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Impact of Internal Factors on Banks Profitability In Pakistan

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ABSTRACT

This paper investigated the internal factors that affecting profitability of banks in Pakistan. This study was used annual data of 19 banks of Pakistan from 2012 to 2016. Descriptive statistics and regression analysis are used to test the relationship between return on equity as dependent variable and independent variables. Capital adequacy, liquidity, bank size and expense management are used as independent variables and return on equity is used as dependent variable. The findings of this study showed that all the independent variables have a significant impact on profitability. Capital adequacy, bank size and expense management are variables which have positive and significant impact on the return on equity. Other variable liquidity has a negative but significant relationship with the return on equity. The results of the descriptive statistics show that liquidity and bank size have high mean values while the standard deviation has low values, but the other variables have low mean values.

INTRODUCTION

Like the other economies in present world, banking sector is playing an important role in the financial system of Pakistan. The financial sector in Pakistan includes commercial banks, private banks, Islamic banks, foreign banks, insurance companies and banking finance companies. Banks are more important in developing countries because it serves as the main tool of resource mobilization in a country than the developed countries where resource are already more mobilized (Bilal, Rukh, & Qureshi, 2016; Abdullah, Karim, Tooheen, & Chowdhury, 2016; Asad & Qadeer, 2014). It is assumed that the banks plays an important role in the financial system of a developing economy due to less developed money and capital markets (Nisar, Susheng, Ahmed, & Ke, 2015; Al Kahtani, Nawab, & Allam, 2016; Asad, Aledeinat, Majali, Almajali, & Shrafat, 2024).

Studies conducted in a number of developed countries for example Indonesia, Nigeria and Kenya have shown an important role of the banking system in the economic development of these countries (Kristianti, 2016; Onuonga, 2014; Zhang & Daly, 2013; Allam & Ahmad, 2013; Asad, Majali, Aledeinat, & Almajali, 2023).

In Indonesia, bank plays major role in reinvestment of profits in large industries which lead to the rapid growth of industrial sector (Kristianti, 2016; Allam Z. , Asad, Ali, & Ali, 2021; Asad, Asif, Sulaiman, Satar, & Alarifi, 2023). Similarly banking sector contributed to the growth of Kenya economy by providing needed capital to the industrial sector of the country (Onuonga, 2014; Allam Z. , Asad, Ali, & Ali, 2021; Allam Z. , Asad, Ali, & Malik, 2022).

In the past a lot of work has been done by the researchers on factors affecting the profitability of banks (Qin & Pastory, 2012; Gremi, 2013; Roman & Tomuleasa, 2013; Iloska, 2014; Khan, Ijaz, & Aslam, 2014; Chinoda, 2014; Sharma & Gounder, 2015; Nkegbe & Ustarz, 2015; Azar &

Kouyoumjian, 2016; Bilal, Rukh, & Qureshi, 2016). Some researchers have used the internal factors in their study but some also used the external factors in their studies along with internal factors (Nahang & Araghi, 2013; Djalilov, 2013; Khan, Ijaz, & Aslam, 2014; Rani & Zergaw, 2015; Amir & Asad, 2018; Asad & Kashif, Unveiling success factors for small and medium enterprises during COVID-19 pandemic, 2021).

These studies indicated that some variables has positive (Paunovic & Popovic, 2016) or negative (Ding, Fung, & Jia, 2017)impact on the profitability of banks. According to the report of the State Bank of Pakistan, bank's profitability in Pakistan nowadays is decline according to the quarterly performance review of the banking sector. There are also some other factors which effect the decline of profitability of banks in Pakistan.

According to literature, bank size, liquidity, capital adequacy and expense management are considered as important independent variables for profitability (Nahang & Araghi, 2013; Nkegbe & Ustarz, 2015; Javaid, 2016; Islam, Sarker, Rahman, Sultana, & Prodhan, 2017; Zuhaib , Wenyuan, Sulaiman, Siddiqu, & Qalati, 2022; Xie, S. A., L., Sulaiman, & Qureshi, 2023). Bank size and liquidity has positive effect (Shah & Jan, 2014; Chinoda, 2014; Victor, ul Haq, Sankar, Akram, & Asad, 2021) on profitability but on the other hand some authors highlighted that both the variables have a negative effect on the profitability (Onuonga, 2014; Javaid, 2016; Xie, S. A., L., Sulaiman, & Qureshi, 2023).

Other variables such as capital adequacy and expense management have a positive (Azar, Bolbol, & Mouradian, 2016 ; Shah & Khan, 2017) but on the other hand, some reserchers showed a negative impact on the profitability of banks (Qin & Pastory, 2012; Obamuyi, 2013). The inconsistencies show a clear gap in the body of literature. Therefore, this paper is conducted to fill the gap and find the impact of internal factors on the bank's profitability of Pakistan.

Literature Review

This section of the research paper provides the overview of the previous studies related to the internal factors which affect the bank profitability. Several authors have contributed towards highlighting the internal factors which affect the profitability of bank (Azar, Bolbol, & Mouradian, 2016). According to Obamuyi (2013) and Onuonga (2014) high capital and interest income has positively impact on banks performance but size of bank has negative but significant impact on profitability.

Cost efficiency, liquidity, capital adequacy, deposits and size are the major internal determinants of profitability of commercial banks in Pakistan (Ongore & Kusa, 2013; Dawood, 2014; Nkegbe & Ustarz, 2015; Khan, Ijaz, & Aslam, 2014). Some internal factors such as total investment to total asset ratio, liquidity risk, net credit facilities to total asset ratio, net credit to total deposit ratio, cost to income ratio, total equity to total asset ratio and bank size also effect the profitability of the Saudi Arabian and Jordan banking sector (Almazari, 2014; Asad, Asif, Allam, & Sheikh, 2021).

Literature on factors that affect the profitability of the banks has shown that capital adequacy also have negative impact on the profitability of the banks (Qin & Pastory, 2012; Putranto, Herwany, & Sumirat, 2014; Fredrick, 2015). Bank size had positive significant relationship on banking profitability but deposit had negative significant relationship with banking profitability (Javaid, 2016; Rabiu & Saidu, 2017; Chethiyar, Asad, Kamaluddin, Ali, & Sulaiman, 2019).

Another study also shown that some othe factors such as total equity to total asset and loan to deposit had a positive effect on the of profitability and cost to income ratio had negative effect on profitability (Siddiqua, Chowdhury, Chowdhury, Mainuddin, & Rahman, 2014; Ramlan & Adnana, 2015; Samad, 2015; Asad, Chethiyar, & Ali, 2020).

Some other researchers also included some other relevent factors such as equity to assets, debts to assets, deposits to assets, bank size and assets management that have a significant influence on the banks profitability in Pakistan (Shah & Khan, 2017; Hammami , Ahmed , Johny, & Sulaiman, 2021; Equatora, Chethiyar, Rachmayanthy, & Susanti, 2022; Vedamanikam & Chethiyar, 2023). Macroeconomic determinants are also have significant impact on the profitability according to previous studies (Ebenezer, Omar, & Kamil, 2017; Asad, Asif, Khan, Allam, & Satar, 2022).

Literature related to the profitability of the banks also shown that deposits, advances, total

Assets, equity and net income have significant impacts on bank profitability (Roman & Tomuleasa, 2013; Abdullah, Karim, Tooheen, & Chowdhury, 2016; Asif, Asad, Kashif, & Haq, 2021).

Tunisian banks also conducted a study related to this topic which indicated that quotation in stock exchange and size positively affect the performance of the Tunisian banks (Ayadi & Ellouze, 2015; Asif, Asad, Bhutta, & Khan, 2021; Haq, Asad, Natarajan, Sankar, & Asif, 2021). Non-interest income to total assets also have significant impact on profitability (Bashir & Asad, 2018; Bilal & Sulaiman, 2021). Another factor net interest margin ratio had no significant effect on the profitability (Islam, Sarker, Rahman, Sultana, & Prodhan, 2017; Ding, Fung, & Jia, 2017; Vedamanikam, Chethiyar, & Awan, 2022).

Interest rate and GDP has positive and significant relationship with the profitability (Jamal, Hamidi, & Karim, 2012; Djalilov, 2013; Kapaya, Salaam, & Raphael, 2016; Damer, Al-Znaimat, Asad, & Almansour, 2021). Gearing ratio is also another factor affect the profitability of Islamic banking industry (Khan, Ijaz, & Aslam, 2014; Farrukh & Asad, 2017; Qalati, Ostic, Sulaiman, Gopang, & Khan, 2022).

Another factor level of income has an important impact on the determinants of bank profitability (Dietricha & Wanzenriedb, 2014; Fadhel, Aljalahma, Almuhanadi, Asad, & Sheikh, 2022). Fixed assets and liabilities has significant and negative relationship profitability (Bilal, Rukh, & Qureshi, 2016; Damer, Al-Znaimat, Asad, & Almansour, 2021; Qalati, Qureshi, Ostic, & Sulaiman, 2022).

Cost assets ratio of permanent and total assets and the scope of the bank are also internal factors which have most significant impact on the profitability (Gremi, 2013; Paunovic & Popovic, 2016; Fatima & Asad, 2018; Farrukh & Asad, 2017; Salem, Alanadoly, & Sulaiman, 2023). Credit risk and bank risk are also other factors which also have positive impact on the profitability (Zhang & Daly, 2013; Alkhuzaie & Asad, 2018; Shaker, Asad, & Zulfiqar, 2018). Profitability of the banks is also affected by the liquidity which have negative and significant impact on the profitability (Nahang & Araghi, 2013; Almansour, Asad, & Shahzad, 2016; Kashif, et al., 2020).

This study examines some of the theories related to capital and profitability as well as bank size and profitability. These theories include signaling theory, risk and return hypothesis and market power and efficiency structures hypothesis. Signaling theory (Javaid, 2016; Khan S. N., Asad, Fatima, Anjum, & Akhtar, 2020; Riphah, Ali, Danish, & Sulaiman, 2022) and risk-return hypothesis (Dietricha & Wanzenriedb, 2014; Khushi, din, & Sulaiman, 2020; Tariq A. , Badir, Tariq, & Bhutta, 2017; Tariq, Badir, & Chonglerttham, Green innovation and performance: moderation analyses from Thailand, 2019) explained the relationship between capital and profitability.

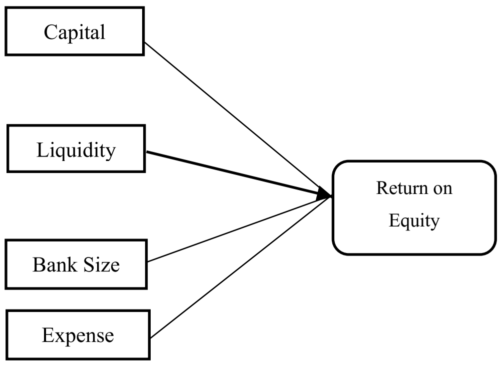
The signaling theory suggests that a higher capital is a positive signal to the market value of a bank (Javaid, 2016; Majali, Alkaraki, Asad, Aladwan, & Aledeinat, 2022; Satar, Alarifi, Alkhoraif, & Asad, 2023). However, the risk-return hypothesis suggests that if the risk increase then leverage of the firm is increase due to expected returns also increase (Israr, Asad, Altaf, & Victor, 2021; Tariq, Ehsan, Badir, Memon, & Sumbal, 2022) which is in accordance with the theory of risk.

Therefore, if a bank expect to increase the return then risk is increase due to leverage is also increase and then equity to asset ratio is decrease (Kahtani, Khan, & Allam, 2016; Sattar, Alarifi, & Asad, 2021). Thus, risk-return hypothesis suggests a negative relationship between capital and profitability (Dietricha & Wanzenriedb, 2014; Khalil, Asad, & Khan, 2018; Sulaiman, Asad, Shabbir, & Ismail, 2023). Which calls for further research due to controversial findings (Baron & Kenny, 1986; Sulaiman, Asad, Ismail, & Shabbir, 2023).

Consequently, the Market Power (MP) and Efficiency Structure (ES) theories explained the relationship between the bank size and profitability (Khalil, Asad, & Khan, 2018). Market power suggest that market structure of the company has an important impact on the performance of banks and that the Efficiency Structure (ES) hypothesis posits that if the internal efficiency of the banks is high then the banks earns high profit because of effective management (Islam, Sarker, Rahman, Sultana, & Prodhan, 2017; Khan, Ijaz, & Aslam, 2014; Sulaiman & Asad, Organizational learning, innovation, organizational structure and performance evidence from Oman, 2023).

Concluding on the MP and ES theories, MP theory assumed that the profitability of a bank is a function of external market factors, while the ES assume that bank profitability is influenced by internal efficiencies (Islam, Sarker, Rahman, Sultana, & Prodhan, 2017; Obamuyi, 2013; Khan A. A., Asad, Khan, Asif, & Aftab, 2021).

Picture 1. *Theoritical Framework*



METHODS

The current study finds the impact of internal factors on banks profitability in Pakistan. There are 48 banks in Pakistan including Government-owned Scheduled Banks, Specialized Banks, Commercial Banks, Development Finance Institutions, Foreign Banks, Islamic Banks, and Microfinance Banks (Shah & Khan, 2017). The population of this study all banks that operate in Pakistan. Data is collected from 19 banks of Pakistan from 2012 to 2016. Cross sectional data is used in this study. The research is quantitative in nature for which secondary data is used. The unit of analysis in this research is the banks of Pakistan. Descriptive statistics and regression model is used for the analysis of data (Asad, Muhammad, Rasheed, Chethiyar, & Ali, 2020). Return on asset is used as dependent variable in this study. Bank size, liquidity, capital adequacy and expense management is used as independent variables in this study.

Dependent variable return on assets is an important profitability ratio because it measures the efficiency of the investment of the banks in the assets and using them to generate profit (Rani & Zergaw, 2015). Return on equity is calculated by dividing net income after tax on total equity capital. Large banks want to create economies of scale which help to decrease cost and has a positive impact on bank profits (Almazari, 2014). Size has an impact on various activities of banks including investing opportunities, portfolio diversification, reputation, and access to equity capital (Rahman, Hamid, & Khan, 2015). Bank size is calculated by taking the log of total assets.

Liquidity is another factor that explains the level of bank performance. Liquidity refers to the ability of the bank to pay its obligations, especially for depositors. Adequate level of liquidity is positively related with bank profitability (Zhang & Daly, 2013). The ratio of total loan to total customer deposits is used in this study as a measure of liquidity. Expenses management shows how efficiently a bank manage its resources. For this study, the variable measures the ratio of operating expenses to total assets. Positive and negative relationship is expected between expenses management and profitability so, good management of the expenses will increase efficiency due to which profits will also increase (Obamuyi, 2013).

The capital adequacy of the bank is another independent variable included in the paper. Capital adequacy was measured as total capital divided by total assets (Ding, Fung, & Jia, 2017). This variable measures the safety and soundness of the bank (Onuonga, 2014). Capital adequacy is more important for financial institutions of developing economies because it provides more strength to survive in the financial crises and increased safety for depositors in difficult conditions (Nisar, Susheng, Ahmed, & Ke, 2015)

RESULTS AND DISCUSSION

The study is conducted on the impact of internal factors on banks profitability in Pakistan. Secondary and cross-sectional data is used for this purpose. In this study, descriptive statistics and regression analysis is used. Return on equity is used as dependent variable and capital adequacy, liquidity, bank size and expense management are used as independent variables. The result of this study shows similarities with the previous studies.

Table 1. *Descriptive Statistics*

Variables	N	Min	Max	Mean	Standard Deviation
Return on Equity	95	0.02	1.43	0.2862	0.29440
Capital Adequacy	95	0.01	6.47	0.6215	0.88748
Liquidity	95	0.08	6.09	1.7399	1.56475
Bank Size	95	8.70	16.54	11.6687	1.84663
Expense Management	95	0.02	3.79	0.3056	0.50748

The mean value of the return on equity is 0.2862 which is low as compared to standard deviation is 0.29440. The mean value of capital adequacy is 0.6215 which is also low as compared to standard deviation is 0.88748. Liquidity mean value is 1.7399 which is high while standard deviation is 1.56475. Bank size measured as log of total assets have very high mean 11.6687 while standard deviation is 1.84663. The mean value of the expense management is 0.3056 but the standard deviation is 0.50748.

Table 2. *Regression Analysis*

Variables	Beta Values	t- Statistics Values	Probab
Capital Adequacy	0.272	2.229	0.000
Liquidity	-0.101	1.989	0.003
Bank Size	0.258	2.171	0.001
Expense Management	0.284	3.069	0.001
R Square 0.472			

The above-mentioned table shows that capital adequacy, liquidity, bank size and expense management have significant impact on banks profitability of Pakistan. The value of r square is 0.472 which means regression model shows the 47.2% variation in the dependent variable which is significant. The p value shows that capital adequacy have strong significant impact on the profitability. The value of coefficient shows that there is a positive relationship between capital adequacy and return on equity which relates to previous study (Azar, Bolbol, & Mouradian, 2016; Ullah, et al., 2021).

The p value of liquidity shows a significant impact on profitability. The value of coefficient shows a negative relationship between them which relate to previous studies (Javaid, 2016; U, O, J, & O, 2012) . Bank size p value shows a significant relationship between bank size and profitability and value of coefficient shows a positive relationship between them (Shah & Jan, 2014; Ta'Amnha, Magableh, Asad, & Al-Qudah, 2023). The p value of expense management also shows significant impact on the profitability of banks but value of coefficient shows positive relationship between expense management and profitability which is also relevant to the previous studies (Shah & Jan, 2014; Dawood, 2014; Zahra, Majeed, Mahmood, & Asad, 2012; Ullah, et al., 2021).

CONCLUSION

The purpose of research was to find the impact of internal factors on the profitability of banks of Pakistan. There are many factors which effect the profitability of banks in Pakistan. Cross sectional data is used to find the impact of internal factors on banks profitability. Descriptive statistics and regression analysis is used to test the relationship between the variables. Capital adequacy, liquidity, bank size and expense management are the variables which affect the profitability of banks.

Descriptive statistics results show that the mean values of return on equity, capital adequacy and expense management are low as compared to the standard deviation. Liquidity and bank size have high mean values while the standard deviation is low. Conclude that capital adequacy has a more significant impact on the profitability of banks. Expense management has significant but positive impact on the profitability of banks. Liquidity also has a significant but negative impact on the profitability of banks. Bank size has a positive and significant impact on the profitability of banks.

REFERENCES

Abdullah, M. N., Karim, T., Tooheen, R. B., & Chowdhury, T. N. (2016). Bank profitability determinents: The case of Bangladesh. *World Review of Business Research, 6*(2), 142-156.

Al Kahtani, N., Nawab, A., & Allam, Z. (2016). Unfair HRM practices in the telecom sector in Saudi Arabia: An empirical investigation of selected public and private sector companies. *International Journal of Applied Business and Economic Research, 14*(10), 6377-6396.

Alkhuzaie, A. S., & Asad, M. (2018). Operating cashflow, corporate governance, and sustainable dividend payout. *International Journal of Entrepreneurship, 22*(4), 1-9.

Allam, Z., & Ahmad, S. (2013). An empirical study of quality in higher education in relation to stakeholders perspectives. *Journal of American Science, 9*(12), 387-401.

Allam, Z., Asad, M., Ali, A., & Ali, N. (2021). Visualization of knowledge aspects on workplace spirituality through bibliometric analysis. *2021 International Conference on Decision Aid Sciences and Application (DASA)* (pp. 446-450). Sakheer: IEEE. doi:10.1109/DASA53625.2021.9682372

Allam, Z., Asad, M., Ali, N., & Malik, A. (2022). Bibliometric analysis of research visualizations of knowledge aspects on burnout among teachers from 2012 to January 2022. *022 International Conference on Decision Aid Sciences and Applications (DASA)* (pp. 126-131). Chiangrai, Thailand: IEEE. doi:10.1109/DASA54658.2022.9765200

Almansour, A. Z., Asad, M., & Shahzad, I. (2016). Analysis of corporate governance compliance and its impact over return on assets of listed companies in Malaysia. *Science International, 28*(3), 2935-2938.

Almazari, A. A. (2014). Impact of imternal factors on bank profitability: comparative study of Saudi Arabia and Jordan. *Journal of Applied Finance and Banking, 4*(1), 125-140.

Amir, A., & Asad, M. (2018). Consumer's Purchase Intentions towards automobiles in Pakistan. *Open Journal of Business and Management, 6*, 202-213. doi:10.4236/ojbm.2018.61014

Asad, M. (2011). Working capital management and corporate performance of textile sector in Pakistan. *Paradigms: A Research Journal of Commerce, Economics and Social Sciences, 6*(1), 100-114. doi:10.24312/paradigms060101

Asad, M., & Kashif, M. (2021). Unveiling success factors for small and medium enterprises during COVID-19 pandemic. *Arab Journal of Basic and Applied Sciences, 28*(1), 187-194. doi:https://doi.org/10.1080/25765299.2020.1830514

Asad, M., & Qadeer, H. (2014). Components of working capital and profitability: A case of fuel and energy sector of Pakistan. *Pardigms A Journal of Commerce, Economics, and Social Sciences, 8*(1), 50-64. doi:10.24312/paradigms08010

Asad, M., Aledeinat, M., Majali, T., Almajali, D. A., & Shrafat, F. D. (2024). Mediating role of green innovation and moderating role of resource acquisition with firm age between green entrepreneurial orientation and performance of entrepreneurial firms. *Cogent Business & Management, 11*(1), 1-17. doi:https://doi.org/10.1080/23311975.2023.2291850

Asad, M., Asif, M. U., Allam, Z., & Sheikh, U. A. (2021). A mediated moderated analysis of psychological safety and employee empowerment between sustainable leadership and sustainable performance of SMEs. *2021 International Conference on Sustainable Islamic Business and Finance* (pp. 33-38). Sakheer: IEEE. doi:10.1109/IEEECONF53626.2021.9686340

Asad, M., Asif, M. U., Khan, A. A., Allam, Z., & Satar, M. S. (2022). Synergetic effect of entrepreneurial orientation and big data analytics for competitive advantage and SMEs performance. *2022 International Conference on Decision Aid Sciences and Applications (DASA)* (pp. 1192-1196). Chiangrai, Thailand: IEEE. doi:10.1109/DASA54658.2022.9765158

Asad, M., Asif, M. U., Sulaiman, M. A., Satar, M. S., & Alarifi, G. (2023). Open innovation: The missing nexus between entrepreneurial orientation, total quality management, and performance of SMEs. *Journal of Innovation and Entrepreneurship, 12*(79), 1-13. doi:https://doi.org/10.1186/s13731-023-00335-7

Asad, M., Chethiyar, S. D., & Ali, A. (2020). Total quality management, entrepreneurial orientation, and market orientation: Moderating effect of environment on performance of SMEs. *Paradigms; A Research Journal of Commerce, Economics, and Social Sciences, 14*(1), 102-108. doi:10.24312/193014016

Asad, M., Haider, S. H., & Fatima, M. (2018). Corporate social responsibility, business ethics, and labor laws: A qualitative analysis on SMEs in Sialkot. *Journal of Legal, Ethical and Regulatory Issues, 21*(3), 1-7.

Asad, M., Majali, T., Aledeinat, M., & Almajali, D. A. (2023). Green entrepreneurial orientation for enhancing SMEs financial and environmental performance: Synergetic moderation of green technology dynamism and knowledge transfer and integration. *Cogent Business & Management, 10*(3), 1-20. doi:https://doi.org/10.1080/23311975.2023.2278842

Asad, M., Muhammad, R., Rasheed, N., Chethiyar, S. D., & Ali, A. (2020). Unveiling antecedents of organizational politics: An exploratory study on science and technology universities of Pakistan. *International Journal of Advanced Science and Technology, 29*(6s), 2057-2066.

Asif, M. U., Asad, M., Bhutta, N. A., & Khan, S. N. (2021). Leadership behavior and sustainable leadership among higher education institutions of Pakistan. *Sustainable Leadership and Academic Excellence International Conference (SLAE)* (pp. 1-6). Manama, Bahrain: IEEE Xplore. doi:10.1109/SLAE54202.2021.9788081

Asif, M. U., Asad, M., Kashif, M., & Haq, A. u. (2021). Knowledge exploitation and knowledge exploration for sustainable performance of SMEs. *2021 Third International Sustainability and Resilience Conference: Climate Change* (pp. 29-34). Sakheer: IEEE. doi:10.1109/IEEECONF53624.2021.9668135

Ayadi, I., & Ellouze, A. (2015). The determinents of Tunisian banking performance: A panel data analysis. *International Journal of Economics and Finance, 7*(1), 262-272.

Azar, S. A., & Kouyoumjian, C. A. (2016).

Azar, S. A., Bolbol, A., & Mouradian, A. (2016). Profitability of banks in Leanon: some theoretical and empirical studies. *International Journal of Economics and Finance, 8*(7), 233-243.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical consideration. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bashir, A., & Asad, M. (2018). Moderating effect of leverage on the relationship between board size, board meetings and performance: A study on textile sector of Pakistan. *American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS), 39*(1), 19-29.

Bilal, Rukh, L., & Qureshi, Q. A. (2016). The effect of internal financial factors on the performance of commercial banks in developing countries. *Journal of Economic Research, 5*(1), 156-167.

Bilal, Z. O., & Sulaiman, M. A. (2021). Factors persuading customers to adopt islamic banks and windows of commercial banks services in Sultanate of Oman. *Review of International Geographical Education(RIGEO), 11*(4), 651-660. doi:10.33403/rigeo. 800679

Chethiyar, S. D., Asad, M., Kamaluddin, M. R., Ali, A., & Sulaiman, M. A. (2019). Impact of information and communication overload syndrome on the performance of students. *Opción, 24*, 390-405.

Chinoda, T. (2014). The determimnents of commercial banks profitability in Zimbawe (2009-2014). *Journal of Economics and Finance, 5*(6), 69-80.

Damer, N., Al-Znaimat, A. H., Asad, M., & Almansour, A. Z. (2021). Analysis of motivational factors that influence usage of Computer Assisted Audit Techniques (CAATs) auditors in Jordan. *Academy of Strategic Management Journal, 20*(Special Issue 2), 1-13.

Dawood, U. (2014). Factors impacting profitability of commercial banks in Pakistan for the period of (2009-2012). *International Journal of Scientific and Research Publications, 4*(3), 1-7.

Dietricha, A., & Wanzenriedb, G. (2014). The determinents of commercial banking profitability in low-middle and high income countries. *The Review of Economics and Finance*, 1-7.

Ding, N., Fung, H.-G., & Jia, J. (2017). Comparison of bank profitability in China and the USA. *China and World Economy, 25*(1), 2017.

Djalilov, K. (2013). Determinants of bank profitability in Transition countries: what matter most? *Journal of Social Sciences*, 1-32.

Ebenezer, O. O., Omar, W. A., & Kamil, S. (2017). Bank specific and macroeconomic determinents of commercial bank profitability:

Empirical evidence from Nigeria. *Finance and Banking Studies, 6*(1), 25-38.

Equatora, M. A., Chethiyar, S. D., Rachmayanthy, R., & Susanti, N. (2022). Motivational interviewing approach in overcoming drug addicts distrust. *Journal of Pharmaceutical Negative Results, 13*(4), 281-287.

Fadhel, H. A., Aljalahma, A., Almuhanadi, M., Asad, M., & Sheikh, U. (2022). Management of higher education institutions in the GCC countries during the emergence of COVID-19: A review of opportunities, challenges, and a way forward. *The International Journal of Learning in Higher Education, 29*(1), 83-97. doi:https://doi.org/10.18848/2327-7955/CGP/v29i01/83-97

Farrukh, W., & Asad, M. (2017). The determinants of capital structure: A study on cement sector of Pakistan. *International Journal of Management Sciences and Business Research, 6*(2), 16-26.

Fatima, S. Z., & Asad, M. (2018). Disposal of hospital wastage in Pakistan: A qualitative research. *Advances in Social Sciences Research Journal, 5*(3), 37-42. doi:10.14738/assrj. 53.4197

Financial Statements of all banks. (n.d.). Retrieved from State Bank of Pakistan: http://www.sbp.org.pk/stats/stat-bal-sheet.htm

Fredrick, N. K. (2015). Factors affecting performance of commercial banks in Uganda-A case for domestic commercial banks. *Industrial Review of Business Research Papers, 11*(1), 95-113.

Gremi, E. (2013). Internal factors affecting Albanian banking profitability. *Academic Journal of Interdisciplinary Studies, 2*(9), 19-25.

Hammami , S. M., Ahmed , F., Johny, J., & Sulaiman, M. A. (2021). Impact of knowledge capabilities on organisational performance in the private sector in Oman: An SEM approach using path analysis. *International Journal of Knowledge Management, 17*(1), 15-18. doi:10.4018/IJKM.2021010102

Haq, M. A., Asad, M., Natarajan, V., Sankar, J. P., & Asif, M. U. (2021). Microfinance and empowerment: A case study on benificiaries of a community development program. *Turkish Journal of Computer and Mathematics Education, 12*(9), 3282-3288. doi:https://doi.org/10.17762/turcomat.v12i9.5479

Iloska, N. (2014). An analysis of bank profitability in Macedonia. *Journal of Applied Economics and Finance, 2*(1), 31-50.

Islam, M. A., Sarker, M. N., Rahman, M., Sultana, A., & Prodhan, A. S. (2017). Determinants of profitability of commercial banks in Bangladesh. *International Journal of Banking and Financial Law, 1*(1), 2017.

Israr, A., Asad, M., Altaf, N., & Victor, S. (2021). Training effectiveness and performance of micro small and medium sized enterprises. *Turkish Journal of Computer and Mathematics Education, 12*(9), 3289-3295. doi:https://doi.org/10.17762/turcomat.v12i9.5480

Jamal, A. A., Hamidi, M., & Karim, M. R. (2012). Determineants of commercail banks'return on assets: panel evidence from Malaysia. *International Journal of Commerce, Business and Management, 1*(3), 55-62.

Javaid, M. E. (2016). Bank specific and macroeconomic deteminants of bank profitability. *Journal of Management Info, 10*(1), 38-54.

Kahtani, N. S., Khan, N. A., & Allam, Z. (2016). Organizational role stress: An empirical perspective of university teachers of Kingdom of Saudi Arabia. *International Journal of Applied Business and Economic Research, 14*(9), 336-355.

Kapaya, S. M., Salaam, D. E., & Raphael, G. (2016). Bank-spacific, industry-specific and macroeconomic determinants of bank profitability: Empirical evidence from Tanzania. *International Finance and Banking, 3*(2), 100-119.

Kashif, M., Asif, M. U., Ali, A., Asad, M., Chethiyar, S. D., & Vedamanikam, M. (2020). Managing and implementing change successfully with respect to COVID-19: A way forward. *PEOPLE: International Journal of Social Sciences, 6*(2), 609-624. doi:org/10.20319/pijss.2020.62.609624

Khalil, R., Asad, M., & Khan, S. N. (2018). Management motives behind the revaluation of fixed assets for sustainability of entrepreneurial companies. *International Journal of Entrepreneurship, 22*(Special), 1-9.

Khan, A. A., Asad, M., Khan, G. u., Asif, M. U., & Aftab, U. (2021). Sequential mediation of innovativeness and competitive advantage between resources for business model innovation and SMEs performance. *2021 International Conference on Decision Aid Sciences and Application (DASA)* (pp. 724-728). Sakheer: IEEE. doi:10.1109/DASA53625.2021.9682269

Khan, M. M., Ijaz, F., & Aslam, E. (2014). Determinents of profitability of Islamic banking industry: An evidence from Pakistan. *Business and Economic Review, 6*(2), 27-46.

Khan, S. N., Asad, M., Fatima, A., Anjum, K., & Akhtar, K. (2020). Outsourcing internal audit services; A review. *International Journal of Management, 11*(8), 503-517. doi:International Journal of Management

Khushi, M., din, S. M., & Sulaiman, M. A. (2020). Effects of profitability measures on free cash flow; evidence from pakistan stock exchange. *International Journal of Scientific & Technology Research, 9*(2), 3882-3889.

Kristianti, R. A. (2016). Factors affecting banks performance: Case of top 10 biggest government and private banks in Indonesia in 2004-2013. *Review of Interative Business and Economic Research, 5*(4), 371-378.

Majali, T., Alkaraki, M., Asad, M., Aladwan, N., & Aledeinat, M. (2022). Green transformational leadership, green entrepreneurial orientation and performance of SMEs: The mediating role of green product innovation. *Journal of Open Innovation: Technology, Market, and Complexity, 8*(191), 1-14. doi:https://doi.org/10.3390/joitmc8040191

Nahang, F., & Araghi, M. K. (2013). Internal factors affecting the profitsbility of city banks. *International Research Journal of Applied and Basic Science, 5*(12), 1491-1500.

Nisar, S., Susheng, W., Ahmed, J., & Ke, P. (2015). Determinents of bank's profitability in pakistan. *International Journal of Economics, Commerce and Management, 3*(4), 1-16.

Nkegbe, P. K., & Ustarz, Y. (2015). Bank performance in Ghana: trends and determinants. *International Journal of Social Sciences, 12*(2), 33-52.

Obamuyi, T. M. (2013). Determinants of bank's profitability in a developing economy: evidence from Nigeria. *Organizations and Markets in Emerging Economies, 4*(2), 91-111.

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial Issues, 3*(1), 237-252.

Onuonga, S. M. (2014). The analysis of profitability of Kenya's top six commercial banks: internal factor analysis. *American International Journal of Social Sciences, 3*(5), 94-103.

Paunovic, S., & Popovic, B. (2016). Proftability of banks in Bosina and Herzegovina: panel analysis. *Proceedings of Faculty of Economics in East Sarajevo, 5*(13), 11-16.

Putranto, A., Herwany, A., & Sumirat, E. (2014). The determinants of commercial bank profitability in Indonesia. *Internationa Conference on Business and Management*, 46-58.

Qalati, S. A., Ostic, D., Sulaiman, M. A., Gopang, A. A., & Khan, A. (2022). Social media and SMEs' performance in developing countries: effects of technological-organizational-environmental factors on the adoption of social media. *SAGE Open, 12*(2), 1-13. doi:10.1177/21582440221094594

Qalati, S. A., Qureshi, N., Ostic, D., & Sulaiman, M. A. (2022). An extension of the theory of planned behavior to understand factors influencing Pakistani households' energy-saving intentions and behavior: a mediated–moderated model. *Energy Efficiency, 15*, 1-21. doi:10.1007/s12053-022-10050-z

Qin, X., & Pastory, D. (2012). Commercial banks profitability position: The case of Tanzania. *International Journal of Business and Management, 7*(13), 136-144.

Rabiu, A. S., & Saidu, U. (2017). The impact of bank specific variables on the financial performance of Nigerian deposit money banks. *International Journal of Innovative Research and Advanced Studies, 4*(3), 43-48.

Rahman, M. M., Hamid, M. K., & Khan, M. A. (2015). Determinants of bank profitability: empirical evidence from Bangladesh. *Journal of Business and Management, 10*(8), 135-150.

Ramlan, H., & Adnana, M. S. (2015). The profitability of islamic and conventional banks: case study in Malaysia. *Procedia Economics and Finance*, 359-365.

Rani, D. D., & Zergaw, L. N. (2015). Determinants of financial performance of commercial banks: panel evidence from Ethiopia. *International Journal of Research in Finance and Marketing, 7*(1), 39-50.

Riphah, H. Z., Ali, S., Danish, M., & Sulaiman, M. A. (2022). Factors affecting consumers intentions to purchase dairy products in Pakistan: a cognitive affective-attitude approach. *Journal of International Food & Agribusiness Marketing*. doi:10.1080/08974438.2022.2125919

Roman, A., & Tomuleasa, I. I. (2013). Analysis of profitability determinants: empirical evidence of commercial banks in the new EU member states. *Journal of Finance and Marketing*, 372-383.

Salem, S. F., Alanadoly, A. B., & Sulaiman, M. A. (2023). Immersive gaming in the fashion arena: an investigation of brand coolness and its mediating role on brand equity. *Journal of Research in Interactive Marketing*. doi:https://doi.org/10.1108/JRIM-02-2023-0053

Samad, A. (2015). Determinants bank profitability: empirical evidence from Bangladesh commercial banks. *International Journal of Financial Research, 6*(3), 173-179.

Satar, M. S., Alarifi, G., Alkhoraif, A. A., & Asad, M. (2023). Influence of perceptual and demographic factors on the likelihood of becoming social entrepreneurs in Saudi Arabia, Bahrain, and United Arab Emirates – an empirical analysis. *Cogent Business & Management, 10*(3), 1-20. doi:https://doi.org/10.1080/23311975.2023.2253577

Sattar, M. s., Alarifi, G., & Asad, M. (2021). Gaining performance among tobacco sector small and medium enterprises through market orientation. *Tobacco Regulatory Science (TRS), 7*(6-1), 6879-6887.

Shah, M. H., & Khan, S. (2017). Factors affecting commercial banks profitability in Pakistan. *Journal of Business and Tourism, 3*(1), 1-12.

Shah, S. Q., & Jan, R. (2014). Analysis of financial performance of private banks in Pakistan. *Procedia-Socail and Behaviour Sciences*, 1021-1025.

Shaker, R. Z., Asad, M., & Zulfiqar, N. (2018). Do predictive power of fibonacci retracements help the investor to predict future? A study of Pakistan Stock Exchange. *International Journal of Economics and Financial Research, 4*(6), 159-164.

Sharma, P., & Gounder, N. (2015). Determinants of resilient bank profitability in the PICs: empirical evidence from Fiji. *Research in International Business and Finance*, 10-32.

Siddiqua, A., Chowdhury, A. N., Chowdhury, A. S., Mainuddin, M., & Rahman, M. L. (2014). Impact of internal factors on the profitability of banks: A case of commercial banks in Bangladesh. *Asian Business Review, 7*(1), 7-14.

Sulaiman, M. A., & Asad, M. (2023). Organizational learning, innovation, organizational structure and performance evidence from Oman. *Organizational Learning, Innovation, Organizational Structure and Performance Evidence from Oman* (pp. 1-17). Ljubljana: The International Society for Professional Innovation Management (ISPIM).

Sulaiman, M. A., Asad, M., Ismail, M. Y., & Shabbir, M. S. (2023). Catalyst role of university green entrepreneurial support promoting green entrepreneurial inclinations among youth: Empirical evidence from Oman. *International Journal of Professional Business Review, 8*(8), e02723-e02723. doi:https://doi.org/10.26668/businessreview/2023.v8i8.2723

Sulaiman, M. A., Asad, M., Shabbir, M. S., & Ismail, M. Y. (2023). Support factors and green entrepreneurial inclinations for sustainable competencies: Empirical evidence from Oman. *International Journal of Professional Business Review, 8*(8), e02724-e02724. doi:https://doi.org/10.26668/businessreview/2023.v8i8.2724

Ta'Amnha, M. A., Magableh, I. K., Asad, M., & Al-Qudah, S. (2023). Open innovation: The missing link between synergetic effect of entrepreneurial orientation and knowledge management over product innovation performance. *Journal of Open Innovation: Technology, Market, and Complexity, 9*(4), 1-9. doi:https://doi.org/10.1016/j.joitmc.2023.100147

Tariq, A., Badir, Y. F., Tariq, W., & Bhutta, U. S. (2017). Drivers and consequences of green product and process innovation: A systematic review, conceptual framework, and future outlook. *Technology in Society, 51*, 8-23. doi:https://doi.org/10.1016/j.techsoc.2017.06.002

Tariq, A., Badir, Y., & Chonglerttham, S. (2019). Green innovation and performance: moderation analyses from Thailand. *European Journal of Innovation Management, 22*(3), 446-467. doi:https://doi.org/10.1108/EJIM-07-2018-0148

Tariq, A., Ehsan, S., Badir, Y. F., Memon, M. A., & Sumbal, M. S. (2022). Does green process innovation affect a firm's financial risk? The moderating role of slack resources and competitive intensity. *European Journal of Innovation Management, 26*(4), 1168-1185. doi:https://doi.org/10.1108/EJIM-05-2021-0265

U, A. W., O, U. D., J, E. I., & O, U. G. (2012). An empirical assessment of the determinants of bank profitability in Nigeria: Bank Characterstics panel evidence. *Journal of Accounting and Taxation, 4*(3), 38-43.

Ullah, Z., Otero, S. Á., Sulaiman, M. A., Sial, M. S., Ahmad, N., Scholz, M., & Omhand, K. (2021). Achieving organizational social sustainability through electronic performance appraisal systems: the moderating Influence of transformational leadership. *sustainability, 13*(10), 1-14. doi:0.3390/su13105611

Ullah, Z., Sulaiman, M. A., Ali, S. B., Ahmad, N., Scholz, M., & Han, H. (2021). The effect of work safety on organizational social sustainability Improvement in the healthcare sector: the case of a public sector hospital in Pakistan. *International Journal of Environmental Research and Public Health, 18*(12), 1-18. doi:10.3390/ijerph18126672

Vedamanikam, M., & Chethiyar, S. D. (2023). Knowledge of money laundering and rationalization of money mule job acceptance: A study among higher education students in Malaysia. *Pakistan Journal of Criminology, 15*(3), 93-114.

Vedamanikam, M., Chethiyar, S. D., & Awan, S. M. (2022). Job acceptance in money mule recruitment: Theoretical view on the rewards. *Pakistan Journal of Psychological Research, 37*(1), 111-117.

Victor, S., ul Haq, M. A., Sankar, J. P., Akram, F., & Asad, M. (2021). Paradigm shift of promotional strategy from celebrity to social CEO. *2021 International Conference on Decision Aid Sciences and Applications (DASA)* (pp. 1016-1023). Zallaq: IEEE. doi:10.1109/DASA53625.2021.9682256

Xie, Z. Q., S. A., S. L., L., M., Sulaiman, M. A., & Qureshi, N. A. (2023). Understanding factors influencing healthcare workers' intention towards the COVID-19 vaccine. *PLOS ONE, 18*(7), e0286794. doi:doi.org/10.1371/journal.pone.0286794

Zahra, K., Majeed, K., Mahmood, A., & Asad, M. (2012). Impact assessment of community participation in solid waste management projects in selected areas of Faisalabad city. *Journal of Urban Planning and Development, 138*(4), 319-327. doi:10.1061/(ASCE)UP.1943-5444.0000127

Zhang, X., & Daly, K. (2013). The impact of bank specific and macroeconomic factors on China's bank performance. *Global Economy and Finance Journal , 6*(3), 1-25.

Zuhaib , Z., Wenyuan, L., Sulaiman, M. A., Siddiqu, K. A., & Qalati, S. A. (2022). Social entrepreneurship orientation and enterprise fortune: an Intermediary role of social performance. *Frontiers in Psychology, 12*, 1-17. doi:10.3389/fpsyg.2021.755080