

The Effect of Managerial Overconfidence on Firm Performance in Emerging Market Asia

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Abstract

CEO Overconfidence plays an important role in determining company performance, especially in the Emerging Market Asia period 2010-2019 in the manufacturing, energy, health, and technology sectors. This study uses secondary data taken from Refinitiv Eikon Financial Analysis. This study aims to determine the effect of managerial overconfidence on company performance as proxied by Return on Asset (ROA), Tobin's Q, and Debt to Equity Ratio (DER). This study uses the Principal Component Analysis (PCA) technique and panel data regression. The results of the study indicate that managerial overconfidence has a significant effect on ROA. However, managerial overconfidence does not have a significant effect on Tobin's Q and DER. This explains that managerial overconfidence can directly affect company performance.

Keywords *Managerial Overconfidence, Return On Asset, Tobin's Q, Debt to Equity Ratio, Principle Component Analysis.*

INTRODUCTION

The current business conditions full of uncertainty and vulnerability due to the COVID-19 pandemic have forced CEOs and their management teams to manage company performance as optimally as possible (McKinsey, 2023). At the same time, this condition requires the management team to have high self-confidence in order to mitigate the various risks that arise effectively and efficiently (Kunz & Sonnenholzner, 2023). The consequences of the challenges faced require the management team to improve the company's performance by actively innovating so that the company can compete in an ever-changing environment (Taouab & Issor, 2019).

Overconfidence is one of the CEO attributes that has received a lot of attention from experts because it can affect the CEO's ability to make decisions (Heavey et al., 2022). Self-confidence is an important characteristic because to some extent it can help run a company successfully (Johnson & Fowler, 2011). However, if this self-confidence turns into overconfidence, which refers to being more confident than is justified by reality. (Chen et al., 2019) and causes individuals to overestimate their performance and the accuracy of their predictions (Gutierrez et al., 2020), then there will be significant consequences for the company's performance (Malmendier & Tate, 2015). Thus, the attribute of overconfidence has a major impact on the determination and implementation of corporate strategy (Huang et al., 2022). This business phenomenon has prompted a great deal of research into the impact of CEO overconfidence on strategic risk setting (Burkhard, 2022).

Company performance is the main criteria in determining success in achieving company goals (Quigley & Graffin, 2017). Company performance must be optimized effectively and efficiently because performance is a measure of the company's success which will be the initial part seen by investors and become a consideration in decision making



(Pranata et al., 2019). Performance assessment is reflected in the form of corporate responsibility and corporate obligations in reporting performance and performance achievements on the use of resources (Hastuti, 2018). The structure and development of a company that can increase the success of a company is also influenced by the company's performance (Azizah & Amin, 2020).

Overconfidence bias causes CEOs to consider very high probabilities of their success. Overconfidence bias also distorts capital structure decisions (Chen et al., 2014). The amount of debt borrowed, the choice of short-term or long-term debt, and the choice between equity, debt, or cash are affected by the presence of overconfidence among CEOs. Researchers in behavioral corporate finance have documented that for a given level of investment needs, the sensitivity of investment cash flows is much higher for overconfident CEOs than for rational CEOs (Malmendier & Tate, 2015).

According to Kharas and Maddison (2017) in the McKinsey Global Institute Cityscope 2.0, emerging markets will drive global growth over the next 20 years. By 2025, global consumption as a whole is expected to reach \$62 trillion, double the 2013 level, and half of this increase will come from developing countries. By 2025, that number will increase to more than half. Taking into account population growth, there will be an additional 1.8 billion consumers, most of whom will live in developing regions.

According to the OECD Emerging Markets Network Report (2023), the global economy is expected to remain sluggish due to a variety of factors, including Russia's full-scale invasion of Ukraine, persistent supply chain bottlenecks, inflationary pressures, tighter monetary policy and rising risk perceptions. Global GDP growth is projected to decline from 5.9 percent in 2021 to 3.2 percent in 2022, and further to 2.6 percent in 2023. In Figure 1.2, Developing Asia consists of China, India, Indonesia, Hong Kong, Malaysia, Taiwan, the Philippines, Singapore, Thailand and Vietnam.

Until now, there are still differences in research results regarding the influence of managerial overconfidence on company performance. Several researchers such as Burkhard et al. (2022), Mundi and Kaur (2019) found that managerial overconfidence has a significant effect on company performance. While other researchers such as Candy and Delfina (2023) did not find a significant effect of managerial overconfidence on company performance. The existence of this research gap provides an opportunity for the author to further research the effect of managerial overconfidence on company performance.

METHOD

In research, data plays an important role in determining the design and analyzing research because data is the main input used and processed. The source and type of data in this study are secondary data. Secondary data is a data source that does not directly provide data to data collectors, for example through other people or documents (Sugiyono, 2019). The research data used is a combination of cross-section and time series data of energy, health, manufacturing, and technology companies in Emerging Market Asia from 2010 to 2019 obtained from Refinitiv Eikon. This study took a population of 10 companies from

each sector that had the largest capitalization from each country in the Emerging Market Asia region. The observation data in this study amounted to 2,010 data.

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistics are conducted to see the picture of the research variable values by looking at the mean, standard deviation, minimum and maximum data values for each research variable, as seen in the table below.

Table 1. Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation	Variance
ROA	-0.822	1,959	0.086	0.115	0.013
TQ	0.000	1,796	0.224	0.485	0.238
DER	0.000	1,981	0.902	0.305	0.093
MO	-0.524	2.425	0.168	0.139	0.019

From Table 1, it can be seen that the Return On Assets (ROA) variable has an average value of 0.086, lower than the standard deviation of 0.115, with a minimum value of -0.822 and a maximum value of 1.959.

The Tobins'Q variable has an average value of 0.224, lower than the standard deviation of 0.485, with a minimum value of 0.000 and a maximum value of 1.796.

The Debt to Equity Ratio (DER) variable has an average value of 0.902, which is greater than the standard deviation of 0.305, with a minimum value of 0.000 and a maximum value of 1.981.

The Managerial Overconfidence variable has an average value of 0.168, which is greater than the standard deviation of 0.139, with a minimum value of -0.524 and a maximum value of 2.425.

The Result of Composite Index

The results of the composite index on managerial overconfidence are used to measure the weighting of the sub-variables, reinvestment rate, dividend retention ratio, and return on investment capital.

Table 2. Composite Index of Managerial Overconfidence

Eigenvalues: (Sum = 3, Average = 1)					
Number	Value	Difference	Proportion	Cumulative Value	Cumulative Proportion
RR	1.760006	0.728455	0.5867	1.760006	0.5867
DRR	1.031551	0.823108	0.3439	2.791557	0.9305
ROIC	0.208443	---	0.0695	3.000000	1.0000



In Table 2, it can be seen that the proportion of the managerial overconfidence sub-variable, namely the reinvestment rate variable, is 0.5867, while the dividend retention ratio variable is 0.3439, and the return on investment capital is 0.0695.

The Panel Data Analysis Techniques

1. The Influence of Managerial Overconfidence on Company Performance (ROA)

The following are the results of the test model of the influence of managerial overconfidence on company performance (ROA).

Table 3. Chow Test

Redundant Fixed Effects Tests
 Equation: Untitled
 Test period fixed effects

Effects Test	Statistics	df	Prob.
Period F	4.991784	(9,1990)	0.0000
Period Chi-square	44.872939	9	0.0000

Based on the table above, it appears that the chi-square prob. value for the Chow test estimation result is 0.000. Since the chi-square prob. value < 0.05 , it can be concluded that the model used is the Fixed Effect model.

Table 4. Hausman test

Correlated Random Effects - Hausman Test
 Equation: Untitled
 Cross-section random effects test

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross section	45.243900	5	0.0000

Based on the output table above, it can be seen that the chi-square probability value for the Hausman test estimation results is 0.0000. Because the chi-square prob. value < 0.05 , it can be concluded that the approach uses Fixed Effect.

2. The Influence of Managerial Overconfidence on Company Performance (Tobin's Q)

The following are the results of the test model of the influence of managerial overconfidence on company performance (Tobin's Q).

Table 5. Chow Test

Redundant Fixed Effects Tests

Equation: Untitled

Test period fixed effects

Effects Test	Statistics	df	Prob.
Period F	0.368068	(9,1990)	0.9505
Period Chi-square	3.343125	9	0.9491

Based on the table above, it appears that the chi-square prob. value for the Chow test estimation result is 0.9491. Since the chi-square prob. value is > 0.05 , it can be concluded that the model used is the Random Effect model.

Table 6. Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects

Null hypothesis: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided

(all others) alternatives

	Hypothesis Testing		
	Cross section	Time	Both
Breusch Pagan	4525.581 (0.0000)	2.294114 (0.1299)	4527.875 (0.0000)

Based on the output table above, it can be seen that the chi-square probability value for the test estimation results *Lagrange Multiplier* The Breusch Pagan method is as big as 0.0000. Since the chi-square probability value < 0.05 , it can be concluded that the approach uses random effects.

3. The Influence of Managerial Overconfidence on Company Performance (DER)

The following are the results of the test model of the influence of managerial overconfidence on company performance (DER).

Table 7. Chow Test

Redundant Fixed Effects Tests

Equation: Untitled

Test period fixed effects

Effects Test	Statistics	df	Prob.
Period F	0.444820	(9,1990)	0.9110



Period Chi-square	4.039553	9	0.9088
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Based on the table above, it appears that the chi-square prob. value for the Chow test estimation result is 0.9088. Since the chi-square prob. value is > 0.05 , it can be concluded that the model used is the Random Effect model.

Table 8. Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects

Null hypothesis: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Hypothesis Testing		
	Cross section	Time	Both
Breusch Pagan	2359.559 (0.0000)	1.903923 (0.1676)	2361.463 (0.0000)

Based on the output table above, it can be seen that the chi-square prob. value for the Lagrange Multiplier test estimation results of the Breusch Pagan method is 0.0000. Because the chi-square prob. value < 0.05 , it can be concluded that the approach uses random effects.

Hypothesis Testing

1. The Influence of Managerial Overconfidence on Company Performance (ROA)

The following are the results of the hypothesis test and analysis of the coefficient of determination of the influence of managerial overconfidence on company performance (ROA).

Table 9. Hypothesis Testing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.863634	1.769252	-5.009821	0.0000
MO	0.015438	0.003492	4.421409	0.0000
Age	0.036483	0.014109	2.585894	0.0098
Gender	-1.283317	0.494383	-2.595797	0.0095
Tenure	-0.027480	0.011650	-2.358733	0.0184
Education	-0.096753	0.179723	-0.538342	0.5904
Founding_Family	-1.011442	0.472572	-2.140291	0.0325

Ethnicity	-0.026823	0.025010	-1.072485	0.2836
FS	1.488430	0.171831	8.662193	0.0000
US	2.75E-05	1.26E-05	2.176876	0.0296
SG	0.000518	0.000911	0.568407	0.5698
CA	1.69E-08	6.52E-09	2.596058	0.0095
FE	1.566827	0.291620	5.372837	0.0000
Compensation	-8.45E-07	1.00E-07	-8.416185	0.0000
IY	-7.15E-05	0.000162	-0.440848	0.6594

Based on the table above, it can be concluded that the variables *Managerial Overconfidence* has a probability value $(0,000) < 0.05$, then H_0 is rejected. Therefore, it can be concluded that there is a significant influence of Managerial Overconfidence on Company Performance (ROA).

Table 10. Analysis of Determination Coefficient

R-squared	0.073305	Mean dependent variable	1.999980
Adjusted R-squared	0.068669	SD dependent var	5.435176
SE of regression	5.245242	Akaike information criterion	6.157978
Sum squared residual	54997.62	Black criterion	6.188657
Log likelihood	-6177.767	Hannan-Quinn critter.	6.169239
F-statistic	15.81282	Durbin-Watson stat	0.370671
Prob(F-statistic)	0.000000		

Based on the table above, it can be seen that the Adjusted R2 value is 0.0686. So it can be concluded that the contribution of all independent variables in explaining the dependent variable is 6.86% while the remaining 93.14% is explained by other variables outside the model.

2. The Influence of Managerial Overconfidence on Company Performance (Tobin's Q)

The following are the results of the hypothesis test and analysis of the coefficient of determination of the influence of managerial overconfidence on company performance (Tobin's Q).



Table 11. Hypothesis Testing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-488.6900	51.48169	-9.492500	0.0000
MO	0.015718	0.026391	0.595596	0.5515
Age	-0.138042	0.313530	-0.440282	0.6598
Gender	-30.82440	17.51861	-1.759523	0.0786
Tenure	0.897232	0.389617	2.302856	0.0214
Education	9.803761	6.456556	1.518420	0.1291
Founding_Family	-6.883764	17.10096	-0.402537	0.6873
Ethnicity	9.550636	0.885048	10.79109	0.0000
FS	-1.970544	3.616773	-0.544835	0.5859
US	-0.000183	0.000149	-1.223325	0.2214
SG	-0.006923	0.006779	-1.021165	0.3073
CA	-3.44E-08	7.66E-08	-0.449455	0.6532
FE	-5.833317	10.17575	-0.573257	0.5665
Compensation	-2.14E-07	1.26E-06	-0.169506	0.8654
IY	-0.002516	0.005950	-0.422812	0.6725

Based on the table above, it can be concluded that the variables *Managerial Overconfidence* has a probability value (0.5515) > 0.05, then H_0 is accepted. Therefore, it can be concluded that there is no significant influence of Managerial Overconfidence on Company Performance (Tobin's Q).

Table 12. Analysis of Determination Coefficient

R-squared	0.069971	Mean dependent variable	0.3073
Adjusted R-squared	0.063252	SD dependent var	63
SE of regression	35.86961	Sum squared residual	37.061
			15
			249348
			6.

F-statistic	10.41467	Durbin-Watson stat	1.0644
Prob(F-statistic)	0.000000		65

Based on Table 12, it can be seen that the Adjusted R2 value is 0.0632. So it can be concluded that the contribution of all independent variables in explaining the dependent variable is 6.32% while the remaining 93.68% is explained by other variables outside the model.

3. The Influence of Managerial Overconfidence on Company Performance (DER)

The following are the results of the hypothesis test and analysis of the coefficient of determination of the influence of managerial overconfidence on company performance (DER).

Table 13. Hypothesis Testing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.996370	79.16129	-0.088381	0.9296
MO	0.053900	0.058566	0.920326	0.3575
Age	1.201330	0.551837	2.176965	0.0296
Gender	9.522962	25.81864	0.368841	0.7123
Tenure	-0.139886	0.587008	-0.238304	0.8117
Education	17.15728	9.501943	1.805660	0.0711
Founding_Family	-6.343309	25.10540	-0.252667	0.8006
Ethnicity	2.610223	1.304978	2.000204	0.0456
FS	-32.10303	6.446401	-4.979993	0.0000
US	-0.000472	0.000317	-1.488386	0.1368
SG	-0.012644	0.015057	-0.839770	0.4011
CA	-2.52E-07	1.62E-07	-1.558127	0.1194
FE	-19.59968	15.25602	-1.284718	0.1990
Compensation	4.58E-06	2.63E-06	1.744344	0.0813
IY	-0.005109	0.008721	-0.585778	0.5581



Based on Table 13 it can be concluded that the variables *Managerial Overconfidence* has a probability value $(0.3575) > 0.05$, then H_0 is accepted. Therefore, it can be concluded that there is no significant influence of Managerial Overconfidence on Company Performance (DER).

Table 14. Analysis of Determination Coefficient

		Mean dependent variable	0.4479
R-squared	0.023015		86
Adjusted R-squared	0.015958	SD dependent var	80.904
			18
SE of regression	80.25599	Sum squared residual	124827
			03
F-statistic	3.261030	Durbin-Watson stat	0.8485
Prob(F-statistic)	0.000037		67

Based on Table 14, it can be seen that the Adjusted R² value is 0.0159. So it can be concluded that the contribution of all independent variables in explaining the dependent variable is 1.59% while the remaining 98.41% is explained by other variables outside the model.

Discussion of The Influence of Managerial Overconfidence on Firm Performance

1. The Influence of Managerial Overconfidence on Company Performance (ROA)

This study shows a positive influence between Managerial Overconfidence and company performance as measured by Return On Asset. This shows that biases and heuristics can produce acceptable solutions to problems in an effective and efficient manner (Busenitz & Barney, 1997) and help CEOs manage unpredictable and complex situations (Simon et al., 2000). Such processes are essential for making strategic decisions, which are often difficult, urgent, and full of uncertainty (Artinger et al., 2015). The results of this study are supported by several previous studies that also found a positive effect between managerial overconfidence and ROA (Chen et al., 2015; Picone et al., 2014; Reyes et al., 2020).

Basically, the conventional perspective in BDT highlights the detrimental consequences of CEO overconfidence on strategic choices, thus negatively impacting organizational performance. On the other hand, new advances in BDT suggest that CEO overconfidence can help in strategic choices, thus improving firm performance especially ROA.

2. The Influence of Managerial Overconfidence on Company Performance (Tobin's Q)

This study shows that there is no influence between Managerial Overconfidence on company performance as measured by Tobin's Q. This shows that CEO Overconfidence does not have a direct influence on company performance, especially on Tobin's Q (Sumunar & Djakman, 2020). This occurs because there are other influencing factors, such as company size, asset growth, and sales growth of a company. Thus, overconfidence can result in strategic assessments that are not well thought out and are not appropriate. The results of this study are supported by several previous studies also found that there was no influence between managerial overconfidence and Tobin's Q (Malmendier & Tate, 2008; Park et al., 2018; Pavićević & Keil, 2021).

3. The Influence of Managerial Overconfidence on Company Performance (DER)

This study shows that there is no influence between Managerial Overconfidence on company performance as measured by the Debt to Equity Ratio. This shows that companies that have overconfident managers tend to have lower debt levels (Ting et al., 2016). This happens because overconfident CEOs assume that new projects will increase the value of the company so they will choose to reduce debt levels. In addition, there are other factors such as education which show that the higher the level of education, the more knowledge they have, making them more careful and more rational. Rational CEOs prefer equity as their source of financing. The results of this study are supported by several previous studies also found that there was no influence between managerial overconfidence and DER (Murhadi, 2018; Park et al., 2018).

Several studies in the last decade have focused on debt conservatism by analyzing CEO behavior. Sunder et al. (2010) study how overconfidence among executives affects debt covenant formulation. They find that firms run by overconfident CEOs prefer conservative debt-raising policies and suggest that appropriate debt covenant formulation can mitigate overconfidence among CEOs. Malmendier et al. (2015) suggest that overconfident CEOs issue debt conservatively relative to the tax benefits available. Huang-Meier et al. (2016) document evidence of debt conservatism by optimistic CEOs. They suggest that debt conservatism is unrelated to cash holdings.

CONCLUSION

This study examines the influence of Managerial Overconfidence on Company Performance in the period 2010-2019, so the following conclusions can be drawn:

1. *Managerial Overconfidence* has a significant influence on Company Performance (ROA) in the Emerging Market Asia region in the 2010-2019 period.
2. *Managerial Overconfidence* does not have a significant influence on Company Performance (Tobin's Q) in the Emerging Market Asia region in the 2010-2019 period.
3. *Managerial Overconfidence* does not have a significant influence on Company Performance (DER) in the Emerging Market Asia region in the 2010-2019 period.



REFERENCES

- Abdul, S., Bala, R., & Auwal Babangida, M. (2022). Capital Structure and Financial Performance of Quoted Deposit Money Banks (DMBs) in Nigeria. *Asian Journal of Economics, Business and Accounting*, 1–10. <https://doi.org/10.9734/AJEBA/2022/V22I530557>
- Abuamsha, M., & Shumali, S. (2022). Debt structure and its impact on financial performance: An empirical study on the Palestinian stock exchange. *Journal of International Studies*, 15(1), 211–229. <https://doi.org/10.14254/2071-8330.2022/15-1/14>
- Altarawneh, M., Shafie, R., & Ishak, R. (2020). CEO Characteristics: A Literature Review and Future Directions. In *Article in Academy of Strategic Management Journal*. <https://www.researchgate.net/publication/340077212>
- Azizah, F., & Amin, M. Al. (2020). Pengaruh Koneksi Politik Terhadap Kinerja Perusahaan (Studi Empiris pada Perusahaan Sektor Pertambangan yang terdaftar di BEI tahun 2014-2018). *Indonesian Journal of Accounting and Governance*, 4(1), 1–17. <https://doi.org/10.36766/ijag.v4i1.38>
- Bartodziej, C. J. (2017). *The Concept Industry 4.0*. Springer. <https://doi.org/10.1007/978-3-658-16502-4>
- Behun, M., Gavurova, B., Tkacova, A., & Kotaskova, A. (2018). The impact of the manufacturing industry on the economic cycle of european union countries. *Journal of Competitiveness*, 10(1), 23–39. <https://doi.org/10.7441/JOC.2018.01.02>
- Buliga, O., Scheiner, C. W., & Voigt, K. I. (2016). Business model innovation and organizational resilience: towards an integrated conceptual framework. *Journal of Business Economics* 2015 86:6, 86(6), 647–670. <https://doi.org/10.1007/S11573-015-0796-Y>
- Burgelman, A. R., Floyd, W. S., Laamanen, T., Mantere, S., Vaara, E., & Whittington, R. (2018). *Strategy Processes and Practices: Dialogues and Intersections*. *Strategic Management Journal*.
- Burkhard, B., Sirén, C., Essen, V. M., Grichnik, D., & Shepherd, A. D. (2022). Nothing Ventured, Nothing Gained: A Meta-Analysis of CEO Overconfidence, Strategic Risk Taking, and Performance. *Journal of Management*, 49(8), 2629–2666. <https://doi.org/10.1177/01492063221110203>
- Chen, S. S., Ho, K. Y., & Ho, P. H. (2014). CEO Overconfidence and Long-Term Performance Following R&D Increases. *Financial Management*, 43(2), 245–269. <https://doi.org/10.1111/FIMA.12035>
- Chen, W. (Tina), Zhou, G. (Stephen), & Zhu, X. (Kevin). (2019). CEO tenure and corporate social responsibility performance. *Journal of Business Research*, 95, 292–302. <https://doi.org/10.1016/J.JBUSRES.2018.08.018>
- Coykendall, J., Hardin, K., Brady, A., & Hussain, A. (2023). Riding The Exponential Growth in Space. . <https://Www2.Deloitte.Com/Uk/EnRetrieved> from: [/Insights/Industry/Aerospace-Defense/Future-of-Space-Economy](https://Www2.Deloitte.Com/Uk/EnRetrieved).

- Fast, N. J., Sivanathan, N., Mayer, N. D., & Galinsky, A. D. (2012). Power and overconfident decision-making. *Organizational Behavior and Human Decision Processes*, 117(2), 249–260. <https://doi.org/10.1016/J.OBHDP.2011.11.009>
- Gutierrez, C., Åstebro, T., & Obloj, T. (2020). The impact of overconfidence and ambiguity attitude on market entry. *Organization Science*, 31(2), 308–329. <https://doi.org/10.1287/ORSC.2019.1300>
- Hambrick, D. C., & Finkelstein, S. (1987). Managerial discretion: A bridge between polar views of organizational outcomes. *Research in Organizational Behavior*, 9, 369–406.
- Heavey, C., Simsek, Z., Fox, B. C., & Hersel, M. C. (2022). Executive Confidence: A Multidisciplinary Review, Synthesis, and Agenda for Future Research. *Journal of Management*, 48(6), 1430–1468. <https://doi.org/10.1177/01492063211062566>
- Ho, G. J., Liew, S. M., Ng, C. J., Shunmugam, R. H., & Glasziou, P. (2016). Development of a Search Strategy for an Evidence Based Retrieval Service. *PLoS ONE*, 11(12). <https://doi.org/10.1371/JOURNAL.PONE.0167170>
- Huang, Y., Wang, X., Li, Y., & Yu, X. (2022). CEO Overconfidence, Corporate Governance, and R&D Smoothing in Technology-Based Entrepreneurial Firms. *Frontiers in Psychology*, 13, 944117. <https://doi.org/10.3389/FPSYG.2022.944117/BIBTEX>
- Johnson, D. D. P., & Fowler, J. H. (2011). The evolution of overconfidence. *Nature*, 477(7364), 317–320. <https://doi.org/10.1038/NATURE10384>
- Kolev, K. D., & McNamara, G. (2020). The role of top management teams in firm responses to performance shortfalls. <https://doi.org/10.1177/1476127020962683>, 20(3), 541–564. <https://doi.org/10.1177/1476127020962683>
- Korteling, J. E., & Toet, A. (2022). Cognitive Biases. *Encyclopedia of Behavioral Neuroscience: Volumes 1-3, Second Edition*, 1–3, 610–619. <https://doi.org/10.1016/B978-0-12-809324-5.24105-9>
- Kunz, J., & Sonnenholzner, L. (2023). Managerial overconfidence: promoter of or obstacle to organizational resilience? In *Review of Managerial Science* (Vol. 17, Issue 1, pp. 67–128). Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1007/s11846-022-00530-y>
- Malmendier, U., & Tate, G. (2015). Behavioral CEOs: The Role of Managerial Overconfidence. *Journal of Economic Perspectives*, 29(4), 37–60. <https://doi.org/10.1257/JEP.29.4.37>
- McKinsey & Company. (2023). *State of Organizations 2023* McKinsey & Company.
- Moore, D. A., & Healy, P. J. (2008). The Trouble With Overconfidence. *Psychological Review*, 115(2), 502–517. <https://doi.org/10.1037/0033-295X.115.2.502>
- Pranata, J., Purwanto, M., & Lindrawati, L. (2019). Pengaruh Family Ownership dan Direktur Independen Terhadap Kinerja Perusahaan. *Seminar Nasional Ilmu Terapan*, 3(1), E12–E12. <https://ojs.widyakartika.ac.id/index.php/sniter/article/view/109>
- Quigley, J. T., & Graffin, D. S. (2017). Reaffirming the CEO effect is significant and much larger than chance: A comment on Fitza (2014). *Strategic Management Journal*, 38(3), 793–801.



- Reischauer, G. (2018). Industry 4.0 as policy-driven discourse to institutionalize innovation systems in manufacturing. *Technological Forecasting and Social Change*, 132, 26–33. <https://doi.org/10.1016/J.TECHFORE.2018.02.012>
- Sofiatin, D. A. (2020). Pengaruh Profitabilitas, Leverage, Likuiditas, Ukuran Perusahaan, Kebijakan Deviden Terhadap Nilai Perusahaan (Studi Empiris pada Perusahaan Manufaktur subsektor Industri dan Kimia yang terdaftar di BEI periode 2014-2018). *Prisma (Platform Riset Mahasiswa Akuntansi)*, 1(1), 47–57. <https://ojs.stiesa.ac.id/index.php/prisma/article/view/366>
- Taouab, O., & Issor, Z. (2019). Firm Performance: Definition and Measurement Models. *European Scientific Journal ESJ*, 15(1). <https://doi.org/10.19044/esj.2019.v15n1p93>