Determinants of Financial Performance of Floriculture Companies in Oromia Regional State of East Shoa Zone,

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Abstract

This study aimed *to investigate the determinants of the financial performance of floriculture companies in the Oromia Regional State - East Shoa Zone. The study used an explanatory research design with panel data for the period of 2011 to 2020 by selecting purposively 10 samples out of 11 farms. Financial performance is represented by the return on assets. Liquidity, leverage, asset utilization, operating expense, cash conversion cycle, innovation, farm size, and age were used as independent variables, and an exchange rate as a control variable. Furthermore, the collected data were analyzed by using descriptive, correlation, and regression analysis techniques. The random effects model was chosen, and the data were summarized using* E-views *10 statistical software. The findings revealed that leverage, asset utilization, cash convection cycle, and farm size had a positive and significant effect on return on assets, whereas liquidity, operating expenses, innovation, and farm age had negative and significant effects, yet exchange rate had a negative and insignificant effect. The findings of the study suggest that reinvestment of idle resources, maintaining an optimum level of debt, arranging group exporting, capital-intensive approach, outsourcing non-operating activities, locally supplying rose seeds, and diversifying the asset base are recommended to be in place to sustainably enhance the return for flower farms.*

Keywords: Determinants, Financial performance, Floriculture firms, Panel data.

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Introduction

In today's globalized business, the goal of any firm is to be competitive, maximize stockholders' wealth, and ensure sustainable growth in the value of assets. Equally important is the goal to identify exactly what factors determine the financial performance of companies. Engaging in a business activity without identifying factors that boost or impair return is going through the darkness with no light. Therefore, identifying the viral determinants will support a firm to strategize its decision related to financing, investment, resource management, and marketing aspects. In addition, those firms that properly identify factors affecting their financial performance have ample opportunity to easily capture the timing, return, and risk of their investment decisions. Nonetheless, on the contrary, firms that embark on business without clear identification of factors affecting financial performance suffer a lot and even go out of the market. Notedly, some factors contribute to the increment of financial return, yet others will degrade it. For instance, efficient way of resource utilization, lower operating expenses, advanced technology through R and D, an appropriate mix of financing sources, managerial skills, service quality, and compliance with government rules and

regulations increase their financial performance, illiquidity, high insolvency conditions, prolonged asset conversion assets periods, small economies of scale, holding depreciated and deteriorated assets, and fewer competitiveness results in deterioration of the company's asset value (Marshall, 2017). Hence, identifying such determinants of a firm's financial performance is vital for any profit-orientated firm to take timely actions and even refrain from financial failure without the exception of floriculture firms.

Problem Statement

In line with such rationale, nowadays, identifying the determinants of financial well-being and successful operations of firms captures the interest of many researchers around the globe. For instance, in Malaysia, Muhammad (2013) conducted a study on determinants of the financial performance of small and medium enterprises and found the positive effects of age, intellectual capital, innovative capability, and value production on the financial performance of the firms. Abate (2013) examined the performance of insurance companies and found that growth, age, asset

tangibility, volume of capital, and size were positively related. Yet, liquidity and leverage have a significant negative effect on profitability. Kirubel (2015) also investigated and found the positive effect of demand-side variables on the profitability of the Ethiopian Airline industry. Meseret et.al. (2017) studied the determinants of the financial performance of wheat flour-producing companies and found that capital adequacy, asset utilization, age, expense management, and leverage have significant and positive effects. Yadollahzadeh et.al. (2017) studied the determinants of financial performance and found that brand value, marketing expense, size, and dividend payout are positively related to profitability while leverage has a negative effect. Aster (2019) also identified the positive effects that capital adequacy, liquidity, size, age, loss, and leverage have on the financial performance of selected insurance firms.

Even though a lot of studies were conducted in different sectors about determinants of the financial performance of firms, major inconsistencies were observed among their findings. For instance, asset utilization was found to be a positive and significant effect on profitability (Okwo et.al.,

2012; Enekwe, 2013; Meseret et.al., 2017; and Akinleye et. al., 2018). Furthermore, while Azim et.al., (2015) found that the cash conversion cycle has positive and significant effects, the study of Orjinta et.al., (2018) showed that it has a negative effect. Age has positive and significant effects on both (Alex et.al., 2016 and Claudio et.al.,2010) which contradicts Muhammad et al., (2013) result. Hassan et.al., (2016) and Maria (2015) found that innovation has a significant influence, but it has negative effects (Doms, 2016). Liquidity, leverage, and operating expense have negative and significant effects on the profitability of Habtamu (2012), Yadollahzadeh et. al., (2013), Yodit (2017), and Tigist (2018) which is contrary to the studies by Ezra, (2013) and Aster, (2019).

Despite the above studies, the floriculture sector got little attention since most of the previous studies (Windsor and Cybinski, 2009; Sharma and Kumar, 2011; Salim, 2012; Birhanu, 2012; Abate, 2013; Ezera, 2013; Victor, 2013; Azim et.al., 2015; Haileyesus, 2016; Doms, 2016; Owolabi, 2018; and Radhev et.al., 2019) focused on financial sectors. And others (Yana, 2010; Chen et.al., 2012; Getachew, 2014; Kirubel, 2015; Tesfaye, 2015; Solomon, 2016; Yodit, 2017;

Akinleye et.al., 2018; and Seid, 2019) investigated the determinants of financial performance in different manufacturing sectors of airlines, food processing, textile and garment, chemical, cement, ceramics, leather factories, and other industries.

On the other hand, it is an undeniable fact that the sector creates a paradox among the government, community, and owners themselves. This is mainly because of its unique nature of operations. For both the government and the owners, the sector was considered the main cultivator of economic growth, supply of foreign currency means to reduce the unemployment rate, and source of income, whereas the larger community and the environment advocator perceive it as a sector with serious health and environmental risk. Now this contradicting scenario has exposed and severed the sector from tremendous return fluctuation because of prevailing land policy and restriction, less acceptance from the community as a result of huge and continuous usage of chemicals and fertilizer, variation of product and productivity, limited capacity of locally produced inputs, huge cargo and packing cost, stiff competition of market share and size abroad. Thus,

to fill the above research and methodology gaps, this study intended to investigate the determinants of financial performance and their possible effects through empirically testing variables for the selected floriculture firms in the mentioned study area and period.

Hypothesis

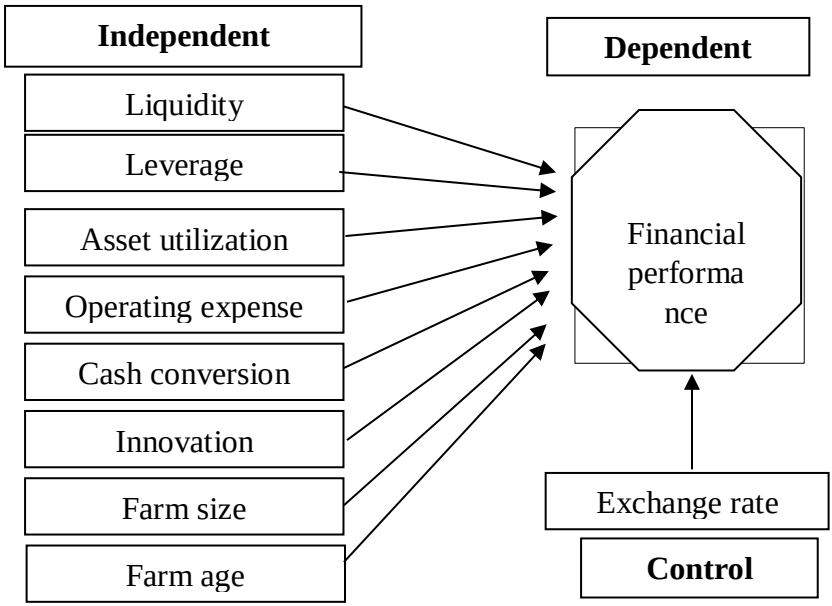
- ✓ H1: Liquidity has negative and significant effects on financial performance.
- ✓ H2: Leverage has a positive and significant effect on financial performance.
- ✓ H3: Asset utilization has a positive and significant effect on financial performance.
- ✓ H4: Operating expense has a negative and significant effect on financial performance.
- ✓ H5: The cash conversion cycle has a positive and significant effect on financial performance.
- ✓ H6: Innovation has a positive and significant effect on financial performance.
- ✓ H7: Farm size has a positive and significant effect on return on financial performance.

✓ H8: Farm age has a negative and significant effect on return on financial performance.

✓ H9: Exchange rate has a negative and significant effect on financial performance.

Conceptual framework

Figure 1: Conceptual framework



Sources: Self-extracted (2021)

Research Methods

The study is explanatory, and it involved the testing of hypotheses quantitatively. The main content of this research approach was to find out a concise address to the research objectives through the collection and analysis of information from firms. The study was mainly based on secondary financial data including income statements, balance sheets, and cash flow statements. A ten-year panel data (2011 to 2020) was used; the data was gathered from the Ministry of Revenue Adama Branch Office and the National Bank of Ethiopia. The target population of the study encompassed all floriculture companies located in Oromia Regional State, East Shoa Zone. Consequently, to evaluate the influence of independent variables on the financial performance of floriculture companies, ten flower firms were purposively selected based on sampling criteria of operation period (2011-2020), establishment period (before 2011), and annual submission of full financial statement reports. Nevertheless, the remaining one was not covered in the study since it did not fulfill the sampling criteria.

Model Specifications

In line with the theoretical guidelines of previous researchers such as Hamdala (2016), Haregewayin (2017), and Tadesse (2017), this study employed a panel data regression model to investigate the determinants of the financial performance of selected floriculture firms.

$$ROA_{it} = \beta_o + \beta_1 * LIQ_{it} + \beta_2 * LEV_{it} + \beta_3 * AU_{it} + \beta_4 * OER_{it} + \beta_5 * CCC_{it} + \beta_6 * INNO_{it} + \beta_7 * FS_{it} + \beta_8 * FA_{it} + \beta_9 * EXR_{it} + \varepsilon_{it} \quad \text{----------Eq1}$$

Measurement and descriptions

Table 1: Variables Descriptions, Measurement, and Result

Variables	Description	Measurements	Expected result	Actual result
Return on asset	The ability to generate earnings at a rate of total assets in a specific period	Net Income after Tax Total farm Asset		
Liquidity	The ability of the business to meet financial obligations as they come due	Total Current Asset Total Current Liabilities	Negative	Negative

Leverage	The ability of the company to pay its long-term obligations using the total assets	Total Farm Liability Total Farm Asset	Positive	Positive
Asset utilization	How well a company is efficiently in utilizing its all asset to generate sales	Farm Total Sales Total Farm Asset	Positive	Positive
Operating expenses	The costs associated with a company's main operating activities	Total Farm Expense Total Farm Asset	Negative	Negative
Cash conversion cycle	The average period required to make an initial outlay of cash to produce goods, sell the goods, and receive cash	Days of Sales Outstanding + Days of Sales in Inventory - Days of Payables Outstanding	Positive	Positive
Innovation	The potential cost incurred by flower firms for laboratory research	Cost of R and D Farm Net sales revenue	Positive	Negative
Farm size	The value of the total asset, or total sales volume which the company has at any time	Natural Log. of Total Farm Assets	Positive	Positive

Farm age	The period that floriculture companies have been in operation since their initial inception	Natural Log. of Total Farm Age	Negative	Negative
Exchange rate	The foreign currency received to sell one unit of home currency	The ratio of the annual average Birr to Dollar or Euro	Positive	Negative

Results and Findings

Descriptive Analysis

Table 2. Summary of Descriptive Statistics

	ROA	LIQ	LEV	AU	OER	CCC	INNO	FS	FA	EXR
Mean	1.54898	0.04534	0.59514	2.87226	0.18463	75.4138	0.04047	8.22122	1.11209	1.25076
Maximum	5.54007	0.52661	2.24028	5.4569	0.60995	489.961	0.88598	9.4427	1.17609	1.41678
Minimum	-1.60053	-0.00602	0.09276	0.86081	0.0027	3.52027	0.00022	6.63147	1.04139	1.01789
Std. Dev.	1.45055	0.08138	0.33924	1.14718	0.1632	102.369	0.10501	0.53534	0.04073	0.11132

Source: Computed from E-views10 software result

Table 2 indicates the average ROA of the surveyed companies was 1.54% which reveals a company's financial capacity to generate a positive return and helps it become more interesting to investors by utilizing its total assets on average. In addition, there is a big gap between the lowest

and highest value, revealing a big difference in financial performance among firms. On the other hand, the remaining financial ratios demonstrate partly their operations that were enormously different from each other. Based on these numbers, we can first conclude that the business performance of some companies in the floriculture firms between 2011 and 2020 was not appreciated even though the economy of Ethiopia developed. As a result, such conditions indicate that some of the firms under study were effective in utilizing their total assets to generate profit, while others were ineffective and even incurred losses during the study period. In other words, there were firms that did not take advantage of the development of the economy, indicating a need to find out factors impacting the financial performance and demanded reasonable measures suggested to improve their business results.

Correlation analysis

Table 3. The correlation coefficient between variables

	ROA	LIQ	LEV	AU	OER	CCC	INNO	FS	FA	EXR
ROA	1.000000									
LIQ	-0.31318	1.000000								
LEV	-0.06912	-0.1385	1.000000							
AU	0.56155	0.04912	-0.3383	1.000000						
OER	-0.4931	-0.05672	0.26319	-0.49005	1.000000					
CCC	0.273910	0.08871	-0.12538	0.341613	-0.20176	1.000000				
INNO	-0.22902	-0.02944	0.27477	-0.26236	-0.00155	0.141785	1.000000			
FS	0.11528	-0.21923	0.154867	-0.36313	0.06761	-0.26164	0.19705	1.000000		
FA	-0.27684	0.08244	-0.06018	-0.20831	0.15961	-0.1883	-0.10966	0.22533	1.000000	
EXR	-0.09872	0.00479	-0.051	-0.15978	0.31827	0.070720	-0.2474	0.08319	2.22E-17	1.000000

Source: Computed from E-views10 software result

ROA has a correlation coefficient of 56.15%, 27.39%, and 11.52% with asset utilization, cash conversion cycle, and farm size respectively. These results indicate that asset utilization, farm size, and cash conversion cycle had reasonable positive effects on ROA. Specifically, the effect of asset utilization was strongly positive. However, ROA had a negative correlation coefficient of 31.32% with liquidity, 6.91% with leverage, 49.31% with operating expenses ratio, 22.9% with innovation 27.685 with farm age, and 9.87% with the exchange rate. This means that operating expenses had a strong negative effect and liquidity, and innovations and farm age had a moderately negative effect on ROA. But leverage and exchange rates had a weak negative effect on the ROA. In addition to this, cash conversion cycle and farm size had a

weak positive effect on ROA with a coefficient value of 27.39% and 11.52% respectively. Finally, ROA had the highest positive correlation coefficient of 56.15% with asset utilization and the greater negative correlation coefficient with operating expense along with a coefficient value of 49.31%.

Tests for the Classical Linear Regression Model Assumptions

Homoscedasticity assumption

Table 4: Heteroskedasticity White test

F-statistic	1.137850 7	Prob. F (54,45)	0.1351
Obs*R-squared	62.32398	Prob. Chi-Square (54)	0.2042
Scaled explained SS	55.47534	Prob. Chi-Square (54)	0.4189

Source: Computed from E-views10 software result

The null hypothesis for this test is that there is no heteroscedasticity:

Ho: σ=σ i for all i (homoscedasticity)

H1: σ ≠ σ i for all i (heteroscedasticity)

As a White test of F- stat, obs R squared, and explained variables are 0.1351, 0.2042, and 0.4189 respectively that greater than 0.05. Hence, there is no heteroscedasticity problem in this model.

Autocorrelation Assumption

Table 5. Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.615463	Prob. F (2,88)	0.5427
Obs*R-squared	1.379484	Prob. Chi-Square (2)	0.5017

Source: Computed from E-views10 software result

The null and alternative hypotheses are:

*H*0 :ρ1 = 0 and ρ2 = 0 and . . .and ρr= 0

*H*1 :ρ1≠ 0 or ρ2≠ 0 or . . . or ρr≠ 0

According to this test, if the p values of the f stat and OBS R squared are greater than 0.05 the null hypothesis would not be rejected. Hence, there is no problem with autocorrelation in the model.

Multicollinearity Assumption

There are two hypotheses for the multicollinearity assumption test;

H0: There is no multicollinearity among the independent variables
H1: There is multicollinearity among the independent variables.

From the correlation matrix, since the maximum coefficient value between the independent variables is 0.49 which is below the standard, there is no multicollinearity problem in the regression and the null hypothesis will not be rejected.

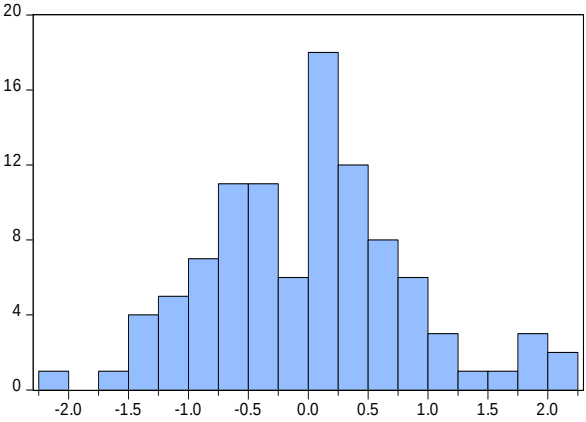
Normality Assumption

There are two hypotheses in this test;
H0: The residuals are normally distributed.
H1: The residuals are not normally distributed

As shown in Figure 2, the coefficient of kurtosis and sleekness of 3.19 and 0.24 is approximately close to the standard coefficient of 3 and 0 respectively. Besides, the Bera-Jarque

statistic had a P-value of 0.55, which is insignificant even at a 10% significance level. It implied that the residual is normally distributed, and the data are consistent. Hence, the null hypothesis is not rejected.

Figure 2: Normality Test for Residuals



Source: Computed from E-views10 software result

Model Fitness

Table 6: Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	8	1.00000

Source: Computed from E-views10 software result

To examine the model fitness, this study employed a Hausman test, and the test result showed a cross-section random effect p-value of 1.00000 which is greater than 0.5 and the estimated cross-section random effects variance is zero. Hence the study used the random effect panel model.

Regression Analysis

Table 7. Multiple regression results

Variable	Coefficient	Std. Error	t-Statistic	
C	0.449930	3.119556	0.144229	0.8856
LIQ	-4.628301	1.130169	-4.095230	0.0001*
LEV	0.638 908	0.290875	2.196501	0.0306*
AU	0.529552	0.105230	5.032340	0.0000*
OER	-2.417181	0.671562	-3.599341	0.0005*
CCC	0.003231	0.001000	3.229742	0.0017*
INNO	-4.287049	1.010769	-4.241372	0.0001*
FS	1.015101	0.193857	5.236339	0.0000*
FA	-6.812637	2.352174	-2.896315	0.0047*
EXR	-0.787817	0.914910	-0.861087	0.3915
R-squared	0.675919	Mean dependent var		1.548979
Adjusted R -squared	0.643511	S.D. dependent var		1.450554
S.E. of regression	0. 866078	Sum squared resid		67.50825
F-statistic	20.85645	Durbin -Watson stat		1.736854
Prob (F-statistic)	0.000000			

***Source**: Computed from E-views10 software result * p<0.01are significant at the 1%*

The above random effect regression result depicts that the value obtained from R- squared statistics and the Adjusted-R-squared statistic of the model were 67% and 64% respectively. This indicates that the independent variables jointly explain an increase in financial performance by 64%. The remaining 36% are explained by other variables which are not included in the model. Therefore, these variables jointly are good explanatory variables to describe the determinants of the financial performance of floriculture companies. The regression results also showed that the F-statistic and the F-statistics p-value of 20.85645 and 0.000000 respectively disclosed that the independent variables in the model were able to explain variations in the dependent variable. Hence, the null hypothesis that all the coefficients are jointly zero should be rejected. After running this equation by using E-views10 software, the following regression model output was generated.

$$ROA_{it}=0.44-4.62LIQ+0.63LEV+0.52AU-2.41OER+0.003CCC-4.28INNO+1.01FS-6.81FA-0.78EXR+\varepsilon_{it}$$

(3.11) (1.13) (0.29) (0.10) (0.67) (0.001) (1.01) (0.19) (2.35) (0.91)

Discussion

H1: Liquidity has negative and significant effects on return on assets.

Based on the beta coefficient, taking all other explanatory variables constant, a one-unit increase in liquidity leads to a 4.62 unit decrease in ROA, but it may vary by 1.13 on average, and it is statistically significant at a 1% significance level and 99% confidence interval. Hence, the null hypothesis was rejected because liquidity had a negative significant influence even at a 1% significance level. This result shows that firms under study may not convert all current assets into cash which is attributed to an overdue of account receivables, inventory, and prepaid expenses. This is mainly because the flower firms held excess cash, raw seeds, chemicals, and pesticides which did not enter into the production cycle and were attributed to a low conversion cycle. This resulted in missing investment opportunities, and high transaction, and

storage costs. Hence, in such a situation the profitability level tends to decline because the firms have missed opportunities to invest in those funds and as a result, the opportunity cost would be high. It can be concluded that as the floriculture companies hold excess and unutilized cash balances and store inventory which are unprocessed and unused chemicals and stems, the rate of return would tend to be low. This finding is in line with the trade-off and agency theory which suggests that a firm should target an optimal level of liquidity to utilize the possible advantage of holding cash.

H**2**: Leverage has a positive and significant effect on return on assets.

Leverage has a 0.63 beta coefficient, a 0.29 standard error, and a P value of 0.0306. Holding other independent variables constant, the beta coefficient indicates that a one-unit increase in leverage results in a 0.63 unit increase in ROA, but it may vary by 0.29 on average, and it is statistically significant at a 5% significance level and 95% confidence interval. This is because most of the floriculture firms were owned by foreign investors and entered the farm market with foreign currency of Dollar and Euro which are largely demanded by most local

banks. Accordingly, the prevailing stiff competition among local banks paves the way for companies to get debt finance with a minimum cost even below the market rate. Besides, the cost of debt would be less than the cost of equity which has more tax advantages. Consequently, this finance would be utilized for expansions of the greenhouse coverage that brings more sales and returns. This finding is consistent with the findings of (Ghosh et al, 2006; Girum, 2009; Lorpev and Kwanum, 2012; Abate, 2013; Meseret et.al., and Getahun, 2017 and Radhev et.al., 2019), trade-off, traditional and agency theory which states that the deductibility of corporate interest payments induces more profitable firms to finance with debt. The information symmetry makes debt funds cheaper than equity funds since higher leverage helps to control agency problems by forcing managers to pay out more of the firm's excess cash and a strong commitment to pay out a larger fraction of their pre-interest earnings to debt payments. However, in sharp contrast with (Heydar, et.al.,2009 and Yodit, 2017), and with the pecking order model which states that firms prefer raising capital first from retained earnings, second from debt, and third from issuing new equity.

H3: Asset utilization has a positive and significant effect on return on assets.

By assuming other independent variables are constant, a 0.52 beta coefficient, 0.10 standard error, and a p-value of 0.0000 indicate that a 100% increase in asset turnover results in a 52% increase in ROA but it may vary by 10% on average, and it is statistically significant at 1% significance level and 99% confidence interval. This implies that increasing the ratio of asset turnover leads flower farms to generate more return, and consequently enhances the overall financial efficiency and effectiveness of management in the utilization of all assets to generate ultimate sales and profit. The significant p-value i.e., 0.0000 also enabled the researcher to reject the null hypothesis at a 1% level of significance. Such a result is consistent with (Ghosh et.al., 2003; Enekwe, 2012; Meseret et al., 2017 and Akinley, 2018) findings and supported by the theories of growth and resources-based view that explained the more a firm utilizes its available resources, the better attracts the efficient management and expected to perform more than its peers. While the more sluggish the firm's sales are, the profitability of the firm would be adversely affected.

Nevertheless, this finding is inconsistent with the studies of (Chen, 2012).

H4: Operating expenses have a negative and significant effect on the return on assets.

Based on the beta coefficient, holding other explanatory variables constant, a 1% increase in operating expense leads to a 2.41% unit decrease in ROA, but it may vary by 0.67 on average, and it is statistically significant at a 1% significance level, and 99% confidence interval. Hence, the null hypothesis was rejected because operating expenses had a negative significant influence at a 1% significance level. With high cargo, packaging, wage and salaries, warehouse, insurance, and other related expenses along with inefficient cost management practices, the firm's net return would decrease and vice versa. Accordingly, this result is in line with (Girum, 2009; Birhanu, 2012 and Yadollahzadeh et.al., 2013) findings that articulated with the lower the value of operating expenses, the more efficient the firm will be in controlling costs, and as a result. On the other hand, contradicts studies of (Okowo et. al., 2012 and Meseret et.al., 2017) that such costs are incurred for expansions of the business, and result in

increments in sales volume and firm's return. Besides, steady with the agency theory that states the prevalence of divergent and conflicting interests between agent and principal, the value of a firm is more likely adversely affected by the total monitoring costs of the principal, bonding costs of an agent, and residual loss of the firm. Thus, the lower agency costs or operating expenses are associated with better performance yet, the higher operating expenses are related to lower performance.

H5: Cash conversion cycle has a positive and significant effect on return on asset.

The cash conversion cycle has a 0.003 beta coefficient, 0.001standard error, and a P value of 0.00017, and assuming all other explanatory variables are constant, a 1day increase in the cash conversion cycle results in a 0.003% increase or decrease in ROA but it may vary by 0.001% on average, and it is statistically significant even at 1% significance level and 99% confidence interval and the null hypothesis that the cash conversion cycle has no positive and significant effects was rejected. This is because a shortening cycle might result in low performance. For case, lengthening the accounts payable

period will damage the credit reputation of the firm, and reducing the inventory holding period could increase the shortage of cost and result in the loss of good customers. On the other hand, a longer cycle through generous credit policies that are associated with higher investment in working capital can enforce firms with large sales volume and higher profitability. The justification for a longer cash conversion cycle is due to a large volume of credit sales over an extended period, a longer production period or lead time, a short disbursement date, and non-frequent sales due to huge cargo costs. In the same vein as this study, (Sharma, 2011) argued that a longer cycle might increase firm profitability due to generous credit policies which increase sales and may result in higher profitability. However, (Raheem et.al., 2013; Azim, 2015; and Owolabi, 2018) found significant and negative effects which contradict with this study.

H6: Innovation has a positive and significant effect on return on assets.

The beta coefficient indicates that taking all other explanatory variables are constant, a 100% increase in innovation results in a 4.28% decrease in the level of financial performance, but it may vary by 1.01% on average,

and it is statistically significant even at 1% significance level and 99% confidence interval. The level of innovation and the changes in it are not related to the profits because, from the perspective of an investor, R&D costs are thought of as an expense rather than a capitalized asset or source of revenue. Since the P-value of this variable is 0.0001 and significant, it verifies itself and helps the researcher to reject the null hypothesis at a 1% level of significance. To enhance the fertility and productivity of soil, reduce the adverse impacts on the surrounding environment, be environmentally friendly, and increase their market share and size, the floriculture companies expended a huge amount of cost towards innovation. Thus, in the short run, such costs are treated as an expense that reduces profitability which is supported by the findings of (Doms, et.al., 2016). However, this finding contradicts Schumpeter's assumption that states innovation is huge, leading to gales of creative destruction as it causes old inventories, ideas, technologies, skills, and equipment to become obsolete. The studies of (Bhagwat et.al., 2001; Chao, 2011; Hassan et al., 2016) also suppose that product, organization, marketing, and

technological innovation costs have significant positive effects on firm performance.

H7: Farm size has a positive and significant effect on the return on assets.

Farm size has a 1.01 beta coefficient, 0.19 standard error, and a P value of 0.0000. The beta coefficient indicates that assuming all other explanatory variables are constant, a 100% increase in farm size results in a 1.01% increase in ROA but it may vary by 19% on average, and it is statistically significant even at a 1% significance level and 99% confidence interval. Since the P value of this variable was significant, the null hypothesis that farm size has no positive and significant effect is rejected. From the economics of scale perspective, size is attributed to a cost advantage that an enterprise obtains vast output, the decline in average unit cost, and more profit level than smaller firms. Moreover, the larger farms expand their asset base by additional greenhouses for greater diversification, win economics of scale, assure market competitiveness, hold greater bargaining power, become more efficient in production, easily compete in existing market share, and

access to new technology and cheaper funds than small than smaller ones. Accordingly, this result was consistent with the findings of (Windsor, 2009; Yana, 2010; Daft, 2011; Birhanu, 2012; Salim, 2012; Abate, 2013). But this corroborates (Abdullah, 2011; Tigist, 2014 and Yodit, 2017) studies that relatively larger size firms have a lower chance of being profitable due to less diversification or high-risk exposure. Besides, as prescribed by Human capital and economic theory, larger firms raise the barriers of entry to potential entrants, gain leverage on the economies of scale, have diverse capabilities to exploit the market, and attract advanced expertise. On the other hand, the structural inertia theory postulated that the drawbacks of larger farms include complexity in stewardship, lengthy and bureaucratic procedures, and less adaptability for change, which will ultimately decrease the level of profit as of delayed decision.

H8: Farm age has a negative and significant effect on return on assets.

Based on the beta coefficient, taking all other explanatory variables constant, a 1year increase in age leads to a 6.81% unit decrease in ROA, but it may vary by 2.35% on average,

and it is statistically significant at a 1% significance level and 99% confidence interval. Hence, the null hypothesis was rejected because age has a negative significant influence at a 1% significance level. Compared to the younger firms, older firms have a low level of productivity and profitability since they hold deteriorated and deprecated assets, incur high replacement, maintenance, betterment, and repair costs, and loss of soil fertility as the land is exhaustively utilized through continuous usage of chemicals and pesticides, transcend the tax holiday periods which potentially reduces tax liability. On the other hand, younger firms tend to be more dynamic and hold unutilized land and fixed assets, they found it easier to adapt to changes in the law and business environment than older firms.

Alex et al. (2006) and Claudio (2010) have found negative and significant effects of age on a firm's profitability. However, researchers such as (Muhammad, 2013; Abate, 2013; Meseret et. al., 2017 and Aster, 2019) founds a positive effect of age. Moreover, theoretically, the organism life cycle tried to analogize organizations' life cycle with people and plants and described the time of flourishing

strength and a gnarled old age when exit becomes almost inevitable. Accordingly, when flower farms get older and older, the chance of being profitable would become lower than the younger ones. However, the learning by doing theory pointed out the likelihood of improvement in their productive efficiency over time by learning from their experience, and the more the farm becomes older, the more return it will bring through time.

Conclusion and recommendations

Conclusion

This study was conducted to investigate the determinants of the financial performance of floriculture companies in the Oromia Regional State of East Shoa Zone. They took quantitative data from 2011 to 2020 from ten floriculture companies. Liquidity, leverage, asset utilization, operating expense, cash conversion cycle, innovation, size, and age were used as firm-specific explanatory variables, and exchange rate as a macroeconomic variable, but ROA represents the financial performance as a dependent variable. A panel fixed effect model with multiple regression analysis was adopted to measure the determinants of the

financial performance of floriculture companies. Based on the descriptive statistical result, liquidity, leverage, operating expense ratio, and the exchange rate had slight variation but asset utilization, cash conversion cycle, innovation, farm size, and age had relatively high variation. Also, ROA had a positive correlation coefficient with asset utilization, cash conversion cycle, and farm size and a negative correlation with liquidity, leverage, operating expense ratio, innovation, farm age, and exchange rate. More specifically, the regression result revealed that leverage, asset utilization, cash conversion cycle, and farm size had a positive and significant effect, whereas liquidity, operating expense ratio, innovation, and farm age had a negative and significant effect on ROA as a proxy of financial performance. Besides, the research findings showed that the exchange rate hurt return on assets as a measure of financial performance, but not statistically significant. The finding of the study was also consistent and corroborated with different empirical results and theoretical views.

Recommendations

Reduction of idle liquid resources through reinvesting in short-term marketable securities like treasury bills, deposit certificates, repurchase agreements, and time deposit accounts would lead to the generation of additional returns. Moreover, with appropriate caution against the apparent benefits of greater leverage, the management should keep the capital structure to optimize the debt level. Likewise, whenever managers of the firm utilize companies' resources efficiently, they should lead the firm to increase its profitability. Hence, management should ensure the efficient utilization of resources by eliminating waste, improving coordination, and full utilization capacity of existing resources. Furthermore, the management should also be concerned about the minimization of operating expenses through outsourcing, group exporting, capital intensive, adoption of new strategies to reduce packaging expenses, and strengthening a local market chain to easily supply farm inputs like fertilizers, and pesticides, stem from local chemical industries. Moreover, capitalization of innovation costs, asset divarication, utilization of underutilized new fertile land, and developing sound accounting systems for

disposal or replacements of deteriorated fixed assets should be considered.

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