



THE EFFECT OF FIRM SIZE ON THE PROFITABILITY OF THE WOOD-BASED FIRMS LISTED IN BURSA MALAYSIA

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**THE EFFECT OF FIRM SIZE ON THE PROFITABILITY OF THE WOOD-
BASED FIRMS LISTED IN BURSA MALAYSIA**

By

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**A Project Report Submitted in Partial Fulfilment of the Requirements
for the Degree of Bachelor of Wood Science and Technology in the
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DEDICATION

Dedicated to:

My beloved family

To all my batch mates

and also

To all my friends who gave full support to
accomplish my Final Year Project successfully

ABSTRACT

This study is carried out in order to explore the effect of the firm size on the profitability of the wood-based industries listed in Bursa Malaysia. The raw data was obtained from the annual report of a total of 35 wood-based companies between the years 2013 to 2017. The indicator of the firm's size are the Total Assets and Total Sales while the indicators of the firm's profitability are Return on Assets (ROA) and Return on Capital Employed (ROCE). The Pearson's correlation and multiple linear regression have been used in the process of the data analyzing. In this study, the ROCE (dependent variable) shows a significant relationship with Total Asset (independent variable) and Total Sales (independent variable). However, the Total Sales had a greater impact on the ROCE compared to the Total Asset. This study would be a good reference or guide for the business analyst, firm managers or owners of the wood-based companies listed in the Bursa Malaysia in the future.

ABSTRAK

Kajian ini dijalankan untuk meneroka kesan saiz firma terhadap keuntungan firma dalam industri berasaskan kayu yang disenaraikan di Bursa Malaysia. Data mentah yang telah diperolehi daripada laporan tahunan untuk 35 industri berasaskan kayu antara tahun 2013-2017. Penunjuk saiz firma ialah jumlah aset dan jumlah jualan sementara petunjuk keuntungan firma pulangan atas aset (ROA) dan pulangan atas modal bekerja (ROCE). Korelasi Pearson, dan regresi linear berbilang telah digunakan dalam proses menganalisis data. Dalam kajian ini, ROCE (pembolehubah bergantung) menunjukkan hubungan yang bererti dengan jumlah aset (pembolehubah bebas) dan jumlah jualan (pembolehubah bebas). Walau bagaimanapun, jumlah jualan mempunyai kesan lebih besar terhadap ROCE berbanding jumlah aset. Hasil daripada kajian ini dapat dijadikan sebagai bahan rujukan kepada penganalisis perniagaan, pengurus serta pemilik firma-firma industri berasaskan kayu yang disenaraikan di Bursa Malaysia, di masa hadapan.

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APPROVAL SHEET

I certified that this research project report entitled “The Effect of Firm Size on the Profitability of Wood-Based Companies listed in Bursa Malaysia” by Sivadass A/L Govindasamy has been examined and approved as a partial fulfillment of the requirements for the Degree of Bachelor of Wood Science and Technology in the Faculty of Forestry, Universiti Putra Malaysia.

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LIST OF ABBREVIATIONS

KLSE	Kuala Lumpur Stock Exchange
KLSEB	Kuala Lumpur Stock Exchange Berhad
LPE	Law of Proportionate Effect
MESDAQ	Malaysian Exchange of Securities Dealing and Quotation Berhad
MPIC	Ministry of Plantation Industries and Commodities
MTCS	Malaysian Timber Certification Scheme
NGO	Non-Government Organization
NP	Net Profit
PEFC	Programme for the Endorsement of Forest Certification
ROA	Return on Assets
ROE	Return on Equity
ROCE	Return on Capital Employed
SES	Singapore Stock Exchange
TS	Total Sales
TA	Total Assets

CHAPTER 1

INTRODUCTION

1.1 Background Study

A firm is also known as business body which is synonym to corporation, company or partnership. It carries out specific functions such as selling and promoting goods and services in order to gain profit. A firm can have few branches, provided, it must be owned by the same owner. Generally, the term 'firm' can be used for variety of aspects. However, in the term of business or enterprise, firm is used interchangeably. A firm's function or role is described as the ability or production capacity that it possesses where it will provide services and goods to the customers.

A common word that is associated with firm is known as ownership. There are several types of ownership. The most common type of ownership is namely, partnership. In this aspect, the firm is basically owned by two or more individuals where both have the equal rights for all business obligates. A sole proprietorship is owned by a single individual and this means that the profit and loss go to that single individual. Corporation is also another type of ownership, where it can be owned by individuals or government. In this case, the owner has limited responsibility due to the fact that, the financial liability is separated.

A firm size can be determined using different measures. Shaheen and Malik (2012) described the size of firm as the quantity and array of production capability and potential that a firm possesses or the quantity and diversity of services a firm can make, available concurrently to its clients. In a study conducted by Vijayakumar and Tamizhselvan (2010) to find out the relationship between firm size and profitability, they have used the sales and total assets of a sample of 15 companies operating in South India as the indicator to measure firm size. On the other hand, Banchenvijit (2012), used total sales as an indicator to measure the firm size in his study of the factors affecting the performance of firms operating in Vietnam. The economic theory states that, the increase in the firm size will allow for more incremental advantages as it raise the barriers of entry to potential entrants besides obtaining leverage on the economics of scale to attain higher profitability. Chrystal and Lipsey (1997) states that the higher the barrier to entry, the lower the threat of potential competition.

Profitability carries an important role in determining the business success of a firm as, the profitability is known as the amount of money that a firm can make by making a full use of the resource available and by doing so, the firm can gain benefits with the increased profitability. It is also defined as the earning of the firm or consistency of cash inflows of the firms where, the firm actually can portrait the benefits associated with the increased profitability. There are

various factors that could affect the performance of the firm, however, Niresh and Velnampy (2014) states that, the firm size is a primary factor in determining the profitability of the firm. There are various indicators that can be used to determine a firm's profitability. Profitability of a firm can be measured by looking at the firm's Return on Assets(ROA), Return on Equity(ROE), Return on Capital Employed (ROCE), Net Profit (NP), earnings before interest, tax depreciation and also amortization. Vijayakumar and Tamizhselvan (2010) has carried out a study in determining the relationship between firm size and profitability in South India where they have used the profit margin and also profit on total sales as the indicators to measure the profitability. Asimakopoulous et al. (2009) used ROA or also known as the Return on Assets as the indicator to measure profitability. Vijayakumar and Devi (2011) used the ROA, ROE and ROS as the measure of profitability in their study to determine the factors affecting the performance of automobile firms in India. Akinyomi and Olagunju (2013) used the ROA as the measure of profitability in their study of determining the effect of firm size on profitability in the Nigerian manufacturing sector.

1.2 Problem Statement

Generally, there are positive and negative results between firm size and profitability. As for example, a research conducted in Brazil shows that the firm size is an important determinant of the financial constraint. Financial constraint simply means, the lack of money which prevents the purchasing process. However, Simon (1962) could not identify a significant relationship between firm size and profitability, statistically. Meanwhile, Whittington (1980) claimed that, the firm profitability does not depend on the firm size.

Regardless these negative results, many research and studies are still being conducted in order to determine the relationship between the firm size and profitability. As for example, Nzioka (2013) carried out a study to determine the relationship between firm size and financial performance of commercial banks in Kenya. On the other hand, Fiegenbaum and Karnani (1991) proved that there is a positive relationship between firm size and profitability, based on their research using data from roughly about 3000 firms between the years of 1979-1987. Hall and Weiss (1967) have found a positive relation between firm size and profitability in the study they carried on over Fortune 500 firms. These previous studies and researches mentioned, are carried out in different kind of sectors in different countries. However, there are not many or little studies regarding the relationship between the firm size and profitability in the wood-based firms.

Therefore, the scope will be narrowed down to the wood-based firms in Malaysia, where there are numerous developing wood-based industries. The wood-based industries in Malaysia have been established for quite some time due to the amount of resources that Malaysia possesses and also the demand level for wood-based products which is high. To ensure and maintain the development of these wood-based industries in Malaysia, the performance of the industries must be efficient and the firm plays an important role in doing so. The question is, how serious is the role of a firm in determining the profitability in the wood-based sector. Therefore, the size of a firm would be an ideal prospect to be taken as the key measure in determining the profitability of the wood-based firm.

1.3 OBJECTIVE

The objectives of the study are:

1. To determine the relationship between the firm size and profitability of the listed wood-based firms in Bursa Malaysia.
2. To study the impact of the firm size on profitability of the wood-based firms listed in Bursa Malaysia.

1.4 RESEARCH JUSTIFICATION

This study will benefit the managers whom are managing wood-based firms in the competitive environment today. Having a better understanding of the role of the firm size on the profitability will ensure these managers to organize their firm properly which will affect the performance of the firm.

Performance of a firm is affected by many factors and the firm size is one of it. As for the wood-based firms in Malaysia, the firm size could be a serious factor that might affect the profitability of the firm. Studies and researches regarding the firm size and profitability would be a great source or as a guide for them to carry out their respective responsibility. This is because, these managers could be operating in either large or small firms. Based on numbers of researches and studies, the larger scale firms gain more profit compared to the small ones. Majumdar (1997) has proven that bigger firms have a higher profitability compared to smaller firms, based on the data of a total of 1020 firms operating throughout India. Similarly, Jonsson (2007), showed that big firms have a higher profitability compared to smaller firms based on his study regarding the relationship between profitability and firm sizes in Iceland. Technically, there are not many larger scale wood-based firms in Malaysia as the wood-based industry in Malaysia is currently in the process of developing further. Therefore, understanding the role of the firm size, either small or big firms would be essential for the managers and owners in order to manage the firm and also to achieve better performance of the firm

REFERENCES

- Akinyomi, O. J., & Olagunju, A. (2013). Determinants of capital structure in Nigeria. *International Journal of Innovation and Applied Studies*, 3(4), 999-1005.
- Amato, L., & Wilder, R. P. (1990). The effects of firm size on profit rates in u.s manufacturing. *Southern Economic Journal*, 52(1), 181–190.
- Amato, L. H., & Burson, T. E. (2007). The effects of firm size on profit rates in the financial services. *Journal of Economics and Economic Education Research*, 8(1), 67.
- Asimakopoulou, I., Samitas, A., & Papadogonas, T. (2009). Firm-specific and economy wide determinants of firm profitability: greek evidence using panel data. *Managerial Finance*, 35(11), 930-939.
- Athanasoglou, P., Delis, M., Staikouras, C., (2005). Determinants of bank profitability in the southern eastern european region. Bank of Greece Working Paper No. 47.
- Azhagaiah, R., & Gavoury, C. (2011). The impact of capital structure on profitability with special reference to it industry in india. *Managing Global Transitions: International Research Journal* 9 (4)
- Banchenvijit, W. (2012). “Determinants of firm performance of vietnam listed companies”, Academic and Business Research Institute. *The Journal of Industrial Economics*, 487-514.

Bauman, H. D., & Kaen, F. R. (2003). Firm size, employees and profitability in U.S Manufacturing Industries. *Social Science Resource Network*, 13: 71-79.

Bobáková, I. V. (2003). Financial regulation as moderatine influence of corporate governance, institutional quality, human capital and firm size on financial institution performance in Kenya. (2017). *Journal of Administrative and Business Studies*, 3(6).

Bottazzi, G., Secchi, A., & Tamagni, F. (2001). Productivity, profitability and financial performance. *Industrial and Corporate Change*, 17(4), 711-751.

Chandler, G. N., & Jansen, E. (1992). The founder's self-assessed competence and venture performance. *Journal of Business Venturing*, 7(3), 223-236.

Chen, R., & Wong, K., (2004). The Determinants of financial health of asian insurance companies. *Journal of Risk and Insurance*, 71(3), 469-499.

Chen, I. J., Paulraj, A., & Lado, A. A. (2004). Strategic purchasing, supply management, and firm performance. *Journal of operations management*, 22(5), 505-523.

Chrystal, K. A. & Lipsey, R. G. (1997). *Economics for business and management*. England: Oxford University Press.

Cowling, M. (2004). The growth–profit nexus. *Small Business Economics*, 22(1), 1-9.

Doğan, M. (2013). Does firm size affect the firm profitability? Evidence from Turkey. *Research Journal of Finance and Accounting*, 4(4), 53-59.

Evans, D. S. (1987). The relationship between firm growth, size, and age: Estimates for 100 manufacturing industries. *The Journal of Industrial Economics*, 567-581.

Fiegenbaum, A., & Karnani, A. (1991). Output flexibility—a competitive advantage for small firms. *Strategic Management Journal*, 12(2), 101-114.

Glancey, K. (1998). Determinants of growth and profitability in small entrepreneurial firms. *International Journal of Entrepreneurial Behaviour & Research*, 4(1), 18-27.

Goddard, J. A., Molyneux, P., & Wilson, J. O. (2004). Dynamics of growth and profitability in banking. *Journal of Money, Credit, and Banking*, 36(6), 1069-1090.

Greiner, L. (1972). Evolutions and revolutions as organizations grow. *Harvard Business Review*, 50, 37-46.

Hall, M., & Weiss, L. (1967). Firm size and profitability. *The Review of Economics and Statistics*, 319-331

Hadlock, C. J., & Pierce, J. R. (2010). New evidence on measuring financial constraints: Moving beyond the kz index. *The Review of Financial Studies*, 23(5), 1909-1940.

Hardwick, P., & Adams, M. (2002). Firm size and growth in the United Kingdom life insurance industry. *Journal of Risk and Insurance*, 69(4), 577-593.

Hoare, A. (2015). Tackling illegal logging and the related trade. *Chatham House*, 2, 21-47.

Jang, S. S., & Park, K. (2011). Inter-relationship between firm growth and profitability. *International Journal of Hospitality Management*, 30(4), 1027-1035.

Jeet, S. & Preeti, Y. (2013). Return on capital employed-a tool for analyzing profitability of companies. *International Journal of Techo-Management Research*, 1(01), 2321-3744.

John, A. O., & Adebayo, O. (2013). Effect of firm size on profitability: Evidence from Nigerian manufacturing sector. *Prime Journal of Business Administration and Management*, 3(9), 1171-1175.

Jonsson, B. (2007). Does the size matter? The relationship between size and profitability of Icelandic firms. *Bifrost Journal of Social Science*, 1, 43–55.

Kaen, F. R., & Baumann, H. D. (2003). Firm size, employees and profitability in US manufacturing industries. *Social Science Resource Network*, 13: 71-79.

Kumar, M.S. (1985). Growth, acquisition activity and firm size: evidence from the United Kingdom. *The Journal of Industrial Economics*, 33(3), 327–338.

Lee, J. (2009). Does size matter in firm performance? Evidence from U.S public firms. *International Journal of the Economics of Business*, 16(2), 189–203.

Majumdar, S. K. (1997). The impact of size and age in firm level performance: some evidence from India. *Review of Industrial Organization*, 12, 231–241.

Markman, G. D., & Gartner, W. B. (2002). The effects of hyper growth on firm profitability. *The Journal of Private Equity*, 58-65.

Mendelson, H. (2000). Organizational architecture and success in the information technology industry. *Management Science*, 46, 513–529.

Ministry of Plantation Industries and Commodities (MPIC). (2009). *National Timber Industry Policy 2009–2020*. Kuala Lumpur: MTIB.

Montgomery, C. A. (1979). The measurement of firm diversification: Some new empirical evidence. *Academy of Management Journal*, 25(2), 299-307.

Niresh, J. A., & Velnampy, T. (2014). Firm size and profitability: A study of listed manufacturing firms in Sri Lanka. *International Journal of Business and Management*, 9(4).

Nzioka, O. M., & Maseki, F. M. (2013). Effects of hedging foreign exchange risk on financial performance of non-banking companies listed at the Nairobi securities exchange. *European Scientific Journal*, 13(10).

Ozgulbas, N., Koyuncugil, A. S., & Yilmaz, F. (2006). Identifying the effect of firm size on financial performance of smes. *The Business Review, Cambridge*, 6(1), 162–167.

Punnose, E. M. (2008). A profitability analysis of business group firms versus individual firms in the Indian electrical machine manufacturing industry. *The Icfa Journal of Management Resource*, 7, 52-76.

Ratner, B. (2009). The correlation coefficient. *Journal of Targeting, Measurement and Analysis for Marketing*, 17, 139-142.

Reid, G. C. (1995). Early life-cycle behaviour of micro-firms in Scotland. *Small Business Economics*, 7(2), 89-95.

Serrasqueiro, Z. S., & Nunes, P. M. (2008). Performance and size: empirical evidence from Portuguese smes. *Small Business Economics*, 31(2): 195-217.

Shaheen, S., & Malik, Q. A. (2012). The impact of capital intensity, size of firm and profitability on debt financing in textile industry of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 3(10), 1061-1066.

Sidhu, H. S., & Bhatia, G. (1993). Factors affecting profitability in Indian textile industry. *Indian Economic Journal*, 41(2), 137.

Simon, Herbert A. and Bonini, Charles P. (1962). The size distribution of business firms. *American Economic Review*, 48, 607-617.

Tarawneh, M. (2006). A comparison of financial performance in the banking sector: Some evidence from Omani commercial banks. *International Research Journal of Finance and Economics*, 3(3), 101-112.

Velnampy, T. (2005). A study on investment appraisal and profitability. *Journal of Business Studies*, (2), 23–35.

Velnampy, T., & Nimalathan, B. (2010). Firm size on profitability: a comparative study of bank of Ceylon and commercial bank of Ceylon Ltd in Sri Lanka. *Global Journal of Management and Business Research*, 10(2), 96–100.

Vijayakumar, A. and Devi, S. S. (2011). Growth and profitability in indian automobile firms – An analysis. *Journal for Bloomers of Research*, 3(2), 168-177.

Vijayakumar, A., & Tamizhselvan, P. (2010). Corporate size and profitability-an empirical analysis. *Journal for Bloomers of Research*, 3(1), 44-53.

Whittington, G. (1980). The profitability and size of United Kingdom companies, 1960-74. *The Journal of Industrial Economics*, 28(4), 335.

