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Do Employee Stock Ownership Plans Affect the Quest for Firm Profitability? Evidence from Tanzania

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Abstract

Objective: This research aims to examine the impact of Employee Stock Ownership Plans (ESOP) on the profitability of Tanzanian publicly listed firms.
Design/Methods/Approach: The research utilized a longitudinal design by employing secondary data from firms listed in the Dar es Salaam Stock Exchange (DSE). The random effect model with two estimations was utilized to analyze data.
Findings: Results suggest that ESOP has a positive and significant effect on a firm's quest for profitability.
Originality: The originality or uniqueness of this study lies in providing further understanding from a different economic and cultural perspective and enhancing the results of academic studies in this area.
Practical/Policy implication: For business owners, the results of this study can be used as a root from which they can have a reason to grow their own ESOP and increase their personal wealth. For policymakers, it is a base for policy formulation that will enhance the profitable tax base.

Keywords: ESOP, Firm, Profitability, Dar es salaam stock exchange, ROE

JEL Classification: G32; G43; G38

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1. Introduction

Employee stock ownership plans (ESOP) are an Equity-based compensation scheme built on eliminating the conflict of interest that often emerges between shareholders and executives, a problem that is most likely to exist in publicly listed companies (Ray, 2016a). ESOP are likely to benefit both the managers and the owners as often. They will be designed to foster the common goal of increasing the wealth of both parties (Barney, 1990). When management and ownership are separated, Management is prone to opportunism and taking on unacceptable levels of risks in order to pursue their own goals at the demise of the company's owners (Tekin & Polat, 2022).

ESOP designs fall into three groups, first is a stock equity design where a corporation gives an employee share with or without voting rights (Andersen & Molnes, 2021). Employees must buy equity and take financial risks like owners. Second is a Stock options design, in which the company agrees to sell shares to workers in future at a today agreed-upon price. Rising stock prices benefit employees. When the stock prices fall, no harm is done as the employee may opt not to exercise the option. The Third is a phantom stock design. It offers rights other than voting rights without a formal transfer of ownership; hence, workers do not own the company's assets. Phantom stock is utilized by companies who do not wish to convey genuine shares to workers or let them vote (Sithole, 2019).

ESOPs in Tanzania usually are set up as a trust by the Employer and trustee under the Trustees Incorporation Act, Cap 318 R.E 2002. The Trust buys corporate shares, and the workers become beneficiaries of the trust. The employees' benefit rights are either options or shares or mere share options, which after some time, will return to the corporation (Breakthrough Attorneys, 2015). In either situation, the trust distributes dividends from shares based on employee choices. An employer decides whether Shares might be redeemed after a set time and after exercising share options. The corporation may create the eligibility criteria for who can join the trust and how the funds will be allocated (Breakthrough Attorneys, 2015).

ESOP is an effective technique to motivate employees as it grants them a stake in the company's success (Ray 2016). Kruse (2018) argues that the various ESOP model's success is derived from the logic that employees deserve to participate in the rewards of their work. This attitude pushes ownership directly to the front lines of the firm and helps its employees realize how the choices they make effect not only themselves, but everyone around them, their colleagues, their customers, their suppliers, and their business as a whole. Savvy firm owners across the world understand that success of the firm is rooted on the success of its employees (Andersen & Molnes, 2021). Firms that run based on their employees' needs, ideas, and growth benefit greatly through employee involvement.

Nurhayati et al. (2019) stated that ESOP could be deployed to retain personnel with abilities in building the firm, encourage employees, enhance cash flow, eliminate principal-agent disputes, avoid share ownership transfers, and increase company value. They further argued that ESOP programs are aligned to compensate workers, directors, and other contributors for improving firm performance. From their viewpoint, applying ESOP will likely enhance job satisfaction, organizational loyalty, work motivation, and workplace involvement. When employees become owners of the firm, they are motivated to act in a manner that boosts firm performance.

An array of academic studies have examined the effect of ESOP on profitability of firms listed in various stock exchanges across the world. Andersen & Molnes (2021) showed evidence that granting employees stock options has a positive impact on the Return on Assets (ROA) of an organization registered in the Oslo stock exchange. Fatihat (2021) found that ESOP had a significant negative effect on the Return on Equity of publicly listed manufacturing companies in Indonesia. Ray (2016b) concluded that ESOP had a positive effect on the financial performance of Indian non-finance enterprises. Makkonen (2021) established that ESOP favourably affected the ROA and ROE of European listed firms. Laudya et al. (2019) determined that ESOP had no effect on ROA but had a positive effect on the ROE of firms listed on the Indonesia stock exchange. Ilmiah et al. (2020) concluded that the size of ESOP did not have a significant effect on ROA, net profit margin and operating profit margin of firms listed on the Indonesia stock exchange. Razzaq (2018) determined that ESOP had a weak but significant positive influence on the profitability of small businesses in Karachi. Wang (2018) established that ESOP had a positive effect on the ROE of state-owned firms in China. Du et al. (2020) found that the ROE of High-tech firms was primarily affected by the implementation of ESOP compared to non-high-tech enterprises registered in the Shanghai and Shenzhen Stock Exchanges. Maghraoui & Zidai (2016) determined that ESOP had a positive effect on the ROA and ROE of French companies. Studies conducted in Kenya have established a positive effect of ESOP on firm profitability (Nyambane 2011; Nkubitu 2013).

Despite the large array of studies that have explored the effects of employee stock ownership on firm profitability, as discussed above. The major issue that arises from all the studies is the inconsistency of the results. Some of the studies (Andersen & Molnes 2021; Ray 2016b) have shown that ESOP affects the quest for a firm's profitability by having a positive impact on ROA and ROE. Meanwhile, other studies by Fatihat (2021) have indicated that the ESOP negatively affect the firms' quest for profitability by negatively affecting ROA and ROE. Furthermore, some of the studies by Laudya et al. (2019) have shown that ESOP has no significant effect on firms' quest for profitability.

Apart from the inconsistencies in results, when we ponder the circumstances of each country in the globe, we realize that there are various specific issues such as economic environment, culture, historical background, data analysis methods, sample size, decentralization of wage determination and collective bargaining coverage. When summed up together may present a different façade of the effect of ESOP on firms' quest for profitability Nurhayati et al. (2019). In

the presence of such a problem coupled with limited research on the subject matter in Tanzania, it was deemed necessary for research to be conducted to examine the effects of ESOP on a firm's quest for profitability by considering all the firms registered in the Dar es Salaam stock exchange (DSE). The agency theory was employed as a guide for a researcher to analyze and interpret the results.

The novelty of our research operates from its focus on the relationship between ESOP and profitability. There are scanty research papers. In Africa, that brings concentrated focus on profitability and ESOP. In East Africa, research on profitability matters has focused on other areas. Ngollo & Mwenda (2022) studied the effect of corporate governance disclosure on profitability. Kisyeri & Kira (2022) studied The Influence of Working Capital Management on the Profitability of Listed Manufacturing Companies in Tanzania. Mujwahuzi & Mbogo (2020) studied the effect of Capital Structure on the Business Profitability of Processing Enterprises Listed on the Dar es Salaam Stock Exchange, Tanzania. It is clear that in the East African region, our research brings a unique contribution to ESOP literature and agency theory, as results from other parts of the world are not usually easy to carry over to different economies surrounded by different circumstances. This study adds to the literature the motivational factor that might lead to ESOP effectiveness on enhancing profitability. This study broadens the scope of ESOP beyond monetary incentives and consider the possibility of intrinsic motivation for employee engagement and success towards a firm's profitability. We contribute to the agency theory of the role of ESOP in aligning employee and management interests. Our findings demonstrate how ESOP might limit agency problems and enhance stakeholder participation in generating profit for the business.

This article is structured as follows: The Introduction gives context and inspiration for executing this study. The second portion, Literature Review and Hypothesis Development, thoroughly analyses the relevant literature and the formulation of study hypotheses. The Data and Methodology section outlines the data sources and collection and analysis methodologies. The Results and Discussion section describes the study's findings and offers an interpretation. The Conclusion, Limitations, and Recommendations section concludes with a summary of the important results, a discussion of the study's limitations, and suggestions for further research.

1.1 *The Dar Es Salaam Stock Exchange (DSE*)

Since this study was conducted on the firms listed in DSE, it is vital that the reader obtain a brief description of the DSE. DSE is Tanzania's primary stock exchange, controlling the country's capital market. DSE was established in 1996 as a limited liability company limited by guarantee without shares under the Capital Market and Securities Authority (CMSA) Act of 1994, revised in 1997, 2000, and 2010. The Act authorizes CMSA to exert regulatory jurisdiction over DSE and other entities in the country that deal in securities. However, its official operations began in April 1998, with the IPO of TOL Gas Limited and Tanzania Breweries Limited (TBL) in the same year. Even though DSE was established in 1996, there were few preparations for its official opening. The preparations included finding qualified employees, drafting rules, and making other logistical arrangements (CMSA, 2008). The current status indicates that 28 companies are listed with DSE. Six of these companies are cross-listed in countries outside of East Africa. These businesses do not operate in Tanzania. However, they are listed as an introduction (DSE, 2017). Twenty-two local enterprises are listed, active, and trading. These are from the Industries and Allied Entities, Banking and Finance, and Commercial Services sectors (DSE, 2018). DSE works Monday through Friday, from 10:00 am to 4:00 pm. Buying and selling of shares occurs via electronic platforms. The Exchange changed its legal structure from a company limited by guarantee to a company limited by shares in July 2015; as a result, its name was changed to Dar es Salaam Stock Exchange PLC on July 12, 2016, when it began issuing shares to the public. It is a member of the World Federation of Exchanges (WFE) because it satisfies all of the WFE's standards and requirements on compliance with market principles, governance issues, the regulatory environment for the listing, and efficiency (DSE, 2019). Moreover, it belongs to the African Stock Exchanges Association.

2. Literature Review and Hypotheses Development

Empirical Review

Various researchers from across the globe have studied various aspects of ESOP. It is vital to empirically go through such studies to develop concrete hypotheses, expand on earlier research, and avoid duplicating previously done studies. The empirical review provides a base to understand the current level of knowledge on matters related to ESOP and determine if there are any conflicts and contradictions in the results derived from research of other parts of the globe. Going through the literature, the following studies caught our empirical attention. Dasilas (2022) examined the impact of employee and executive ownership on the accounting and market-based performance of 620 Chinese listed companies from 2014 to 2020. Pooled cross-sectional regression analysis revealed a curvilinear relationship between ESOPs and firm performance, with an inflexion point of the inverted U-shaped relationship between employee stock ownership and firm performance indicators. Findings suggested that there is an inflexion point that firms might consider when practicing ESOP. The author specifically denoted that when employees own between 0% and 1% of a company, it produces a favourable effect on the accounting and market-based metrics of its performance.

Hamdani & Gumanti (2019) studied the performance of 12 companies listed on the Indonesia Stock Exchange (IDX) that implemented ESOP from 2011-2014. By using Wilcoxon signed rank test, they determined that there were no significant differences between the period of ESOP implantation and the period before ESOP implementation in the examined variables, including return on assets, return on equity, and net profit margin; thus, ESOP does not have any effect on firm performance. Anugraini & Khusnah (2020) conducted a study on manufacturers listed on the Indonesia Stock Exchange (BEI) between 2015 and 2019. They investigated the effect of the Employee Stock Ownership Program (ESOP) on firm profitability and value. They utilized the Partial Least Square (PLS) method for data analysis. The study findings revealed that the impact of ESOP on firm value is partially mediated by profitability and that ESOP has a positive effect on profitability. Syahida & Prasetiono (2019) studied manufacturing firms registered on Indonesia Stock Exchange for the period ranging from 2013 to 2017 and determined ESOP had an insignificant negative effect on firm financial performance. Andersen & Molnes (2021 conducted a study of firms listed on the Oslo stock exchange and determined that the granting of employee stock options ad positively influenced the ROA of the firms studied. Fatihat (2021) studied listed manufacturing firms listed in Indonesia and found that ESOP had a significant negative effect on the Return on Equity of firms under consideration.

Hypothesis Development

ESOP structure employed and factors Beyond ESOP itself that might affect firm profitability. From the empirical review, it is clear that research has yielded conflicting results, showing both favourable and unfavourable effects of ESOP on a firm's financial performance and profitability. The problem of conflicting results might stem from the size of the firms studied and the industry in which they operate. We have to note that ESOP has several potential advantages that could accrue to the firm, such as employee motivation and elimination of agency problems and the development of coherent hypotheses to gain further empirical insight, which can ultimately align the results in one order firms considering ESOP implementation becomes imperative. Such development of hypotheses needs an understanding of the concept of profitability and a theory to root it on.

Concept of Profitability

Godwin et al. (2021) conceptualize Profitability as a state of affairs in which a firm generates profit. When we look at profitability, we compare a firm's earnings relative to the costs incurred and the resources deployed to generate those earnings. Profitability is the Organization's main objective. Profitability can be a crucial benchmark for gauging efficiency and effectiveness, even though it might not be wise to use it as a definitive yardstick. Profitable firms can utilize justified investments to provide a decent return to investors. Profitability should not be looked at as a synonym for efficiency. It should be considered an efficiency indicator and management roadmap to enhance efficiency. In a business, world profitability can be used to measure the success or failure of organizations. Various accounting ratios are used to measure profitability, to name only a few, such as ROA, ROE, Gross profit margin and operating profit margin (Mwenda & Pastory 2022; Mwenda et al. 2021). In this study, we focus on ROE as a gauge to measure profitability. ROE was deemed a great tool since it is a financial ratio used to assess a firm's profitability by determining the rate of return shareholders earn. If ESOP puts ownership in the hands of the individual working for the firm, then it is fair to argue that they will be prompted to operate in such a manner that they enhance the return they obtain from their share of ownership. If that is the case, then ROE is a great metric that can be employed to test if ESOP affects a firm's quest for profitability.

Agency Theory

Jensen and Meckling (1976) are credited with inventing agency theory. The theory postulates that when principals and agents have distinct interests, a conflict will arise because agents do not operate harmoniously to further the principal's goals. According to Jensen and Meckling (1976), less than 100 percent management ownership proportions will eventually lead to an agency problem. This means that managers tend to act in a way that pursues their interests and are not based on maximizing the value of the principles when making everyday decisions (Wening & Damayanthi 2021). ESOP is a benefit the firm provides to recognize and reward employees for their achievements and reduce agency problems. It is anticipated that the ESOP will boost the level of employee motivation, which, in turn, will improve the performance of the firm Yunita (2018), which will be reflected in its profitability. ESOP incentive fosters employees' feelings of belonging and makes them feel part of the firm. Since ESOP provide workers with a chance to have a stake in the businesses they work for, we argue that such an opportunity will motivate them to higher productivity standards across all the departments of the firms and increase the overall profitability. This paper will test the agency theory from that vantage point.

Based on numerous results in the introduction section and literature review of this study, Verifying the assumption within the Tanzanian context has become necessary by looking at DSE-registered firms. An empirical foundation to determine the answers to the research question was going to be provided by the outcomes of the hypotheses investigated by researchers. This research aimed to determine whether ESOPs mattered in the pursuit of profitability, that is, does it have any significant positive influence on firms' profitability? Previous research has delivered inconsistent findings regarding the effect of employee stock ownership plans (ESOP) on firms' profitability. Some studies

have shown that ESOP may improve profitability, while others have found the opposite and some have found it to have no significant effect on firms' profitability. From the such standpoint of confusion, it was deemed necessary to investigate the following hypothesis in Tanzanian contexts to provide additional answers to the existing body of knowledge:

H1: ESOP has a positive effect on a firm's profitability.

This hypothesis is founded on the empirical findings that had mixed suggestions, where some researchers determined a positive or curvilinear relationship between ESOP and firm performance. At the same time, others found that ESOP has an insignificant or negative effect on profitability and firm performance. The hypothesis indirectly proposes that the potential benefits of an ESOP, such as increased employee motivation and a reduced agency problem, could contribute to a company's profitability by improving the firm's financial performance, which is reflected in the ROE ratio. This improvement would then reflect in the firm's increased ability to generate profits. The hypothesis also conceptualizes profitability as an efficiency indicator and management roadmap to enhance efficiency, and thus it complements well the agency theory on which it is grounded.

3. Method

Researchers opted for a longitudinal research design by analyzing only quantitative data to derive conclusions similar approach has been used by Andersen & Molnes (2021) in establishing the effects of ESOP on firms' profitability. This research used dependent variables ROA and ROE, which are financial ratios indicating firms' level of profitability. ROA was used as a measurement tool for Profitability resulting from operational efficiency. It is a measure of a company's ability to generate profit by efficiently employing its asset to sustain its operations over a long duration of time Strouhal et al. (2018). ROE was chosen as the metric to analyze because it gauges how well the firm generates profits for its shareholders (Albuja et al., 2011). Shareholders are a demographic that is of concern when we think of ESOP.

Secondary data was obtained from the financial reports of the studied firms, resulting in a panel dataset. The profitability of all firms registered in the DSE for a period of 16 years ranging from 2006 to 2021 was analyzed. Regression analysis was employed to assess the effect of ESOP on firms' profitability. The researchers carried out examinations required to ascertain that the data were normally distributed and that there was no multicollinearity among the variables employed in the study. A Hausman test was conducted to establish whether a model with fixed or random effects should be used. The employed regression model is presented in Equation I.

$$ROE_{it} = \beta_0 + \beta_1 ESOP_{it} + \beta_2 FS_{it} + \beta_3 FA_{it} + \beta_4 liq_{it} + \beta_5 Salgrowth_{it} + \beta_6 lev_{it} + \beta_7 firmprod_{it} + FD_i + TD_t + \mathcal{E}_{it} \quad \text{..... (I)}$$

ROE are dependent variables, β0 is constant, and β1 to β5 were coefficients of independent variables Employee Stock Ownership Plans (ESOP) firm size (F.S.) Firm age (F.A.), liquidity (liq), Sales growth (Salgrowth) and firm productivity (firmprod), whereas vectors F.D. (Firm Dummy) and T.D. (Time Dummy) represented firms time invariant specific effect and time-variant specific impact, respectively, $\mathcal{E}$ is the error term, and i and t are firm and time elements.

Table 1: Variables Measurement

Variables	Measurement	Expected Sign
Dependent Variable		
Return on Equity	Net profit before tax divided by total Shareholders' equity.	+ or -
Independent variable		
ESOP	It is dichotomous, i.e., 1 for the firm with ESOP and 0 if otherwise	+
Control variables		
Firm size	Natural logarithm of the total assets	+ or-
Liquidity	The current ratio was chosen as the measure of the firm's liquidity. This ratio was obtained for each firm from 2006 to 2021.	+
Firm age	Number of years since incorporation till the period of study	+ or –
Sales growth	This variable was measured by taking the current year's sales minus the previous year's sales and dividing the result by the previous year's sales	+
Leverage	This is the ratio of total debts to the firms' total assets from 2006 to 2021.	+
Firm productivity	This ratio was measured by dividing sales by the average of the current and past years' total book assets. This ratio measures the firm's ability to use assets productively.	+

Note that: + = positive and – = negative

Multicollinearity Test

The multicollinearity test used the Pearson correlation matrix in Table 2 and the variance inflation factor in Table 3. It can be seen from Table 2 that there is no strong intercorrelation between the study variables. Thus, there is a low risk of multicollinearity. This is also supported by Table 2, showing the variables' VIF factor, which is between the acceptable range of 1 - 10. A VIF score between 1 and 10 indicated a lack of multicollinearity (Kanai et al., 2020).
Notably, from the correlation matrix in Table 2, it can be observed that firm profitability exhibits positive correlation coefficients with all independent factors other than leverage, indicating that an increment in all other independent variables is likely to increase profits. In contrast, an increase in leverage is likely to decrease earnings.

Table 2: Pearson Correlation Matrix

	ROE	Liquidity	Leverage	Sales growth	ESOP	Firm productivity	Firm size	Firm age
ROE	1							
Liquidity	0.0652	1						
Leverage	-0.3768	0.1136	1					
Sales growth	0.0197	-0.0355	-0.0356	1				
Esop	0.2262	0.0919	0.0103	0.0148	1			
Firm productivity	0.1498	-0.1002	0.0091	0.0043	-0.0587	1		
Firm size	0.2111	0.1682	-0.1831	0.0606	0.0382	-0.1213	1	
Firm age	0.3132	-0.2527	-0.2718	-0.0771	0.0775	0.1859	-0.0434	1

Table 3 VIF for Multicollinearity Test

Variables	Firm age	Leverage	Liquidity	Firm size	Firm prod	Esop	Sales growth
VIF	1.21	1.14	1.12	1.09	1.06	1.03	1.02
1/VIF	0.826291	0.877151	0.889681	0.915169	0.944229	0.973696	0.982972

Autocorrelation

Analysis for verification of autocorrelation was carried out. The serial autocorrelation supposition is met when the values of similar variables display no resemblance among them over consecutive periods (Htay *et al*., 2011). When there is a high degree of autocorrelation amongst variables will result in inefficiencies in the regression model, and the coefficients will be highly influenced by correlation within the variable itself over time.

Table 4: Wooldridge Test for Serial Autocorrelation

Test for Autocorrelation		
Dependent variable	**F-value**	**P-value**
Return on Equity (ROE)	0.067	0.7102

Wooldridge's (2002) test says that the autocorrelation assumption is met when the p-value exceeds 0.05. This assumption was backed up by the fact that the p-value for Return on Equity, which was 0.7102, was higher than the 5% alpha limit that had already been set. (Table 4). So, the null hypothesis, H 0: No first-order autocorrelation, could not be rejected

Heteroskedasticity

The research examined heteroskedasticity to see if the residual variance was constant. According to Biorn (2017), the heteroskedasticity assumption is satisfied when the p-value exceeds 0.05. This hypothesis was evaluated using the Breusch-Pagan/Cook-Weisberg test. A suitable regression model for analysis should have constant variance (homoskedasticity) (Gujarati, 2004).

The p-value of about 0.072 determined the heteroscedasticity assumption was higher than the stated alpha level of 5%. (Table 5). Since there was no problem with heteroskedasticity in the study data, the null hypothesis was accepted. H o: Constant variance

Table 5: Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity

Test for Heteroscedasticity		
Dependent variable	$chi^2(1)$	P-value
Return on Equity (ROE)	7.64	0.072

Haussmann Test

The Haussmann specification test was utilized to determine whether to employ the Random Effect (RE) or Fixed Effect (F.E.) model. The RE Model implies that the group's mean scores are random from the population, while the F.E. Model believes that the group's mean scores are fixed. The null hypothesis of the Haussmann test asserts that the coefficient difference is not systematic. The results of the Haussmann test gave a Prob > chi2 = 0.2551 for the ROE model. This was more than the alpha level of 0.05. As a result, the null hypothesis was accepted (random effects would be consistent and efficient). The random effect model was adequate for the research results since the Prob > chi2, which was 0.2551, was larger than the 0.05 alpha threshold. As a result, the research used RE to determine the influence of Employee Stock Ownership Plans (ESOP) on the profitability of Tanzanian publicly traded enterprises.

4. Results and discussion

Descriptive Statistics on ESOP and Firm Profitability

Descriptive statistics were used to describe the main features of the dataset used in this study, as provided in Table 6 below. They were employed to summarize data and provide an overview of its main characteristics without making assumptions or drawing conclusions. The main variable of interest is the return on equity (ROE), liquidity, and leverage. From Table 6, ROE had an average value of 11.5%, meaning that the firm's profitability throughout the study was, on average, 11.5%. However, the maximum ROE attained was 69.26%, indicating some periods of exceptional profitability, while the minimum ROE was -84.24%, showing that losses were also experienced up to 84 % of the invested equity. The standard deviation of ROE was 20.9%, indicating that the firms' returns were highly volatile during the study period. A high standard deviation means that the values in the dataset are spread out over a wide range across firms, which suggests that the ROE varied greatly from year to year and from firm to firm. Regarding liquidity, the current ratio had an average value of 5.0946, which indicates that the firms had enough current assets to cover their current liabilities by a factor of five. The standard deviation of liquidity was 8.457, indicating that liquidity levels varied widely over the study period and across firms. The liquidity ranged from a minimum of 0.04 to a maximum of 13.69. Lastly, the mean leverage, measured by the ratio of total debts to total assets, was 0.5064. This means the company had a debt-to-asset ratio of 0.5064, indicating that it had more assets than debts. The leverage range was from 0.021 to 4.626, which suggests that the debt levels varied significantly across firms. The standard deviation of leverage was 0.6320, which indicates that the company's leverage was volatile throughout the study.

Table 6 Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROE (%)	253	11.5552	20.9427	-84.24	69.26
Liquidity	253	5.0946	3.4577	0.05	13.69
Leverage	253	0.5064	0.6320	0.021	4.626
Sales growth	253	0.7653	8.3821	-10.99	32.525
ESOP	253	0.7826	0.4132	0	1
Firm productivity	253	54.6798	20.8630	13	128
Firm size	253	7.6194	1.1457	4.578	10.138
Firm age	253	24.3201	17.2928	0	71

Regression Results

A random effect model was employed as a result of a Haussmann test. The random effect model has proved useful when analyzing data whose variation across entities in the sample is random and uncorrelated with the explanatory variable (Vătavu et al., 2018). Two estimations were carried out to provide robust outcomes. Estimation 1 included all the variables used in the study, while Estimation 2 dropped some control variables such as liquidity, leverage and firm size. This was done to check the consistency of the results under different circumstances.

Table 7 demonstrates a clear positive association between ESOP and firm profitability, as measured by ROE, in both estimations used for the firms listed in the DSE. This indicates that ESOP is significant with or without certain control variables; thus, the analysis results can be relied on. These results are consistent with the research of (Andersen

& Molnes,2021; Anugraini & Khusnah,2020) but differ from those of (Fatihat, 2021; Hamdani & Gumanti, 2019). The results suggest that firms that implement ESOP are more likely to experience higher levels of profitability. This positive impact could be because employees are more inclined to take responsibility when they believe the company values them. In return for the company's care and investment, employees work hard to ensure its success, resulting in increased profitability (Huang et al., 2021). This positive relationship between ESOP and profitability supports the agency theory, which suggests that ESOP firms are likely to decrease the conflict of interest between shareholders and those responsible for daily operations. Reducing conflict of interest may enhance employee motivation, leading to increased profitability (Yunita, 2018). Other control variables included in the study did not yield significant results, except for firm age and productivity, which had a positive impact on profitability. Such a positive impact might have stemmed from older and more productive firms having had more time and resources to develop their operations and management strategies, which may have led to higher profitability.

Table 7 Baseline Random Effect Model on ESOP And ROE

Variables	(1)	(2)
Liquidity	0.2615*	
	(0.147)	
Leverage	-4.1202**	-5.4461***
	(1.898)	(1.851)
Sales growth		0.3237**
		(0.183)
Esop	6.9487***	6.8650***
	(2.242)	(2.220)
Firm productivity		0.1036**
		(0.049)
Firm size	1.6203*	
	(0.948)	
Firm age		0.4413***
		(0.139)
Firm dummy	Yes	Yes
Time dummy	Yes	Yes
Constant	-29.9775**	-29.5664**
	(14.881)	(14.803)
Observations	253	253
Number of FIRMS	21	21

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

High debt levels can increase financial risk and reduce a firm's ability to invest in profitable opportunities. On the other hand, leverage, a measure of a firm's debt levels, may negatively impact profitability. Even though ESOP had a significant positive effect on firm profitability, it is important to note that effect might depend on various factors, such as the specific design of the ESOP plan, the size of the firm, and the industry in which the firm operates.

Robustness Check on ESOP and Firm Profitability

Pooled least square (POLS) was employed to see if the random effect baseline model results were robust. POLS was utilized because it is appropriate and simple for estimating the relationship in econometric models (Mao and Gu, 2008). The variables in POLS analysis were the same as those in the baseline model. Two estimations were also carried out to verify the consistency of the outcomes. Where estimation 2 dropped some of the control variables.

From the results in Table 8, it can be observed that the variable ESOP still had a significant positive effect on ROE, in all two estimations, even in the POLS model. This result indicates that the random effect baseline model findings are robust and can be generalized. These results are consistent with previous studies that have found a positive relationship between ESOP and firm profitability (Andersen & Molnes, 2021). In addition, the data indicate that liquidity and sales growth had a favorable impact on ROE. However, leverage had a negative impact on profitability metrics as per the baseline random effect model. The findings also suggest that company age and productivity positively affected profitability. Older enterprises are more established and have a stronger reputation, which may lead to greater client loyalty and higher profitability.

On the other hand, firm productivity may lead to cost savings, better efficiency, and higher profitability. Every other result from the POLS model is in line and supports the results obtained from the random effect model. Thus, at this particular juncture, it is reasonable to argue that the findings from the random effect baseline model are robust and can be generalized based on the evidence provided by the POLS analysis.

Table 8 POLS Model on ESOP and ROE

Variables	(1)	(2)
Liquidity	0.2671*	
	(0.146)	
Leverage	-3.3904*	-3.5969*
	(1.928)	(1.931)
Sales growth		0.2226*
		(0.114)
Esop	6.8760***	6.8568***
	(2.230)	(2.238)
Firm productivity		0.1017**
		(0.049)
Firm size	5.4627***	
	(1.726)	
Firm age		0.4051***
		(0.137)
Firm dummy	Yes	Yes
Time dummy	Yes	Yes
Constant	-29.5664**	-29.5664**
	(14.803)	(14.803)
Observations	253	253
Number of FIRMS	21	21

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

5. Conclusion

This study aimed to examine the impact of ESOPs on the pursuit of profitability by firms registered in the DSE. The research approach used in this study was purely quantitative, meaning that we relied on numerical data to measure the relationship between variables. The census sampling approach was used to incorporate all the listed firms in the study. After conducting the Haussmann test, we used a random effect model to analyze the data. This model type considered that each firm in the study was unique and had its characteristics, which could affect the analysis results. From the results and the approaches used in data analysis, we can conclude that ESOP has a positive effect on the firm's quest for profitability. The firm's ownership structure is refined when an ESOP is implemented. Such a shift in ownership structure increases operational framework diversity since several people are engaged and invested in increasing the firm's profitability. ESOP enables regular employees to become shareholders, the most vital participants in any firm. Their vested interest in the company increases their morale and output. ESOPs empower employees, who are the most important internal stakeholders, with additional authority to participate in firms' decision-making, alleviating the internal-external informational bias strain and encouraging the firm's long-term success. In addition to that, stock ownership plans are crucial for fostering change and motivating management to take creative initiatives. When managers and executives lack a personal investment in the firm's success, they are less inclined to welcome innovations and new ideas that might boost the company's profitability. Establishing an ESOP structure, which distributes a share of revenues as dividends, encourages all concerned parties to develop innovative solutions.

This study was limited to two areas. First, it was geographically limited, focusing only on firms registered to operate in the DSE. Such limitation exposes the study to cultural bias as the outcome might differ under other geographical circumstances. Secondly, the study focused only on publicly traded firms and left out the privately owned firms. Thus, we do not obtain an in depths picture of the whole perspective of ESOP under all circumstances of firm ownership. We recommend that future researchers incorporate the influence of cultural diversity and compare the effect of ESOP on various geographical circumstances. We urge the firms to incorporate ESOP in their daily plans as the results have shown that with its incorporation, the firm's quest for profitability is enhanced.

The outcome of this research is of great use to policymakers and business owners. For the government to collect taxes, firms have to make a profit. If ESOP enhances the quest for profitability, it lies within the policymakers' domain to influence the adoption of ESOP, eventually leading to greater profits and taxes shortly. For business owners, the results of this study can be used as a root from which they can have a reason to grow their own ESOP and increase their personal wealth.

Author Contribution

Author 1: conceptualization, writing original draft, data curation, formal analysis, investigation, methodology.
Author 2: review and editing, writing review and editing, supervision, validation, visualization.

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Conflict of Interest
The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

References

Albuja, C. D., Garcia, F. G., Moreiras, L. M. F., & Tambosi Filho, E. (2011). Where to invest in BRICS? An analysis from the point of view of the industrial organization. *Revista de Administração de Empresas*, *51(4)*, 349–369.

Andersen, F. O. O., & Molnes, J. J. (2021). *Employee stock options and company performance on the Oslo Stock Exchange (Master's thesis)*. Handelshøyskolen BI Norwegian Business School.

Anugraini, M., & Khusnah, H. (2020). Employee Stock Ownership Program (ESOP) Dan Nilai Perusahaan Dengan Profitabilitas Sebagai Veriabel Intervening. *Accounting And Management Journal*, *4*(2), 113–124.

Barney, J. B. (1990). Employee stock ownership and the cost of equity in Japanese electronics firms. *Organization Studies*, *11*(3), 353–372.

Breakthroughattorneys, W. (2015). *Employees Share Option Schemes – Tanzanian Case*. https://breakthroughattorneys.com/employees-share-option-schemes-tanzanian-case/ Accessed April 9, 2023

Biorn, E. (2017). Economics of Panel Data; Methods and Applications. Oxford University Press. 418pp.

Dasilas, A. (2022). The Nonlinear Relationship between Esops and Firm Performance: Evidence from China. (Manuscript under review) *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4103102

Du, F., Li, Y., Chen, J., Han, Y., Xu, Y., & Wang, J. (2020). The Effects of Employee Stock Ownership in Chinese Listed Companies. In IEIS2019: Proceedings of the 6th International Conference on Industrial Economics System and Industrial Security Engineering (pp. 165-179). Springer Singapore.

Fatihat, G. G. (2021). The Effect of the Employee Stock Ownership Program and Growth on Return On Equity (Case Studies in Manufacturing Companies Listed on the Indonesia Stock Exchange in 2015-2019). *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(8), 1267–1275.

Gujarati, D. N. (2004). Basic econometrics (4thEdition). McGraw-Hill, New Yo: McGraw-Hill. 1027pp

Godwin, Adaobi Ozioma, & Udeh, Francis N. P. (PhD). (2021). the Effect of Human Resource Accounting (Hra) on Profitability: A Study of Selected Firms Quoted on the Nigerian Stock Exchange. *EPRA International Journal of Economics, Business and Management Studies*, *8(11)*, 61–68. https://doi.org/10.36713/epra8891

Htay, S. N., Rashid, H. M., Adnan, M. A., & Meera, A. K. (2011). Corporate governance and risk management information disclosure in Malaysian listed banks: panel data analysis. *International Review of Business Research Papers*. 7(4), 159-176.[https://www.academia.edu/5925041/], visited on 23/09/2018.

Hamdani, A. M., & Gumanti, T. A. (2019, October). Company Profitability Before and After Employee Stock Ownership Program in 2011-2014. In 2019 International Conference on Organizational Innovation (ICOI 2019): volume 100 (pp. 553-556). Atlantis Press..

Huang, P., Wang, Y., & Peng, J. (2021). Research on the Influence of Employee Stock Ownership Plan on Employee Innovation Behavior from the Perspective of Psychological Ownership. In Proceedings of the Fifteenth

International Conference on Management Science and Engineering Management: Volume 2 15 (pp. 758-773). Springer International Publishing.

Handayani, F., & Yurniwati, Y. (2020). Analysis of The Influence of Employee Stock Ownership Program (ESOP) Application of Company Financial Performance. Jurnal Ilmiah Universitas Batanghari Jambi, 20(2), 616-625.

Kanai, M., Noguchi, M., Kubo, H., Nozoe, M., Kitano, T., Izawa, K. P., Mase, K., & Shimada, S. (2020). Pre-stroke frailty and stroke severity in elderly patients with acute stroke. *Journal of Stroke and Cerebrovascular Diseases*, *29*(12), 105346.

Kisyeri, D. M., & Kira, A. R. (2022). The Influence of Working Capital Management on the Profitability of Listed Manufacturing Companies in Tanzania. *Asian Journal of Economics and Empirical Research*, *9*(2), 73–82.

Kruse, D. L. (2018). Amplifying Workers' Voices in an Evolving Economy. *Invested*, *2*, 1–5.

Laudya, R., Handoko, J., & Si, M. (2019). The Effect of Employee Stock Option Plan on Market. *Jaa*, *2*(2), 13–39.

Maghraoui, R., & Zidai, J. (2016). Effects of Employee Ownership on the Performance of French Companies SBF120: Empirical Validation. *Finance and Auditing Studies*, *2*(4), 195–217.

Makkonen, E. (2021). Employee Share Ownership and Company Performance (Bachelor's thesis). Tallinn University of Technology.

Mwenda, B., & Pastory, D. (2022). Financial Performance of Firms Before and After Listing on Dar es Salaam Stock Exchange, Tanzania. In Sustainable Education and Development–Making Cities and Human Settlements Inclusive, Safe, Resilient, and Sustainable: Proceedings of the Applied Research Conference in Africa (ARCA), 2021 10 (pp. 341-351). Springer International Publishing.

Mwenda, B., Ndiege, B. O & Pastory, D (2021). The influence of Firm leverage on performance Among Listed Firms on Dar es Salaam Stock Exchange. Springer International Publishing. Sustainable Education and Development, pp. 273–283, 2021. https://doi.org/10.1007/978-3-030-68836-3_24

Mujwahuzi, G. V., & Mbogo, C. J. (2020). Effects of Capital Structure on Business Profitability of Processing Enterprises Listed on the Dar es Salaam Stock Exchange, Tanzania. *Journal of Finance and Accounting*, *8*(4), 165 - 171.

Ngollo, M., & Mwenda, B. (2022). Effects of corporate governance disclosure on profitability of public listed firms in Tanzania. *Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah*, *10*(5), 325–336.

Nkubitu, J. K. (2013). Effect of Employee Stock Ownership Plans on Financial Performance of Companies Listed in the Nairobi Securities Exchange (Doctoral dissertation), University of Nairobi.

Hamdani, A. M., & Gumanti, T. A. (2019, October). Company Profitability Before and After Employee Stock Ownership Program in 2011-2014. In 2019 International Conference on Organizational Innovation (ICOI 2019) (pp. 553-556). Atlantis Press.

Nyambane, P. K. (2011). Effects of employee share ownership plan adoption on financial performance of listed firms in Kenya (Doctoral dissertation), University of Nairobi.

Ray, K. K. (2016a). Employee Stock Option Plan and Firm Performance: A Quantile Regression Approach. *Asian Journal of Empirical Research*, *6*(6), 152–166. https://doi.org/10.18488/journal.1007/2016.6.6/1007.6.152.166

Razzaq, A. (2018). Effect of Employee Stock Ownership Plans (ESOPs) on the performance of Small business in Karachi. *Munich Personal RePEc Archive*, *84322*.

Sithole, S. (2019). Unpacking Employee Share Ownership Plans ESOPs. In *SATRI working paper*.

Strouhal, J., Štamfestová, P., Ključnikov, A., & Vincúrová, Z. (2018). Different approaches to the ebit construction and their impact on corporate financial performance based on the return on assets: Some evidence from Czech top100 companies. *Journal of Competitiveness*, *10*(1), 144.

Syahida, A. Z., & Prasetiono, P. (2019). Pengaruh Employee Stock Ownership Plan (Esop), Pengungkapan Corporate Social Responsibility (Csr), Innovation, Leverage, Dan Firm Size Terhadap Corporate Financial Performance (Studi pada Perusahaan Manufaktur yang Listing di Bursa Efek Indonesia Periode 2013-2017). *Diponegoro Journal of Management*, *8*(2), 159–170.

Tekin, H., & Polat, A. Y. (2020). Agency theory: A review in finance. *Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi*, *8*(4), 1323–1329.

Vătavu, S., Lobonț, O.-R., Para, I., & Pelin, A. (2018). Addressing oil price changes through business profitability in oil and gas industry in the United Kingdom. *PloS One*, *13*(6), e0199100.

Wang, K. (2020, August). The Impact of Employee Stock Ownership Plan on Corporate Performance. In 2020 The 4th International Conference on Business and Information Management (pp. 1-7).

Wening, A. A. D. K., & Damayanthi, I. G. A. E. (2021). Factors Affecting the Earnings Management of State-Owned Enterprises in 2010-2019. *American Journal of Humanities and Social Sciences Research*, *5*(4), 487–494.