements, news from politics and government, forecasts for the future, knowledge from everyone else, and the value of stocks have an impact on investor behaviour (Waweru et al., 2008). Shareholder behavior reflects change marketplace, as according behavioural finance (DeBondt and Thaler, 1995). Its judgement abilities of stock markets are impacted by such target markets. Identify the awareness of the financial markets as having a substantial influence on shareholders' choice procedures (Waweru et al., 2008). Because of its lower price, better cash, as well as better return, it will appear more tempting to shareholders (Asad, et. al., 2018).

Moderating Role of Market Factor on Individual Investor's Factor and Investment Performance

According to Nodsinger (2014), traders should collect as well as study a large amount of information on the many opportunity shares that are available in the marketplace. Investors can access older financial resources. It is never advised to utilize them to assess data or behavior investment (shiller, 2006). Reinganum (1988) said that, concerning stock performance that, price shares carry out better than increase stocks. The stock overall performance described with the aid is a complex idea the incorporates scale, liquescence, gradation global integration or unpredictability (Levine and Zervos, 1998).

Moderating Role of Market Factor on Individual Investors Factor and Investment Decision

According to Waweru et al. (2008), shareholders mainly focus mostly on stocks and certain other interesting events which are dependent on share market information, which have a substantial impact on their judgments. Behavioral finance is the study focusing of psychological factors on different financial market players and how the stock markets respond to such elements (Sewell, 2010). In order to make informed decisions, investors should take into account market knowledge. Investors must contend with additional challenges and hazards in order to make wise, well-informed judgments if they want to succeed in controlling the market (Nguyen and Nguyen, 2020).

Investment Decision and Stock Performance

The Behavioral Finance was an effort to create a decision-making concept that was centered on the value decision-making paradigm (Zaiane, 2015). Decision-making may not always be ideal, they will aid in making a satisfactory choice (Ippoliti, 2015). Long term investment decisions are influenced by information of a historical behaviour of stock marketplace indices (Cohen and Kudryavtsev, 2012). According to Bashir et al. (2013), men are believed to possess a higher propensity than ladies. Shareholders must recognize the feelings associated in judgement in order to gain market share and behave responsibly (Joo & Durri. 2015). Chang Young (2015) asserted that stockholders share information while considering their options, particularly in an environment of rapid change. Tseng and Yang (2011) recognised the crucial part biases perform in certain individuals' investment decisions after establishing that dependence on patterns was crucial in personal risk in financial decisions.

Research Hypothesis

- *H1: Individual investor behavior factors have significant impact on investment decision in Pakistan Stock Exchange.*
- *H2: Individual investor behavior factors have significant impact on investment performance in Pakistan Stock Exchange.*
- *H3: Market factors have significantly impact on investment decision in Pakistan Stock Exchange.*
- *H4: Market factors have significantly impact on investment performance in Pakistan Stock Exchange.*
- *H5: Market factors have significant moderating role in relationship between individual investor behavior factors and investment decision in Pakistan Stock Exchange.*
- *H6: Market factors have significant moderating role in relationship between individual investor behavior factors and investment performance in Pakistan Stock Exchange.*

CONCEPTUAL MODEL

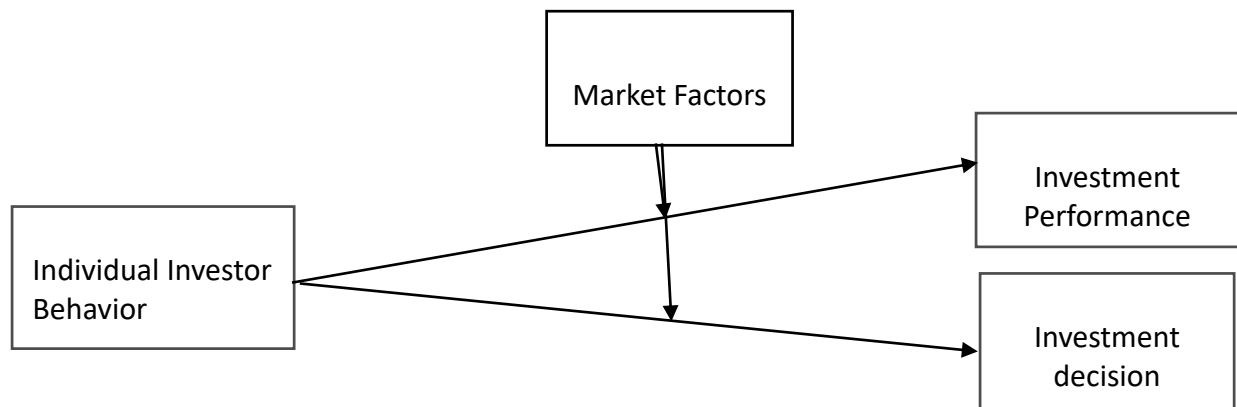


Figure 1

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METHODOLOGY

This study is descriptive, but it also includes quantitative analysis and is analyzed. The method used in this research is based on the use of questionnaires to gather primary data. The method that was used out of convenience was sampling. Only data from stock market participants who had at least a year of experience investing in the sector were analysed to ensure that respondents had a solid understanding of the factors that influence the investment behaviour of individual investors in the stock market.

To collect information, 250 respondents in total were contacted. The size of the sample for this analysis was chosen in accordance with the standards for SEM models outlined by Peng and Lai (2012). This research adopted construct of items from different paper. Five levels of scale are used to apply the Likert scale 5- point: (5 = strongly agree, 1 = strongly disagree).

Its information is acquired using two methods: first, a questionnaire out of a selected sample of financial markets in Karachi using a self-administrative survey approach; and second, an online survey form. The investors have completed the Google Files questionnaire.

To analyze the modelled hypothesis, the study used the partial least squares structural equation modelling (PLS-SEM) approach (Wong, 2013). Even with Medium to small number of respondents and non-normality PLS-SEM can model latent constructs and generate the optimal unbiased route coefficient. Additionally, smart PLS has been more widely used in marketing research, but its significance in finance research has just recently become evident (Ali & Omar, 2014; Sarstedt, et. al., 2014). In comparison to other software, the Smart PLS 4 edition is well-known for making evaluation of the moderating impact simple. Furthermore, there are two phases in the PLS analysis: the bootstrap and the PLS algorithm (F. Hair et. al., 2014). Factor loadings, weights, and path coefficients are effectively produced by the PLS algorithm procedure, whereas p values and T values are effectively produced by the bootstrapping approach (5000 resamples), which is used to decide whether to accept or reject a suggested hypothesis. PLS method is well-known for determining the reliability and validity whereas bootstrapping is widely known for performing hypotheses on the components (Anderson & Gerbing, 1988).

RESULTS AND DATA ANALYSIS

Current research makes an effort to look into how people trade on the Stock Exchange of Pakistan. The research of predictor of behaviour of personal stake provides personal investment options to modify their behavior. The fundamental justification for selecting Karachi for research is that it represents the cornerstone of Pakistan's prosperity, employing more than a million individuals in its core workforce and hosting around 70% of investment. But during the recent four years, companies' stock purchases have drastically changed as a result of something like the significance of improving public order in luring both local and foreign investments to Pakistan, especially in Karachi. The market environment is less tempting to investors affected by political and financial uncertainties, and the depreciation of the Pakistani rupee renders commerce abroad less attractive. Businesses are moving to nearby countries has resulted. The respondents' demographic characteristics were shown in table 1

Gender: Shows that male responses are 76% and female responses are 24% of the total 250 responses.

Age: It shows that responses between the ages of 19 to 25 are 2%, 26 to 30 are 14%, 31 to 35 are 38%, 36 to 40 are 12% and 41+ above are 34%.

Educational status: Shows that responses educational status with Bachelors are 46%, Masters are 52% and PhD are 2%.

Work experience: 1-5 year are 66%, 6-10 years are 28% and over 10 years are 6% of among 250 respondents.

Income: 4% of respondents have less than Rs 50,000-50,000 while 24% have Rs 50,001-100,000, 26% belongs to Rs 100,001-150,000 and 38% belongs to Rs 150,001-200,000 groups. Though, 8% have above Rs 200,000 level of income.

Table 1 Demographic variables of the respondents.

VARIABLES	DESCRIPTION	Frequency	PERCENTAGE (%)
Gender	Male	190	76%
	Female	60	24%
Age	Up to 25	5	2%
	26-30	35	14%
	31-35	95	38%
	36-40	30	12%
	41- above	85	34%
Educational status	Bachelor	115	46%
	Master	130	52%
	PhD	5	2%
Work Experience	1- 5 year	165	66%
	6- 10 year	70	28%
	Over 10 year	15	6%
INCOME	50,000- Less than 50,000	10	4%
	50,001- 100,000	50	24%
	100,001- 150,000	65	26%
	150,001- 200,000	95	38%
	Above than 200,000	20	8%

Path Model

In the path diagram, the measurement model shows the connection between the construct and the indicator, although the SEM shows the connection between the constructions. Indicators are in square and constructs are in oval.

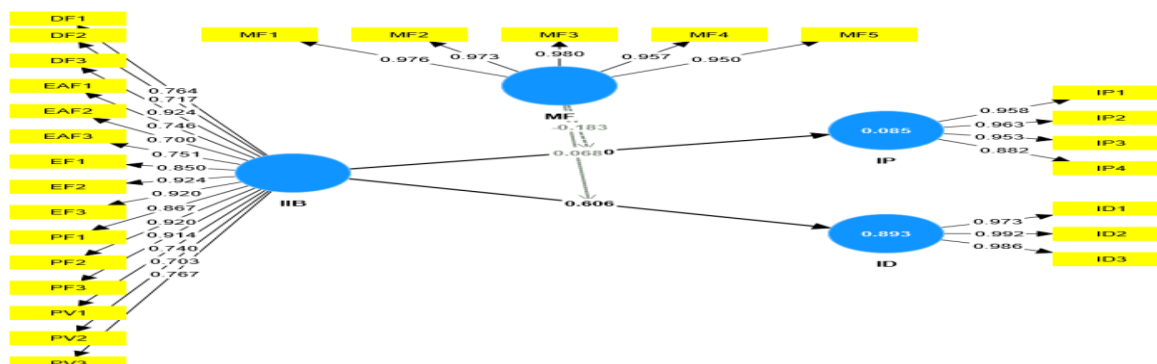


Figure 2

Individual investment behaviour, market influence, investment performance, and stock investment decision are the four latent variables used in this study. Figure 2 and table 2 findings show that all indicators have strong loadings toward their associated latent variables as each of these items have factor loadings over 0.70, the acceptable threshold point for factor loadings that are acceptable.

Exploratory Factor Analysis

The measure was examined using an exploratory factor analysis (EFA). In the research, 27 observed items were collected. The items were accepted following reliability testing using the Cronbach Alpha coefficient. Which are all higher than 0.7, were left in the scale since they guaranteed satisfactory convergence with the other variables.

Table 2 Factor Loadings

Construct	Items	ID	IP	MF	IIB
Investment Decision Making	ID1	0.973			
	ID2	0.992			
	ID3	0.986			
Investment Performance	IP1		0.958		
	IP2		0.963		
	IP3		0.953		
	IP4		0.882		
Market Factors	MF1			0.976	
	MF2			0.973	
	MF3			0.980	
	MF4			0.957	
	MF5			0.950	
Individual Investment Behaviour	PF1				0.867
	PF2				0.920
	PF3				0.914
	EF1				0.850

EF2	0.924
EF3	0.920
DF1	0.764
DF2	0.717
DF3	0.924
PV1	0.740
PV2	0.703
PV3	0.767
EAf1	0.746
EAf2	0.701
EAf3	0.751

Reliability, Convergent and Discriminant Validity

The research must focus on the issue with the construct's validity and reliability. Table 3 displays. All four constructs have Cronbach's Alpha values above .7, indicating that they are all very dependable. The convergent validity of the notions is ensured by the fact that all values of AVE are more than .50 (Henseler et al., 2014). Strong relationship standards show that a construct has discriminant validity in a similar manner.

Table 3 Convergent Validity, Composite Reliability, and AVE

	Cronbach's alpha	Rh_A	Composite reliability	AVE	ID	IIB	IP	MF
ID	0.983	0.984	0.989	0.968	0.984			
IIB	0.967	0.986	0.968	0.670	0.915	0.818		
IP	0.955	0.959	0.968	0.883	0.142	0.167	0.940	
MF	0.983	0.985	0.986	0.936	0.853	0.783	0.085	0.967

Structural Model Assessment

The Next stage after evaluating to ascertain the significance level of the pathway values, it reliability test evaluates the structure path (relationships between constructs of this study). Table 4 presents the findings. In figure 3, the structural model is displayed.

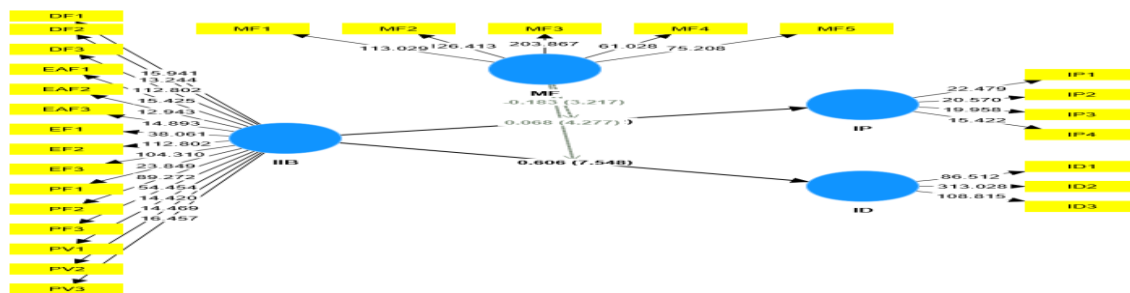


Figure 3

Table 4 Structural Assessment Model (Direct Relationship)

Hypothesis	B	S.D	T-Value	P-Value
IIB -> ID	0.606	0.080	7.548	0.000
IIB -> IP	0.350	0.100	3.512	0.000
MF -> ID	0.391	0.083	4.686	0.000
MF -> IP	-0.223	0.107	2.082	0.037
MF x IIB -> ID	0.068	0.016	4.277	0.000

<i>MF x IIB -> IP</i>	<i>-0.183</i>	<i>0.057</i>	<i>3.217</i>	<i>0.001</i>
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H1 and H2 evaluates whether individual investment behavior significantly and positively affects investment decision and investment performance in stock market. The outcomes indicates that individual investment behavior positively and significant impact investment decision in Karachi stock market ($\beta = .606$, $t = 7.548$, $p = .000$) and ($\beta = .350$, $t = 3.512$, $p = .000$). Hence, H1 and H2 were supported.

H3 the results indicates that Market influence positive and significant impact investment Decision in Karachi stock market ($\beta = 0.391$, $t = 4.686$, $p = .000$). Hence, H3 was supported. H4 the results indicates that Market influence negative and significant impact investment performance in stock market ($\beta = -0.223$, $t = 2.082$, $p = .037$). Hence, H4 was supported.

Moderation Analysis

*H5: The study assessed the moderating Market influence on the relationship between Individual Investment Behaviour (IIB) and Investment Decision (ID). The R-square value for ID was 0.839% when the moderating impact (MF*IIB) was not taken into account. This demonstrates that MF accounts for 83.9% of the change in ID. The R-Square increased to 89.3% once the interaction effect was added. That indicates an increase of 5.4% in the variance in the dependent variable (ID) that is understood.*

Feather, Analysis of the moderating impact significance revealed that MF had a significant and positive moderating effect on the connection between IIB and IP (t -value = 4.277, $\beta = 0.068$, $p = .000$), supporting H5. This shows that within increase in Market Factors the relationship between IIB and ID is strongly. Moderation analysis summary in presented in Table 4.

*H6: The study assessed the moderating Market influence on the connection between individual investor behaviour (IIB) and investment performance (IP), using the market as a moderating factor. The R-square value for IP was .028% when the moderating impact (MF*IIB) was not taken into connect. This demonstrates that MF accounts for 2.8% of the change in IP. The R-Square increased to 8.5% with the interaction term included. According to this, the dependent variable (IP) variance explanation has risen by 5.7%.*

Interpretation of the moderating effect's significance revealed that the moderating effect of MF on the link between IIB and IP was both negative and significant ($\beta = -0.183$, t -Value = 3.217, $p = .001$), supporting H6. This shows that within increase in Market Factors the relationship between IIB and IP is weakened. Moderation analysis summary in presented in Table 4.

DISCUSSION AND CONCLUSION

Using convenience sampling methods, a survey questionnaire were adopted and utilized to gather responses from a sample of 250 investors of the Karachi Stock Exchange. Results indicate that individual investor's behavioural factors have positive impact on investment decision and investment performance in Karachi stock exchange and p-value is 0.000 which mean is less than 0.05 (t- value is 7.548, β value is .606) and (t-value is 3.512 and β value is .350). While Positive significant relationship between market factors and investment decision and p-value is $0.00 < (\text{sig} = 0.05)$, t- value is 4.686 and β value is .391. But Market Factors have negative impact in Investment Performance and p-value is $0.037 < (\text{sig} = 0.05)$, t- value is 2.082 and β value is -.0223. P value is positive but β value is negative so, Market Factor has negative Weakens relationships in Individual Performance.

Market factors have also statistically Positive significant moderating role in relation with Individual Investment Behaviour and investment decision in stock but Market Factor weakened moderating role in Individual investment behavior and Investment Performance.

This researchers focused at the characteristics that affect how individual investor acts. At the Pakistan Stock Exchange, individual investors' investment decisions are influenced by five behavioural aspects. Demographics, psychological impact, economics, personal values, and expectation of guidance. This study aims to evaluate how individual investors' behaviour influences their choice of investments, how well those investments perform, and how it influences moderation role of market variables on the Karachi Stock Exchange. When people take into account financial service concepts, then may get to the conclusion that shareholders effect change considering evaluating and considering all relevant information regarding the share. Firms then spend money to improve their securities' value and usability. While according behavioural economics, it is impossible to achieve a sufficient form of market efficiency where all investors have the same amount of information, are extremely well educated, or decide things according to their own knowledge, education, and point of view, Behavioral finance, that openly refutes these ideas, claims that this is simply not possible. Consequently, behavioural finance discovered behavioural biases including their consequences on investment judgment.

Traders can exaggerate or react negatively to pricing and announcements, generalize past patterns through into future, paying consideration to a stock's macroeconomic factors, and focus on common stocks and relative price changes, per the behavioural financial theory. For such research, investors are asked to evaluate their own financial investment achievement. When analyze the yield share of the market investments, shareholders are particularly asked to compare their current actual dividend yields to all of their expected rates of return and the market average yield value for stocks. The research also recommends include financial decision fulfillment as a criterion when assessing share prices.

Prior research has confirmed the existence of behavioural elements in the choice process for investments. A diversity of advantages that every investor seeks for holding a stock pick has a significant impact on his or her decision to engage in the stock marketplace, particularly equity. Additionally, it has been proposed that comprehending the actions of individual investments may aid inside the explanation of share market oddities. Finally but also not least, taking into consideration the behaviour element can result in certain strategies which wealthy sectors should use while making investments in the finance sector.

Some investors base their decisions on other people's recommendations and do not express their own opinions. Investors' economic and community lives depend greatly on their financial decisions, and bad financial decisions can have a negative impact on both. For this reason, it is important to avoid certain biases. Thus it is best to educate investors on these issues and show individuals how to stop making decisions that could result in significant financial losses down the road.

The outcome is solely dependent on how honestly and fairly people react. People commonly underreport their money and hobbies, making it extremely difficult to ascertain the true findings. Time is a limited resource that must be used in this research. The researcher may decide to conduct this study again in the years to come using a variety of data collection techniques and explanatory variables. When conducting studies on this premise, researchers may also utilize larger sample numbers to produce better findings. Future research may be done to determine if the severity of behavioural biases varies with risk tolerance.

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