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Determinants of Financial Performance of Wheat Flour Producing Companies in Hawassa City, South Ethiopia

Meseret Tadesse[1] Getahun Kassa[2]
1. Department of Accounting and Finance, Mizan-Tepi University, Mizan Teferi, Ethiopia
2. Department of Agricultural Economics, Mizan-Tepi University, Mizan Teferi, Ethiopia

Abstract
In Ethiopia the contribution of manufacturing companies to economic growth is so minimal as compared to agriculture and services sectors. They are experiencing low return which is an indicator of poor financial performance. However, to remain competitive in the globalized economy, having good financial performance is highly imperative. Therefore, this research aimed at examining the effect of firm-specific and macroeconomic determinants of financial performance of wheat flour producing companies' in Hawassa city. Panel data from eight flour manufacturing companies were collected over the period of 2008 to 2012. Financial performance was measured by using profitability ratios; return of asset (ROA) and return of equity (ROE). Though the average ROA and ROE for flour companies were accounted for 6.5 % and 23 %, their financial performance was affected by several factors. A multiple linear regression model was employed to identify the factors that affect the performance of wheat flour producing companies. The estimation result shows that firm-specific variables namely capital adequacy (CAR), asset utilization (ASU), age (AGE), expense management (EXM) and leverage (LEV) have significantly affected companies' financial performance. Therefore, financial performance of flour producing companies is mainly driven by management decisions. Thus, attention should be given to firm specific variables to have a sound financial performance.
Keywords: financial performance, firm specific variables, macroeconomic variables, flour manufacturing companies

1. INTRODUCTION

In developed countries manufacturing companies have been playing a central role in the economic growth (Bhayani, 2010). However, in developing countries the contribution of manufacturing companies to the economic growth is so minimal as compared to agriculture and services sectors (NBE, 2010/11). In Ethiopia, for instance, manufacturing firms are experiencing low return which is an indicator of poor financial performance. Consequently, the development of other sectors is victimized by lack of modernization in manufacturing sector (Andualem, 2011). Therefore, for the sake of bringing significant development in the overall economy, the manufacturing sector needs to be transformed.

In today's globalized business to have a sound financial performance, financial performance analysis is utmost essential. A business entity has to be efficient and effective in order to compete and stay in the business (Mehran and Izah, 2012). Thus, measurement of efficiency and effectiveness is crucial in defining the success or failure of a company. A good performance rewards the shareholders for their investment which, in turn, encourages additional investment and brings about economic growth. On the contrary, poor performance can lead to failure which has negative repercussions on the economic growth (Marshall, 2009).

Many authors and organizations define financial performance analysis in different ways. According to Brigham and Houston (2004), financial performance analysis is a process of examining, interpreting and converting historic records of company's financial operation into meaningful input for decision making. Financial performance analysis indicates how the companies' resources have been managed in the past as well as the current financial condition. Financial performance examination also encourages companies to attain a higher level of performance by showing current financial position of a company in relation to other companies and creating a competitive environment (*Hawawini et al., 2003*).

The analysis of a firm's financial performance usually employs the financial ratio method, because it provides a simple description about the firm's financial performance in comparison with previous periods and helps to improve its performance (Lin *et al.,* 2005). Profitability ratios are among the most commonly used measure of companies' financial performance in using their assets, equity, investment, and sales that the companies can achieve. In particular, return on asset (ROA) and return on equity (ROE) are among the most commonly used measure of financial performance. The higher to these ratios implies the more the efficiency and effectiveness of the companies in using their assets and equity invested (Fabozzi and Peterson, 2003).

The financial performance of firm's can be affected by several firm specific and macroeconomic factors. According to Gemechu (2013) and Athanasoglou *et al (2006*), firm specific factors seem to be the major determinants of firm's financial performance, and are the main drivers for competitive advantage which is crucial for surviving economic downturns. On the other hand, Hawawini et al (2003) stated that macro economic factors play a more important role in dictating the influence of firm performance. Overall, financial performance

is determined by indicators like profit or value added; sales, fees, budget; costs or expenditure; stock market indicators (e.g. share price) and autonomy; return on equity (ROE) and return on asset (ROA) (Gichaaga, 2014). Hence, the ultimate target of this study is identifying the major determinants that hamper the financial performance of flour manufacturing companies in Hawassa city.

2. RESEARCH METHODOLOGY

2.1. Description of the study area

The study was conducted in Southern Nations Nationalities and People's Region (SNNPR) specifically in Hawassa city, which is the capital city of the region as well as the seat for the Sidama Zone administration. Hawassa is among the city of the region that have abundant resource base, which can create a favorable environment for industrial development especially for agro industry (example, cereals for flour manufacturing company). According to the data from the city's trade and investment bureau there are a total of 90 manufacturing companies in Hawassa city which found at full /semi operation, licensing registration and implementation level, of which only 16 companies established as a flour sector.

2.2. Source and nature of Data

For the purpose of this study, secondary data were used from internal and external sources. The internal sources are the balance sheet and income statement of eight flour manufacturing companies, whereas, the external sources are the annual reports of Ministries of Finance and Economic Development (MoFED). Panel data were employed to examine the effect of firm specific and macroeconomic factors on financial performance of flour companies. Panel data is favored over pure time-series or cross-sectional data because it can control for individual heterogeneity and there is a less degree of multicollinearity between variables (Altai, 2005).Only audited financial reports were included in this study.

2.3. Sampling Technique

Purposive sampling technique was employed to select targeted population and companies were selected on the basis of whether they have audited financial statements. In line with this criterion, 8 flour manufacturing companies namely, Admass Tesfa Plc, Amar Flour Factory, Barkot Flour General Trading plc, Hawassa Flour Share Company, Kemer Flour Factory, Nassir Usman Flour Factory, Sani Industry Plc and Sultan Yimam (Amir) Flour Factory were selected. Therefore, based on the sample size and the time coverage of the investigation, the sample consists of 40 observations.

2.4. Data Analysis

The main purpose of this study is to scrutinize the determinants of financial performance in flour manufacturing companies, using the annual balanced panel data in the period of 2008-2012. Thus, financial performance of the flour producing companies was measured by using profitability ratios; return of asset (ROA) and return of equity (ROE). Regarding the determinants of financial performance of flour producing companies, multiple linear regression model used. Thus, on the basis of the general regression model two multiple regression models were specified and estimated to examine the relationship between the two dependent variables – ROA and ROE- each with ten independent variables. The general form of the regression model (mathematical equation) can be stated as:

$$Y_{it} = â + \beta_i X_{it} + \varepsilon_{it}$$

Where, â is a constant term; β_i is estimated coefficient; X_{it} are the vector of explanatory variables and ε_{it} is the combined cross-section and time series error component.

3. RESULTS AND DISCUSION

3.1. Descriptive Statistics for Model 1 and 2

The descriptive statistics explores and presents a statistical description of flour manufacturing companies' financial performance as expressed by both return on asset (ROA) and return on equity (ROE) from 2008 to 2012. Table 1 presents the descriptive statistics of the firm specific and macroeconomic variables that determine the financial performance of flour manufacturing companies. The table reports the mean, standard deviation, minimum and maximum of each variable in the sample.

Table 1: firm specific and macroeconomic variables

Variables		Observation	Mean	Standard deviation	Minimum	Maximum
Dependent (Model 1 and 2)	ROA	40	0.065	0.3063	-0.9144	1.3292
	ROE	40	0.23	1.14	-1.91	6.33
Independent	CAR	40	0.7003	0.5072	-0.6332	2.9144
	ASU	40	2.67	5.35	0.2932	32.23
	TA	40	1.33e+07	1.47e+07	722428	6.61e+07
	AGE	40	6.5	5.4538	2	22
	PRO	40	4325.86	12867.8	-19980	49977
	GRO	40	0.5097	0.8459	-0.447	4.3627
	EXM	40	9.83	8.8868	-17.71	34.2
	LEV	40	1.3177	2.7663	-4.2977	11.9437
	INF	40	0.23304	0.1228	0.028	0.364
	GDP	40	0.0834	0.02168	0.05	0.112

As stated in table 1, the average ROA and ROE for flour companies were 6.5% and 23% indicating that flour manufacturing companies have an average positive profit over the last five years. From the total of 40 observations, the mean of ROA equals 6.5% with a minimum of 91% and a maximum of 133%. That means, the most profitable company earned 1.33 ETB (133%) of net income from a single one birr investment on asset. On the other hand, the maximum losses incurred by the sample companies is a loss of 91cents (91%) for each one birr investment on asset. Then again, from the total of 40 observations, the mean of ROE equals 23% with a minimum of 191% and a maximum of 633%. That means, the most profitable company of the sample companies earned 6.33 ETB (633%) of net income from one birr equity investment. On the other hand, the maximum loss incurred by companies is a loss of 1.91 ETB (191%) for each one birr investment on equity. Furthermore, the statistical summary implies that there was a higher variation in both ROA and ROE. The standard deviation statistics for ROA and ROE was 30.6% and 114% respectively, which indicates a very high variation among the selected companies during the period 2008-2012. In general, the results revealed the presence of some volatility in financial performance of flour manufacturing companies, since standard deviations of the variables are above the respective means.

Capital adequacy (CAR) which is measured by ratio of equity to total asset has a mean value of 70 cents with a standard deviation of 50 cents. This implies that capital adequacy was the least deviated variable from its mean as compared to others firm-specific variable during the period of the study. Moreover, the standard deviation implies that the presence of moderate variations among the values of performance across flour companies included in this study. On the other hand, on an average, asset utilization (ASU) equals 2.67 ETB with standard deviation of 5.35 ETB, which shows the existence of high variation. This implies during the period 2008 to 2012, asset utilization was one of the unstable factor with some volatility, since standard deviations of this variable was above the respective mean. Then again, size of a firm which is measured by total asset (TA) is the most volatile firm specific variable with a mean value of 13.3million ETB, standard deviation of 14.7 million ETB, which makes it the highest deviating variables. This implies variation of size of companies as measured by total asset across companies during the study period.

Age (AGE) is the other firm specific variable which is indicated by operating years of the companies from date of establishment to the date of observation. As indicated in the table 1 most of the companies selected for this study have been in operation for an average of 6.5 years. The table also shows the existence of a very high gaps in the age of the companies which is indicated by the range between 2 and 22. Table 1 also shows that an average productivity of 4325.86 ETB with a standard deviation of 12,867.8 ETB, minimum and maximum productivity of 19,980 and 49,977. This implies the existence of high variation in man power utilization in the sample companies. Moreover, the observation also pointed out that the most productive employee generated an annual operating income of 49,977 ETB. On the other hand, the less productive employee incurred an annual loss of 19,980 ETB. Regarding firm growth, growth (GRO) of a firm has a mean of 50.97% with a standard deviation of 84.59%. This implies the growth of the firm, which is measured by percentage change in sales, was the other unstable variable. This implies the presence of some volatility in performance and growth, since standard deviations of this variable is above the means.

Regarding expense management (EXM), the table shows somewhat a moderate variation which is indicated by the mean and standard deviation of 9.83 ETB and 8.88 ETB. The mean value of 9.83 ETB implies that most companies incurred 9.83 ETB expenses out of the total income per year. On the other hand, the most efficient companies incurred 17.71ETB of total cost and the inefficient companies incurred 34.2 ETB total cost. This implies the efficient companies have cost management advantage over the inefficient companies. In other words, the higher range between the minimum and maximum value implies that the most efficient companies has

a quite substantial cost advantage as compared to the least efficient companies. The other firm specific variable which is measured by debt to equity ratio has a mean of 1.32 ETB with maximum and minimum value of 11.94 ETB and 4.29 ETB. This implies during the past five years leverage was the other unstable factor since its standard deviation is higher than the respective mean.

Regarding macro-economic variables, inflation (INF) and real growth rate of gross domestic product (GDP) were used. The mean value of inflation for the period of the study was 23.3% with a standard deviation of 12.28%. This implies during the period of 2008 to 2012 performance and inflation does not present volatility, since standard deviation is under the respective means. The other macro-economic variable used in this study was GDP. The result revealed that the mean real GDP growth in Ethiopia for the last five years was 8.3%, with a maximum of 11.6% and a minimum of 5%. The result also revealed a small standard deviation of 2.1% which implies stable economic growth in Ethiopia during the period of 2008 to 2012.

3.2. Regression result for Model 1 and 2

To achieve the main objective of this study, two multiple regression models were specified and estimated: ROA used as the dependent variable in the first model, whereas ROE used as dependent variable in the second model. The characteristics of the model and proposed variables in equation, likely not violate the classical assumptions underlying the OLS model. In the same way, to verify the fitness of this model (Prob > F) value checked, the result signifies a strong statistical significance (Prob > F = 0.0000 for both models which is less than 5%), which enhanced the reliability and validity of the model. The R-square values of the two models (R squared value of 0.8692 and 0.8943 for model 1 and 2) indicate the explanatory power of the models. Thus, 86.92% and 89.43% of the variations in the dependent variables (ROA and ROE) were explained by the regressions (model 1 and model 2).

Table 2: Regression result for Model 1 and 2

Independent variables	Coefficient	Standard error	t-value	P > |t|
CAR	0.0174	0.0054938	3.18	0.003**
ASU	-0.3516	0.041238	-8.53	0.000**
lnTA	-0.0272	0.0269373	-1.01	0.320
AGE	-0.0101	0.0051145	-1.98	0.058*
PRO	3.57e-06	2.24e-06	1.60	0.121
GRO	0.0266	0.0235215	1.13	0.268
EXM	-0.0042	0.0024186	-1.73	0.095*
LEV	-0.0300	0.0070356	-4.28	0.000**
INF	0.1708	0.1541478	1.11	0.277
GDP	-1.4807	1.016205	-1.46	0.156
R-squared		0.9027		
Adjusted R-squared		0.8692		
P > F=0.000000		0.0000		

Regression model

$ROA_{it} = â+β1\ CAR_{it} +β2\ ASU_{it} + β3lnTA_{it} + β4\ AGE_{it} + β5\ PRO_{it} + B6\ GRO_{it} + B7EXM_{it} + B8LEV_{it} + B9\ INF_{it} + β10GDP_{it}$

Independent variables	Coefficient	Standard error	t-value	P > |t|
CAR	0.1314043	0.0183653	7.16	0.000**
ASU	-0.991142	0.1378557	-7.19	0.000**
lnTA	0.0440251	0.0900493	0.49	0.629
AGE	-0.0324222	0.0170974	-1.90	0.068*
PRO	-3.21e-06	7.48e-06	-0.43	0.671
GRO	-0.0847133	0.0786305	-1.08	0.290
EXM	-0.0130129	0.0080853	-1.61	0.118
LEV	-0.0947059	0.0235194	-4.03	0.000**
INF	0.666315	0.5153047	1.29	0.206
GDP	-5.276886	3.397096	-1.55	0.131
R-squared		0.9214		
Adjusted R-squared		0.8943		
P > F=0.000000		0.0000		

Regression model

$ROE_{it} = â+β1\ CAR_{it} +β2\ ASU_{it} + β3lnSIZ_{it} + β4\ AGE_{it} + β5\ PRO_{it} + B6\ GRO_{it} + B7EXM_{it} + B8LEV_{it} + B9\ INF_{it} + β10GDP_{it}$

Among the firm specific variables, capital adequacy (CAR), asset utilization (ASU), age (AGE), expense management (EXM) and leverage (LEV) have a significant impact on flour companies' financial performance as measured by ROA and ROE. However, among these variables only capital adequacy has a positive impact on both ROA and ROE.

In this study, Capital adequacy (CAR) has positively and significantly affected firm's financial performance at 1% significance level. It is interesting to note that, higher the capital level brings higher performance for flour companies because having more capital; act as a buffer in case of adverse situation. This finding is consistent with previous studies (Alexiou and Sofoklis (2009); and Athanasoglou *et al* (2006)). The researchers noted that a company with a sound capital position is able to pursue business opportunities more effectively and has more flexibility to deal with problems arising from unexpected losses.

Another important variable that negatively and significantly affected firm's financial performance at less than 1% significance level is asset utilization. It is one of the firm specific variables which measure efficiency of companies' asset management measured by total asset turnover ratio (TATO). The negative coefficient of asset utilization (β = - 0.3516 and - 0. 9911) in both case of ROA and ROE implies increase in TATO by one ETB results in decrease in flour companies' ROA and ROE by 35% and 99%, respectively. This may appear due to big firms' domination. Big firms usually cannot increase their efficiency (TATO) easily due to the presence of high total asset with low level of operating profit which generated from sales. This implies the incompetence of the flour manufacturing companies in managing their assets. In other word, inefficient asset management implies the presence of under utilization of capacity. This is consistent with the finding of Sparta and Februaty (2005). They found negative association between asset utilization and financial performance.

Age (AGE) is the other firm specific variable which has a significant and negative effect on financial performance. This implies the oldest companies are relatively poor in their operation due to lack of flexibility with the change in technology. In other word, young firms are relatively easier than the older ones to achieve a proportionate increase in scale because they have innovative ideas and dynamic management. In line with this finding, a study by Marshall (2009) noted that age inertia and rigidities in adaptability lead to lower performance.

Expenses management (EXM) is another important variable which negatively and significantly affected flour companies' financial performance as measured by ROA. The negative coefficient of cost to income ratio shows the existence of inefficient cost management system in flour companies. As the regression result indicates the sample flour companies are affected by poor cost management system which arises from high level of operating, administrative and personnel expenses during the study period. This implies the poor expenses management is one of the main contributors for poor performance of flour companies. This finding is consistent with the finding of Aburime (2008) and Jiang *et al* (2003) who noted that expenses management appear to be an important determinant of financial performance.

Another important variable that significantly affected Flour Company's financial performance at less than 1% significance level is Leverage (LEV). The negative sign between performance and leverage implies increase in debt to equity ratio results in decrease in performance as measured by both ROA and ROE. This implies highly profitable flour companies are more likely relied on internally generated funds and equity capital than debt as the source of financing because existence of high level of leverage results a higher risk. Consequently, high risk leads poor financial performance.

The second objective of this study was to examine whether macroeconomic variables affect the performances of flour manufacturing companies or not. It was hypothesized that macroeconomic factors have significant effect on financial performances of flour manufacturing companies in Hawassa City. As can be seen from table 2 the regression result shows unexpected results. The effect of inflation (INF) on both ROA and ROE is not significant but, positively related. Surprisingly, the gross domestic product (GDP) has a negative impact on both ROA and ROE but the effect is not significant. This effect supports the view that GDP growth is not necessarily positively related with companies' financial performance. In general, the analysis revealed that the macroeconomic variables have insignificant effect on financial performance but, the sign is mixed.

4. CONCLUSSION AND RECOMMENDATION

The average ROA and ROE for flour companies were 6.5 % and 23 % respectively, which indicates that flour manufacturing companies have an average positive profit over the past five years. However, the financial performances of flour manufacturing companies were affected by several firm specific variables. Based on regression model 1 (ROA), variables such as capital adequacy (CAR), asset utilization (ASU), age (AGE), expense management (EXM) and leverage (LEV) significantly affected firm's financial performance. On the other hand, the second regression model result verified that capital adequacy (CAR), asset utilization (ASU), age (AGE) and leverage (LEV) have a significant effect. Overall, empirical result with OLS shows that capital adequacy, asset utilization, age, expense management and leverage are significant determinants of flour manufacturing companies' financial performance. Therefore, attention should be given to those variables in improving the financial performance of flour producing firms.

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