European Economic Letters
ISSN 2323-5233
Vol 14, Issue 4 (2024)
http://eelet.org.uk

The Mediating Role of Investment Strategy on the Relationship between Market Timing Ability and Mutual Fund Performance

Dr. G. Kanuka Raju[1], Mr. K. Ramakrishna[2], Dr. Kamma Ramanjaneyulu[3], Mr. K. Radha Krishna[4]
[1]Assistant Professor, School of Management, Annamacharya University, Rajampet, Annamaiah District, Andhra Pradesh, kanukaraju2021@gmail.com.
[2]Assistant Professor, Dept. of MBA, RGM College of Engineering and Technology, Nandyal, Nandyal District, Andhra Pradesh, kramakrishna40@gmail.com.
[3]Principal-In-Charge, Dr. K.V. Subba Reddy Institute of Management, Kurnool, Kurnool District, Andhra Pradesh, ramulatha.mba@gmail.com.
[4]Assistant Professor, Dept. of Management, KSRM College of Engineering (Autonomous), Kadapa, Andhra Pradesh, kakanoori@gmail.com.

Purpose/Aim:- The aim of the present research is to investigate the mediating role of investment strategy on the relationship between market timing ability and mutual fund performance in the contemporary context. The market timing ability include, economic indicators: Interest rates, inflation rates and GDP growth rate followed by technical analysis tools include: moving averages, relative strength index, fund manager expertise, investor confidence level and news and media influence, geopolitical development and natural disasters and pandemics. The mediating factor is the type of the investment strategy includes, the risk tolerance ability, time horizon, the main goals and objectives of investment strategy, market conditions and economic conditions and asset allocation and diversification. The mutual fund performance metrics are absolute returns, risk-adjusted returns, alpha value, beta value, net asset value (NAV), expense ratio and turnover ratio. Outcome:- The outcome of the research witnessed that, the impact of the market timing ability on mutual fund performance majorly dependents on the type of the investment strategy selected by the investor to invest in mutual funds. The strategic investment for enhance performance and risk assessment. Research Methodology/Approach/Design:- Designed closed ended structured questionnaire to collect the opinion of mutual fund investors with respect to three different constructs like: Market Timing Ability, Investment strategies and mutual fund investment performance. Limitations/Implications:- There are certain factors only considered under market timing ability, still there are other factor which enhances the performance of mutual funds. Sampling Technique:- Google Survey sheet being developed and applied simple random sampling technique to collect the opinion from various investors. Statistical Tools:- Applied both descriptive and inferential statistics which include Mean, SD, Correlation, Regression and Structural Equation Modeling Algorithm (SEM) and all the values of the model assessment model include, GFI, AGFI, NFI, TLI and CFI >.90 and RMSEA <.08 and Ch-Square value (P<.000). The measurement model witnesses the accuracy. Generalizability:- The outcome of the research and the model constructs can be used where need arises the mutual fund performance based on the market timing ability, the objective of investment strategy and mutual fund performance.

Keywords: - Market Timing, Mutual Funds, Fund Performance, Investments, Investment Strategies

Introduction:-

The market timing ability factors are essential especially the economic indicators are the interest rates changes are the primary driver of market movement followed by the inflation rates and GDP growth of the nation and the technical analysis tool include the moving averages and the relative strength index (RSI) and the fund manager expertise and market sentiment analysis and global events include, geopolitical development and natural disasters and pandemic conditions in various countries are the essential concepts must be studies under the market timing ability. The investment strategies include the risk tolerance ability of the investor which include, high risk-ability and low-risk ability and the time horizon of the investment include, short term investment and long-term investment and investors goals and objectives include: retirement savings, capital preservation, income generation and wealth creation, the fund diversification across different fields and other strategies are essential under investment category. The present research model include three different constructs namely: market timing ability, investment strategy and mutual fund performance. The researcher is trying to test the model with respect to direct and in-direct effect. The direct effect draws the relationship between the market timing ability and the mutual fund performance and the in-direct effect which is the investment strategy mediates the relationship between the market timing ability and the mutual fund performance. Therefore, the mutual fund performance might be influenced by the direct and in-direct effect in the present context.

Review of Literature:-

Kon, S. J. (1983) Kon examined the market timing abilities of mutual fund managers and found no evidence of successful market timing on average. However, a subset of funds exhibited significant timing abilities, suggesting that some managers possess superior skills in adjusting their portfolios based on market conditions. Grinblatt, M., & Titman, S. (1994) This study evaluated the performance of mutual funds using various models, including those that account for market timing abilities. The authors found that while some funds exhibited timing skills, these abilities did not persist over time and were not consistently related to superior performance. Daniel, K., Grinblatt, M., Titman, S., & Wermers, R. (1997) The authors proposed a characteristic-based benchmark to evaluate mutual fund performance, which accounts for investment styles and stock characteristics. They found that funds with concentrated portfolios and distinct investment strategies tended to outperform more diversified funds, suggesting a link between investment strategy and performance. Wermers, R. (2000) Wermers decomposed mutual fund performance into various components, including stock-picking talent, investment style, transaction costs, and expenses. The study found that investment style and stock-picking ability were the most important determinants of fund performance, while market timing abilities played a relatively minor role. Becker, C., Ferson, W., Myers, D. H., & Schill, M. J. (1999) This study examined the market timing abilities of fund managers relative to benchmark investors with different investment styles. The authors found that some funds exhibited successful timing abilities when compared to growth-oriented benchmarks, while others displayed timing skills relative to value-oriented benchmarks, suggesting a link between investment style and market timing abilities. Otten, R., & Bams, D. (2002) Otten and Bams analyzed the performance of European mutual funds and found that while market timing abilities were present among some funds, these abilities were not consistently related to superior performance. Instead, investment style and stock selection skills were more important determinants of fund performance. Swinkels, L., & Rzezniczak, P. (2009) This study examined the performance of Polish mutual funds and found that funds with distinct investment styles, such as growth or value orientations, tended to outperform more diversified funds. However, market timing abilities did not significantly contribute to fund performance. Comer, G., Larrymore, N., & Rodriguez, J. (2009) The authors proposed a method to control for fixed income exposure when evaluating mutual fund performance. They found that funds with greater exposure to fixed income securities exhibited different market timing abilities compared to equity-focused funds, suggesting that investment strategy plays a role in determining the relevance of market timing skills. Elton, E. J., Gruber, M. J., & Blake, C. R. (2012) Using monthly holdings data, this study examined the market timing abilities of mutual funds. The authors found that while some funds exhibited timing skills, these abilities were not persistent over time and did not consistently lead to superior performance. Huang, J., Sialm, C., & Zhang, H. (2011) This study investigated the risk-shifting behavior of mutual fund managers and its impact on fund performance. The authors found that funds with more flexible investment strategies that allowed for risk-shifting tended to outperform funds with more constrained investment mandates, suggesting a link between investment strategy flexibility and performance. Kacperczyk, M., Sialm, C., & Zheng, L. (2005) This study examined the relationship between industry concentration and mutual fund performance. The authors found that funds with higher industry concentration, which deviated from a well-diversified portfolio, exhibited greater stock-picking abilities and superior performance, highlighting the importance of investment strategy in determining fund performance. Cremers, K. M., & Petajisto, A. (2009) Cremers and Petajisto introduced a new measure of active management, called "active share," which quantifies the degree to which a fund deviates from its benchmark index. They found that funds with higher active share and distinct investment strategies tended to outperform, suggesting a link between active management and superior performance. Busse, J. A., Goyal, A., & Wahal, S. (2010) This study examined the performance and persistence of institutional investment managers, including mutual funds. The authors found that managers with distinct investment strategies and concentrated portfolios exhibited superior performance and persistence, while market timing abilities played a less significant role. Huang, J., Wei, K. D., & Yan, H. (2007) The authors investigated the relationship between fund flows, past performance, and participation costs (such as load fees and redemption fees). They found that funds with lower participation costs were more sensitive to past performance, suggesting that investment strategies that minimize costs and improve accessibility may attract more investor flows. Kosowski, R. (2011) This study examined the performance of mutual funds during different economic conditions and found that funds with greater market timing abilities and flexible investment strategies tended to outperform during recessions, suggesting that market timing skills and adaptive investment strategies become more valuable in challenging market environments.

Research Questions (RQ's):-
RQ1:- How Does the mutual fund performance will be enhanced by studying the market timing ability factors?
RQ2:- How Does the mutual fund performance will be enhanced by studying the investment strategy factors?
RQ3:- Does the investment strategy mediate the relationship between market timing ability and mutual funds investments?
RQ1:- How Does the mutual fund performance will be enhanced by studying the market timing ability factors?
Enhancing mutual fund performance through market timing involves leveraging economic indicators, technical analysis, market sentiment, and the expertise of fund managers to make informed buy or sell decisions based on predicted market trends. By monitoring key economic data, utilizing advanced technical tools, and understanding investor sentiment, fund managers can strategically time their investments to capitalize on favorable conditions and mitigate risks. Effective market timing, combined with diversification and the use of technology for precise execution, can significantly boost mutual fund returns

RQ2:- How Does the mutual fund performance will be enhanced by studying the investment strategy factors?
Enhancing mutual fund performance through investment strategy factors involves optimizing asset allocation, diversification, and risk management. Understanding strategies like value and growth investing, and sector rotation helps in identifying profitable opportunities. Employing both short-term and long-term strategies provides flexibility and responsiveness to market changes.

RQ3:- Does the investment strategy mediate the relationship between market timing ability and mutual funds investments.
Investment strategy can mediate the relationship between market timing ability and mutual fund performance. A well-defined investment strategy can enhance the effectiveness of market timing by providing a structured approach to decision-making. This ensures that market timing efforts are systematically aligned with broader investment goals, leading to better overall fund performance. Thus, the synergy between market timing and a solid investment strategy can significantly boost mutual fund returns.

Hypothesis Development: -

H_a(1): There is a significant positive relationship between the Market Timing Ability factors and the Mutual Fund Performance. Market timing ability, which involves predicting and acting on market movements, positively influences mutual fund performance. Fund managers who accurately time their entry and exit points can capitalize on favorable market conditions and avoid downturns. This skill leads to higher returns and better overall fund performance. Therefore, a significant positive relationship exists between market timing ability and mutual fund performance.

H_a(2): There is a significant positive relationship between the Investment Strategies and the Mutual Fund Performance. The effective investment strategies, such as asset allocation, diversification, and risk management, enhance mutual fund performance. By carefully selecting and managing investments, fund managers can maximize returns and mitigate risks. Well-executed strategies ensure that funds are optimally positioned to capitalize on market opportunities. Consequently, there is a significant positive relationship between investment strategies and mutual fund performance.

H_a(3): The Investment Strategies mediates the relationship between Market Timing Ability and the Mutual Fund Performance. The investment strategies mediate the relationship between market timing ability and mutual fund performance. Effective investment strategies provide a structured framework that enhances the impact of market timing decisions. By aligning market timing with strategic investment goals, fund managers can optimize returns and manage risks more effectively. Thus, investment strategies play a crucial role in translating market timing ability into improved mutual fund performance.

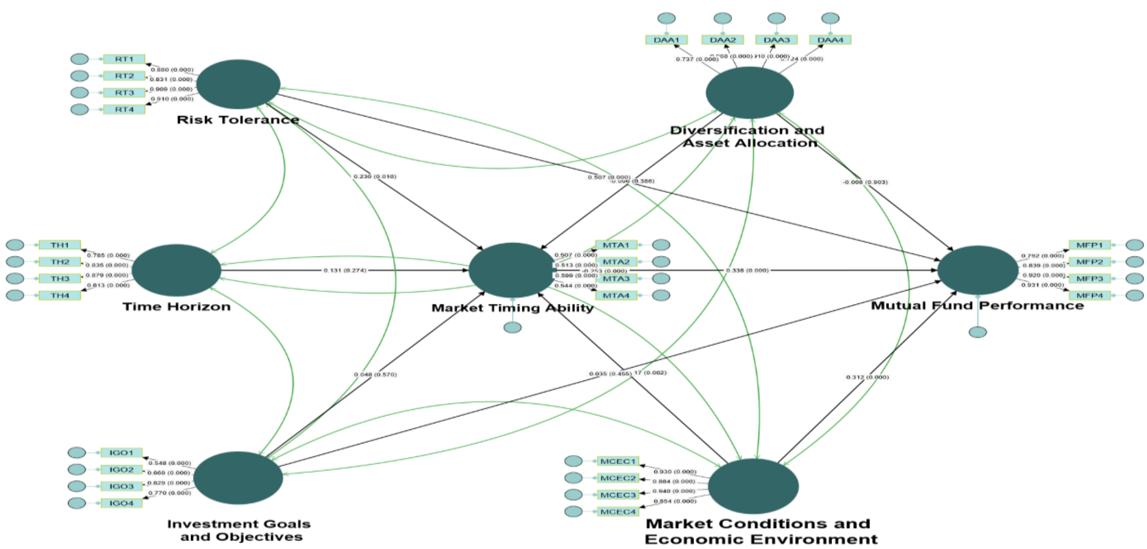
Data Analysis and Interpretation: -

Table.1: Correlation Matrix for Mutual Fund Performance

	Diversification and Asset Allocation	Investment Goals and Objectives	Market Conditions and Economic Environment	Market Timing Ability	Mutual Fund Performance	Risk Tolerance	Time Horizon
Diversification and Asset Allocation	1.000						
Investment Goals and Objectives	0.350*	1.000					
Market Conditions and Economic Environment	0.645*	0.334*	1.000				
Market Timing Ability	0.401*	0.276*	0.557*	1.000			
Mutual Fund Performance	0.507*	0.262*	0.575*	0.620*	1.000		
Risk Tolerance	0.603*	0.282*	0.449*	0.436*	0.678*	1.000	
Time Horizon	0.550*	0.439*	0.628*	0.472*	0.358*	0.481*	1.000

The correlation matrix reveals several key relationships among the variables. Notably, Mutual Fund Performance exhibits a strong positive correlation with Risk Tolerance (r = 0.678), indicating that higher risk tolerance is associated with better mutual fund performance. Market Conditions and Economic Environment show moderate positive correlations with Diversification and Asset Allocation (r = 0.645) and Time Horizon (r = 0.628), suggesting that favorable market conditions enhance diversification strategies and longer investment horizons. Diversification and Asset Allocation also correlate moderately with Risk Tolerance (r = 0.603) and Time Horizon (r = 0.550), indicating these factors are essential for a diversified portfolio. While Investment Goals and Objectives correlate modestly with Time Horizon (r = 0.439), they show weaker correlations with other variables, reflecting a more individualized approach to investment planning. Overall, the data suggest that risk tolerance, market conditions, and diversification are crucial for optimizing mutual fund performance, and these elements interplay significantly with investment strategies and objectives.

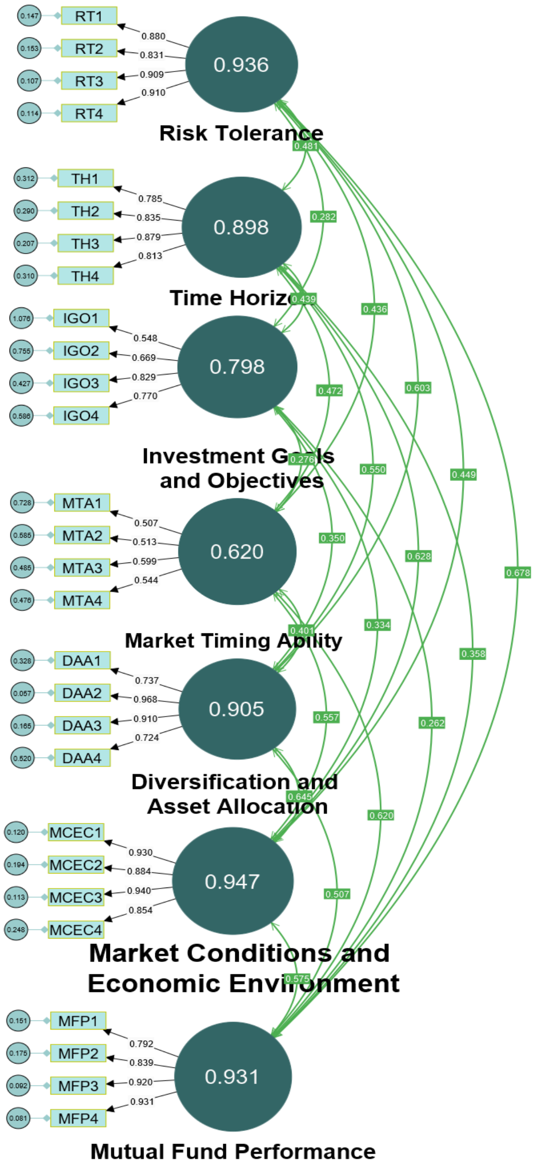
Figure.1: Structural Equation Model for Study Variables of Mutual Fund Perfromance



European Economic Letters
ISSN 2323-5233
Vol 14, Issue 4 (2024)
http://eelet.org.uk

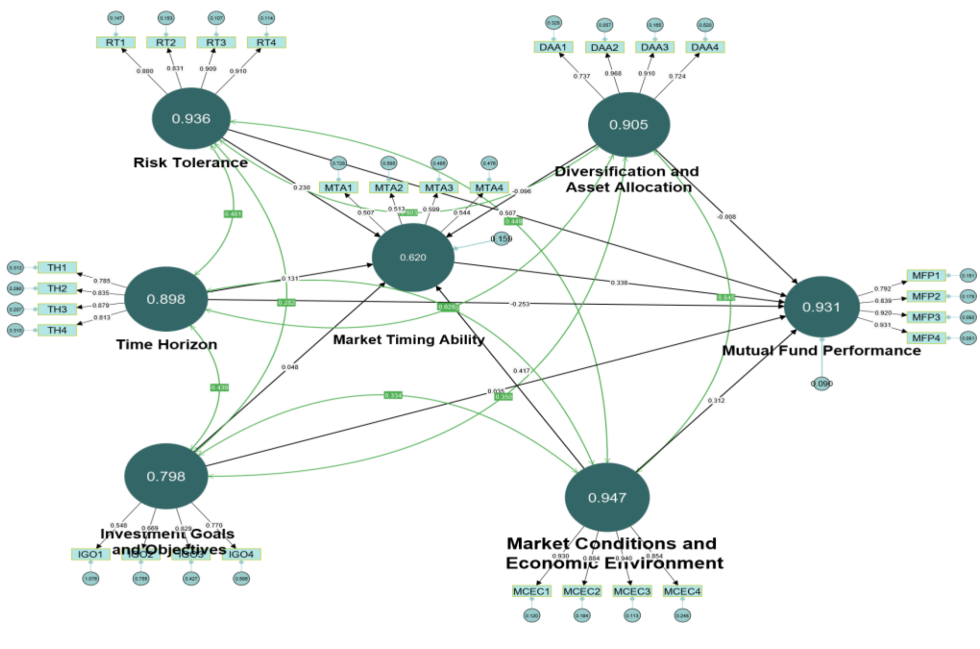
The path coefficients reveal the impact of various factors on Market Timing Ability and Mutual Fund Performance. A one-unit increase in Diversification and Asset Allocation slightly improves Market Timing Ability (0.077 units) but has a minimal effect on Mutual Fund Performance (0.007 units). This suggests that while diversification aids in timing the market, it doesn't directly translate to significant performance gains. Investment Goals and Objectives moderately enhance Market Timing Ability (0.036 units) and Mutual Fund Performance (0.026 units), indicating that clear goals contribute to better timing and performance. Market Conditions and the Economic Environment have a strong influence, increasing Market Timing Ability by 0.239 units and Mutual Fund Performance by 0.180 units, highlighting their critical role in investment success. Market Timing Ability itself significantly boosts Mutual Fund Performance by 0.340 units, emphasizing its importance. Risk Tolerance improves both Market Timing Ability (0.162 units) and Mutual Fund Performance (0.361 units), suggesting that willingness to take risks is beneficial. Finally, Time Horizon increases Market Timing Ability by 0.093 units and Mutual Fund Performance by 0.180 units, indicating that a longer investment period positively affects timing and performance.

Figure.2: Factor Analysis of Mutual Fund Perfromance



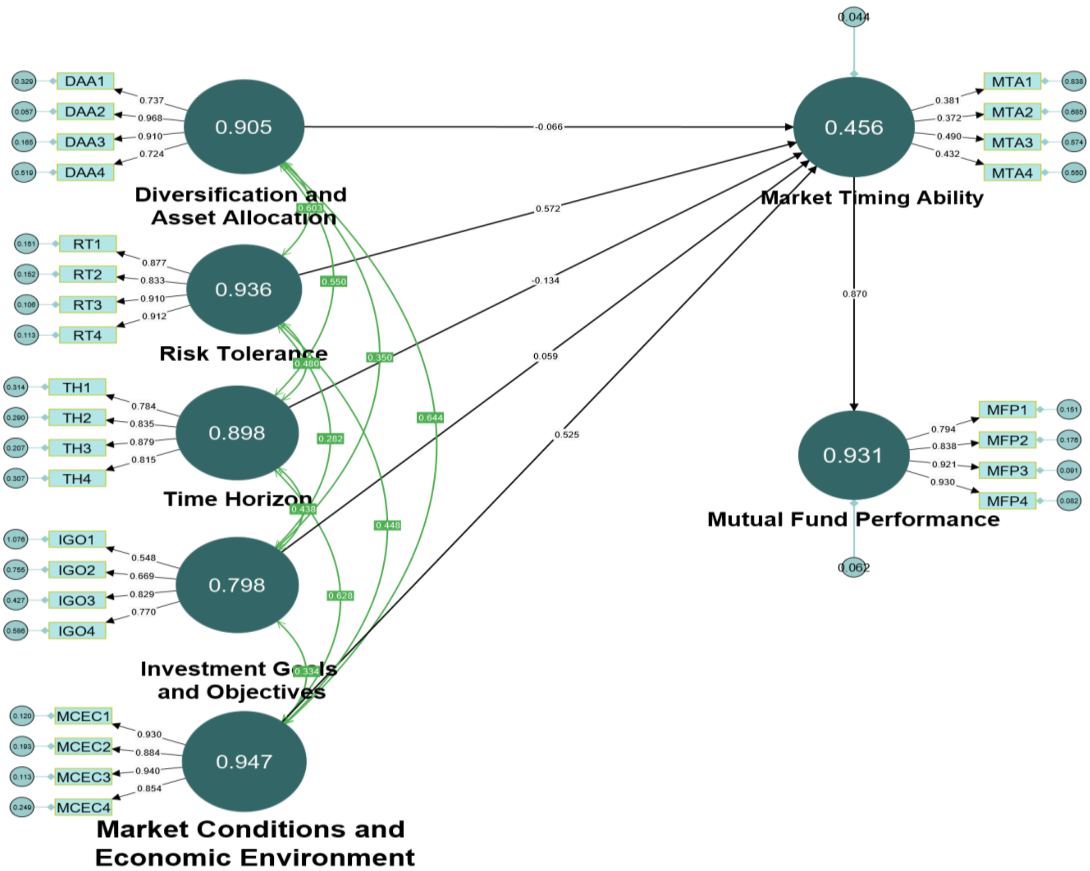
The factor loadings depict the strength and direction of relationships between observed variables and latent factors concerning investment factors. In terms of diversification and asset allocation, DAA1 (0.737), DAA2 (0.968), DAA3 (0.910), and DAA4 (0.724) show positive associations, indicating their significant contribution to representing effective diversification and asset allocation strategies. Investment goals and objectives, represented by IGO1 (0.548), IGO2 (0.669), IGO3 (0.829), and IGO4 (0.770), exhibit positive loadings, suggesting their robust representation of various investment objectives. Market conditions and economic environment are well-captured by MCEC1 (0.930), MCEC2 (0.884), MCEC3 (0.940), and MCEC4 (0.854), indicating strong associations with market dynamics and economic factors. Market timing ability, as indicated by MTA1 (0.507), MTA2 (0.513), MTA3 (0.599), and MTA4 (0.544), demonstrates modest associations, suggesting their representation of an individual's ability to make effective market timing decisions. Mutual fund performance, represented by MFP1 (0.792), MFP2 (0.839), MFP3 (0.920), and MFP4 (0.931), shows strong positive associations, indicating their robust representation of mutual fund performance. Risk tolerance indicators, RT1 (0.880), RT2 (0.831), RT3 (0.909), and RT4 (0.910), exhibit positive loadings, suggesting their robust representation of an individual's risk tolerance levels. Time horizon variables, TH1 (0.785), TH2 (0.835), TH3 (0.879), and TH4 (0.813), also show positive associations, indicating their robust representation of different time horizons for investment planning. The fit indices for the estimated model provide insights into how well the model fits the observed data. The chi-square value of 1472.577 with 329 degrees of freedom and a p-value of 0.000 indicates a statistically significant discrepancy between the model and the observed data, suggesting potential limitations in fit (Bollen & Long, 1993). The ChiSqr/df ratio of 4.476 is above the commonly accepted threshold of 3, further indicating potential shortcomings in fit (Bollen & Long, 1993). The RMSEA value of 0.090 suggests a moderate fit, falling within an acceptable range (Browne & Cudeck, 1993; Steiger, 1990). The GFI and AGFI values of 0.805 and 0.759, respectively, fall below the commonly accepted threshold of 0.90, indicating an inadequate fit (Hair et al., 2013; Jöreskog & Sörbom, 1993). The PGFI value of 0.652 suggests a moderate fit (Mulaik et al., 1989). The SRMR value of 0.059 falls within the acceptable range, indicating a relatively good fit (Hu & Bentler, 1999). The NFI, TLI, and CFI values of 0.855, 0.866, and 0.883, respectively, are slightly below the preferred threshold of 0.90, suggesting potential areas for improvement (Bentler, 1980; Tucker & Lewis, 1973; Bentler, 1990). The AIC and BIC values of 1626.577 and 1939.846, respectively, provide metrics for model comparison, with lower values suggesting better fit. However, without a comparative model, these values alone do not determine the adequacy of fit (Akaike, 1974; Schwarz, 1978). Overall, the model demonstrates moderate fit with potential for enhancement in various areas.

Figure.3: Structural Equation Model for Study Variables of Mutual Fund Performance, AVE, GFI and AGFI



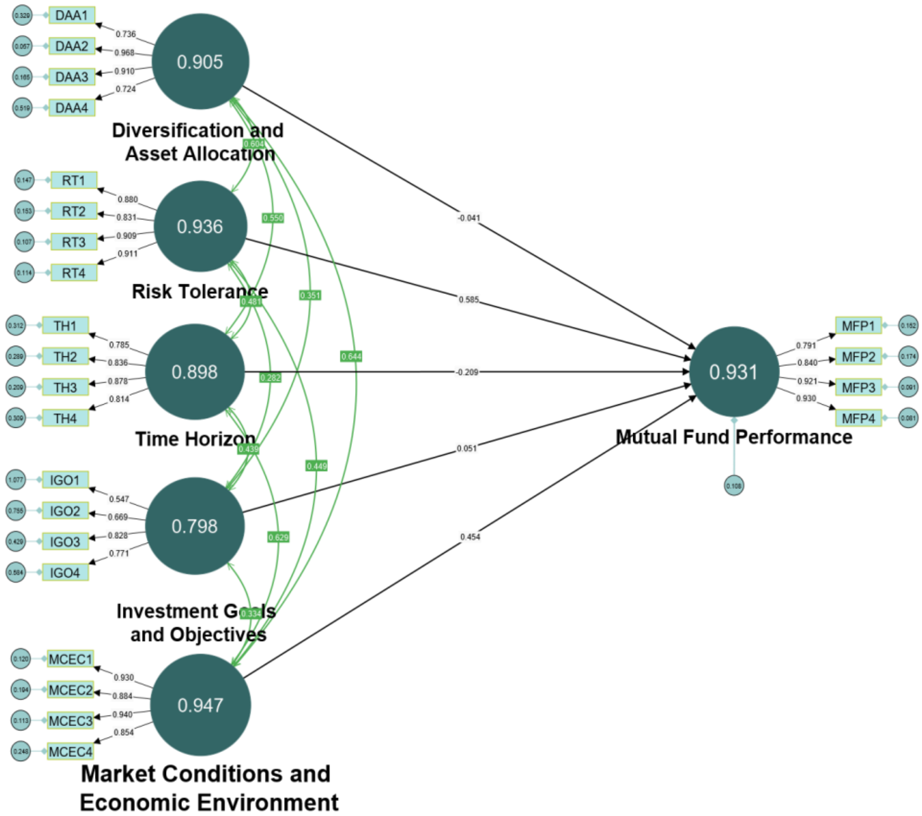
The estimated model statistics indicate the overall fit of the structural equation model. The chi-square value (1472.577) with a p-value of 0.000 suggests a significant difference between the observed and model-implied covariance matrices, indicating a poor fit (Bollen & Long, 1993). The chi-square to degrees of freedom ratio (4.476) exceeds the acceptable threshold of 3, further indicating an inadequate fit (Bollen & Long, 1993). The Root Mean Square Error of Approximation (RMSEA) is 0.090, suggesting a poor fit as values above 0.08 indicate a less satisfactory model (Browne & Cudeck, 1993; Steiger, 1990). The Goodness of Fit Index (GFI) is 0.805, and the Adjusted GFI (AGFI) is 0.759, both below the acceptable threshold of 0.90 (Hair et al., 2013; Jöreskog & Sörbom, 1993). The Parsimony GFI (PGFI) of 0.652 is above the threshold of 0.50, indicating an acceptable fit (Mulaik et al., 1989). The Standardized Root Mean Square Residual (SRMR) of 0.059 is within the acceptable range, indicating a reasonable fit (Hu & Bentler, 1999). However, the Normed Fit Index (NFI) of 0.855, Tucker-Lewis Index (TLI) of 0.866, and Comparative Fit Index (CFI) of 0.883 are all below the preferred threshold of 0.90, suggesting that the model is moderate fit (Bentler, 1980; Tucker & Lewis, 1973; Bentler, 1990). Finally, the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) values are 1626.577 and 1939.846, respectively, with smaller values indicating better fit, which can be useful for model comparison (Akaike, 1974; Schwarz, 1978). The R-squared values indicate the proportion of variance explained by the independent variables in the model. In this case, the R-squared value for Market Timing Ability is 0.370, which means that 37% of the variance in Market Timing Ability is explained by the predictors in the model. Similarly, the R-squared value for Mutual Fund Performance is 0.647, indicating that 64.7% of the variance in Mutual Fund Performance is explained by the predictors. These values suggest a moderate explanatory power of the model for Market Timing Ability and a strong explanatory power for Mutual Fund Performance.

Figure.4: Structural Equation Model for Study Variables of Mutual Fund Performance, AVE, GFI and AGFI (In-Direect Effect)



The structural equation model's fit indices provide insights into how well the model represents the observed data. The chi-square value of 1557.497 with 72 parameters and an associated p-value of less than 0.05 indicates a statistically significant discrepancy between the model and the observed data, suggesting that the model does not fit the data well (Bollen & Long, 1993). The RMSEA value of 0.092 is above the acceptable threshold of 0.08, indicating a poor fit (Browne & Cudeck, 1993; Steiger, 1990). The GFI and AGFI values are 0.797 and 0.754, respectively, which are below the commonly accepted thresholds of 0.90, indicating moderate fit (Hair et al., 2013; Jöreskog & Sörbom, 1993). The PGFI value of 0.656 is above the threshold of 0.50, suggesting a reasonable fit on this criterion alone (Mulaik et al., 1989). The SRMR value of 0.065 is within the acceptable range of less than 0.08, indicating a good fit for this particular index (Hu & Bentler, 1999). The NFI (0.847), TLI (0.859), and CFI (0.875) values are all below the preferred threshold of 0.90, suggesting that the model is moderate fit (Bentler, 1980; Tucker & Lewis, 1973; Bentler, 1990). Finally, the AIC and BIC values are 1701.497 and 1994.424, respectively. These values are useful for model comparison, with lower values indicating a better fit. However, without a comparative model, these values alone do not indicate the adequacy of fit (Akaike, 1974; Schwarz, 1978). The given R2 values for Market Timing Ability (0.687) and Mutual Fund Performance (0.757) indicate the proportion of variance explained by the respective regression models. Specifically, an R2 of 0.687 suggests that 68.7% of the variability in market timing ability is accounted for by the model, highlighting a strong relationship between the independent variables and market timing ability. Similarly, an R2 of 0.757 implies that 75.7% of the variability in mutual fund performance is explained by the model, demonstrating a robust fit. Both values reflect substantial explanatory power, with the mutual fund performance model showing a slightly higher level of predictability.

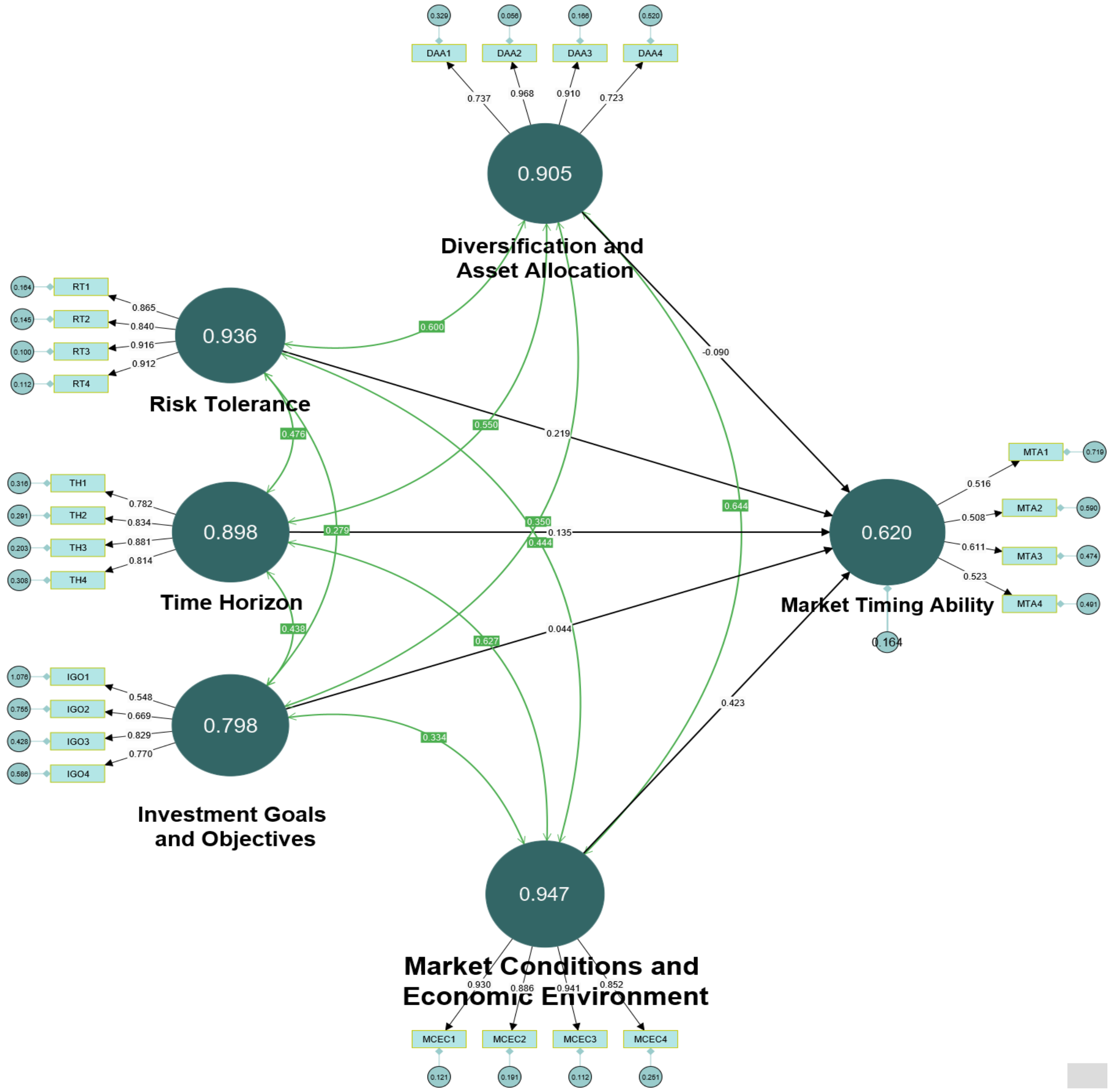
Figure.5: Structural Equation Model for Study Variables of Mutual Fund Performance, AVE, GFI and AGFI (Direct Effect)



The fit indices of the structural equation model provide valuable insights into its adequacy in representing the observed data. The chi-square value of 1141.165 with 63 parameters and an associated p-value (not provided) likely indicates a statistically significant discrepancy between the model and the data, suggesting potential limitations in fit (Bollen & Long, 1993). The ChiSqr/df ratio of 4.815 is above the threshold of 3, further indicating potential shortcomings in fit (Bollen & Long, 1993). The RMSEA value of 0.094 exceeds the acceptable threshold of 0.08, implying suboptimal fit

(Browne & Cudeck, 1993; Steiger, 1990). The GFI and AGFI values of 0.818 and 0.769, respectively, fall below the commonly accepted threshold of 0.90, suggesting inadequate fit (Hair et al., 2013; Jöreskog & Sörbom, 1993). The PGFI value of 0.646 indicates a potential limitation in fit (Mulaik et al., 1989). The SRMR value of 0.059 falls within the acceptable range, suggesting a relatively good fit (Hu & Bentler, 1999). The NFI, TLI, and CFI values of 0.880, 0.886, and 0.902, respectively, are slightly below the preferred threshold of 0.90, indicating potential areas for development (Bentler, 1980; Tucker & Lewis, 1973; Bentler, 1990). The AIC and BIC values of 1267.165 and 1523.476, respectively, provide useful metrics for model comparison, with lower values suggesting better fit (Akaike, 1974; Schwarz, 1978). The R2 value of 0.575 for Mutual Fund Performance indicates that 57.5% of the variability in mutual fund performance can be explained by the independent variables in the regression model. In simpler terms, the factors considered in the model, such as market conditions, investment strategies, or fund characteristics, collectively account for about 57.5% of the observed changes in mutual fund performance.

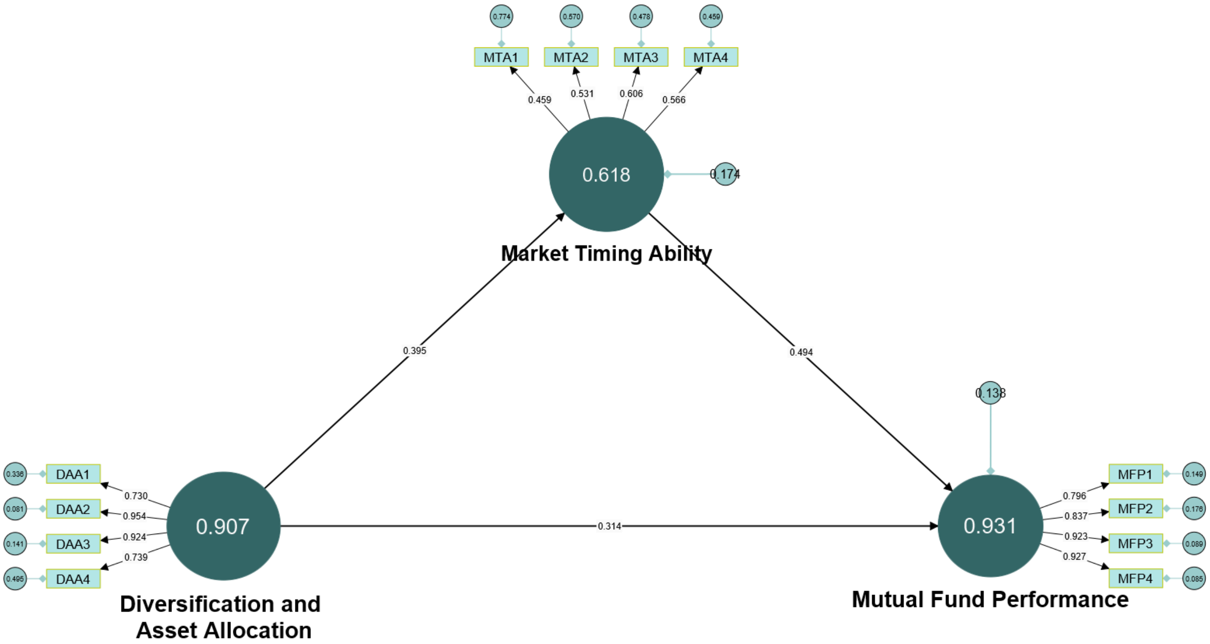
Figure.6: Structural Equation Model for Study Variables of Mutual Fund Performance, AVE, GFI and AGFI (Mediator as Dependent)



European Economic Letters
ISSN 2323-5233
Vol 14, Issue 4 (2024)
http://eelet.org.uk

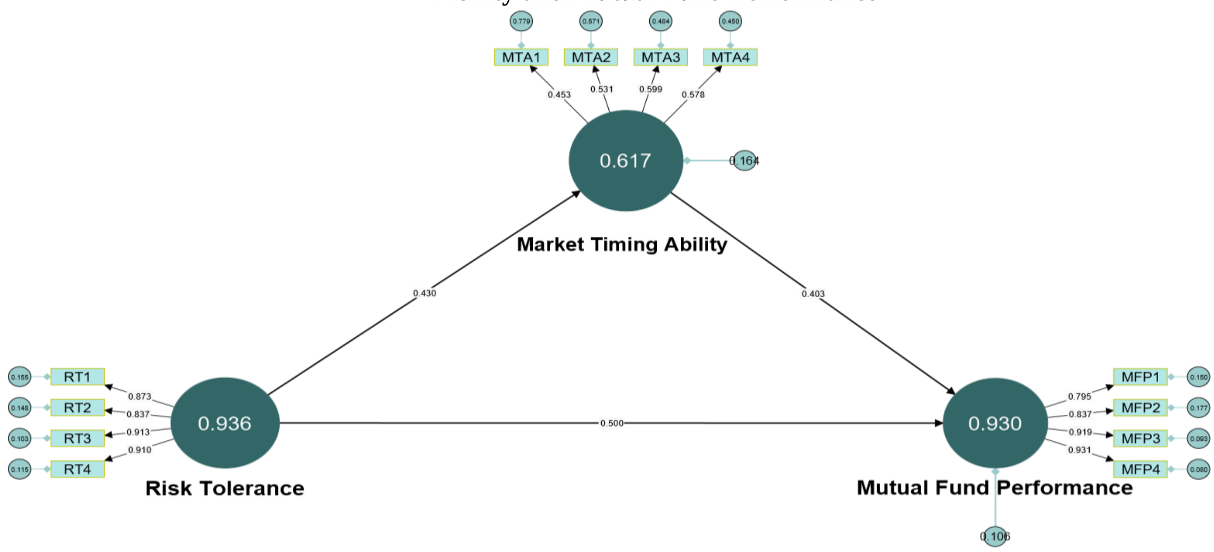
The fit indices for the estimated model provide insights into how well the model represents the observed data. The chi-square value of 1073.681 with a ChiSqr/df ratio of 4.530 indicates a statistically significant discrepancy between the model and the observed data, which is expected given the sample size (Bollen & Long, 1993). The RMSEA value of 0.090 suggests a moderate fit, falling within an acceptable range (Browne & Cudeck, 1993; Steiger, 1990). The GFI and AGFI values of 0.823 and 0.776, respectively, while slightly below the commonly accepted threshold of 0.90, still indicate a reasonable fit (Hair et al., 2013; Jöreskog & Sörbom, 1993). The PGFI value of 0.650 suggests a moderate fit (Mulaik et al., 1989). The SRMR value of 0.064 falls within the acceptable range, indicating a relatively good fit (Hu & Bentler, 1999). The NFI, TLI, and CFI values of 0.866, 0.874, and 0.892, respectively, are slightly below the preferred threshold of 0.90, suggesting potential areas for improvement (Bentler, 1980; Tucker & Lewis, 1973; Bentler, 1990). The AIC and BIC values of 1199.681 and 1455.991, respectively, provide metrics for model comparison, with lower values indicating better fit. However, without a comparative model, these values alone do not determine the adequacy of fit (Akaike, 1974; Schwarz, 1978). Overall, the model demonstrates moderate to good fit, with some room for enhancement in certain areas.

Figure.7: Linkage among Diversification and Asset Allocation, Market Timing Ability and Mutual Fund Performance



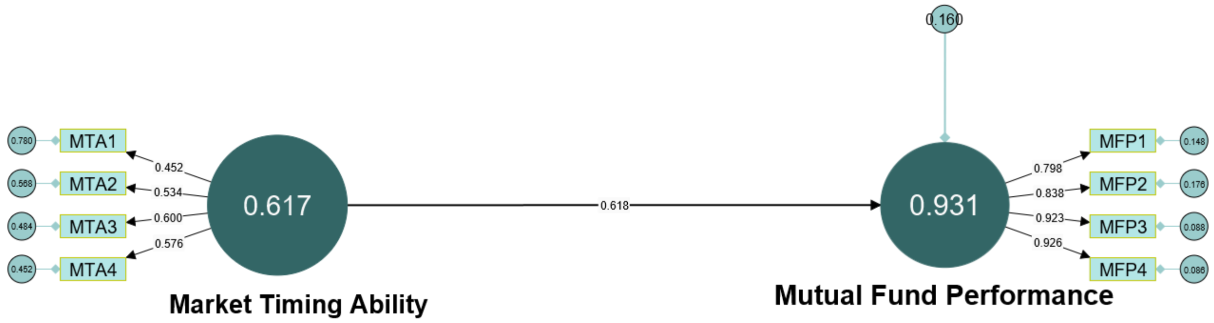
The fit indices for the estimated model indicate a strong fit to the data. The chi-square value of 140.455 with a ChiSqr/df ratio of 2.754 suggests a good fit, given that it is below the commonly accepted threshold of 3 (Bollen & Long, 1993). The RMSEA value of 0.064 is below the recommended threshold of 0.08, indicating a reasonable fit (Browne & Cudeck, 1993; Steiger, 1990). The GFI and AGFI values of 0.951 and 0.925, respectively, are above the preferred threshold of 0.90, suggesting a strong fit (Hair et al., 2013; Jöreskog & Sörbom, 1993). The PGFI value of 0.622 suggests a moderate fit (Mulaik et al., 1989). The SRMR value of 0.034 is well below the acceptable threshold of 0.08, indicating a very good fit (Hu & Bentler, 1999). The NFI, TLI, and CFI values of 0.956, 0.963, and 0.972, respectively, are all above the preferred threshold of 0.90, further indicating a strong fit (Bentler, 1980; Tucker & Lewis, 1973; Bentler, 1990). Finally, the AIC and BIC values of 194.455 and 304.302, respectively, provide metrics for model comparison, with lower values suggesting better fit. Overall, the model demonstrates a strong fit to the data across various fit indices.

Figure.8: Linkage among Diversification and Asset Allocation, Market Timing Ability and Mutual Fund Performance



The fit indices for the estimated model provide insight into how well the model fits the observed data. The chi-square value of 280.390 with a ChiSqr/df ratio of 5.498 indicates a statistically significant discrepancy between the model and the observed data, which is expected given the sample size (Bollen & Long, 1993). The RMSEA value of 0.102 exceeds the generally accepted threshold of 0.08, suggesting a less-than-optimal fit (Browne & Cudeck, 1993; Steiger, 1990). The GFI and AGFI values of 0.903 and 0.852, respectively, fall slightly below the commonly accepted threshold of 0.90, indicating a relatively good but not ideal fit (Hair et al., 2013; Jöreskog & Sörbom, 1993). The PGFI value of 0.590 suggests a moderate fit (Mulaik et al., 1989). The SRMR value of 0.051 falls within the acceptable range, indicating a relatively good fit (Hu & Bentler, 1999). The NFI, TLI, and CFI values of 0.924, 0.918, and 0.936, respectively, are slightly below the preferred threshold of 0.90, suggesting potential areas for improvement (Bentler, 1980; Tucker & Lewis, 1973; Bentler, 1990). The AIC and BIC values of 334.390 and 444.238, respectively, provide metrics for model comparison, with lower values indicating better fit. However, without a comparative model, these values alone do not determine the adequacy of fit (Akaike, 1974; Schwarz, 1978). Overall, the model demonstrates moderate to good fit, with some potential for enhancement in certain areas

Figure.9: Linkage between Market Timing Ability and Mutual Fund Perfromance



The fit indices for the estimated model suggest a good fit to the data. The chi-square value of 76.881 with a ChiSqr/df ratio of 4.046 indicates a reasonable fit, as it falls below the commonly accepted threshold of 5 (Bollen & Long, 1993). The RMSEA value of 0.084 is slightly above the preferred threshold of 0.08 but still suggests a reasonably good fit (Browne & Cudeck, 1993; Steiger, 1990). The GFI and AGFI values of 0.960 and 0.925, respectively, are both above the commonly accepted threshold of 0.90, indicating a strong fit (Hair et al., 2013; Jöreskog & Sörbom, 1993). The PGFI value of 0.507 suggests a moderate fit (Mulaik et al., 1989). The SRMR value of 0.034 is well below the acceptable threshold of 0.08, indicating a very good fit (Hu & Bentler, 1999). The NFI, TLI, and CFI values of 0.957, 0.951, and 0.967, respectively, are all above the preferred threshold of 0.90, further indicating a strong fit (Bentler, 1980; Tucker &

Lewis, 1973; Bentler, 1990). Finally, the AIC and BIC values of 110.881 and 180.045, respectively, provide metrics for model comparison, with lower values suggesting better fit. Overall, the model demonstrates a strong fit to the data across various fit indices.

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