

# Determinants of Profitability and Financial Management Food Processing Enterprises in Wolaita Zone, Ethiopia

Derese Balcha<sup>a\*</sup>, Mathewos Chafa<sup>b</sup>, Ayele Dutebo<sup>c</sup>

<sup>a</sup>*Derese Balcha msc in economics of development police analysis*

<sup>b</sup>*Mathewos Chafa msc in rural development and planning*

<sup>c</sup>*Ayele DuteboMsc in Accenting and finance WolaitaSodo University Ethiopia*

<sup>a</sup>Email: [deresebalango@gmail.com](mailto:deresebalango@gmail.com), <sup>b</sup>Email: [mathewoschafa2021@gmail.com](mailto:mathewoschafa2021@gmail.com), <sup>c</sup>Email: [ayudutebo@gmail.com](mailto:ayudutebo@gmail.com)

## Abstract

The ultimate goals of any economic activity is making profit, it was increase return of equity and promote income generation of food processing enterprise. Study was conducted Wolaita Zone in Southern Nation Nationalities Regional State. With the main objectives to describe factors that affect profitability of food processing enterprise in the study area. In order to attain this objective the study cross-sectional survey data was employed food processing enterprise. Sample respondents of food processing enterprise members were managers and experts within the enterprise. Multi-stage sampling techniques employed to select enterprises by using Yamane (1967) formula with 5 per cent precision and 95 percent confident level. The researcher used both primary and secondary data .The primary Data collected by using interview schedule through face-to-face interview and secondary data collected from different sources. The required number of sample was draw from six towns in the study area. Multi stage sampling techniques was employed to draw an appropriate sample. data wasanalyzed both descriptive summary statistics and econometric model of binary logit regression through econometric software of STATA. The STATA output r-square 0.779 (78%) reveals that the data fit the regression model while the higher r-squared indicates a better fit for the model. Multiple regression analysis from ten independent or explanatory variables six are statistically significant at 1%.5% and 10% level of statistics in dependent variable; five independent variable are positive relationship with dependent variable and one independent variable are negative relationship with dependent variable .The sampled food processing enterprise 91% is profitable and 9% none profitable. The gross prfite of group ratio is 15.74 that implies the enterprise is more profitable in the study period.

**Keywords:** Food processing Enterprise; gross profit; group ratio; multiple regression and Profitability.

---

\* Corresponding author.

## **1. Introduction**

Ethiopia is the largest producer of agricultural products the economy is supported by agriculture The food and beverage sector is one of the main components of Ethiopia's manufacturing sector accounted the highest percentage 29.46% distribution of large and medium scale manufacturing enterprises by the regional state public and private industrial group[6]. According to Addis Ababa Chamber of Commerce and Sectorial Association studies of October 2015, the top two manufacturing subsector, food and beverage alone accounted 39 % of the employment in the sector in the year [3]. These sub sectors includes wide variety of activities, mostly linked to the transformation of domestically produced agricultural products. Asynthetic picture of the company's financial position and its performance is found in the annual financial statements, which therefore become the main information sources that allow the qualitative analysis of how resources are used during the process of creating value [5]. Economic and financial point of view resulted from a good knowing of internal and external specific conditions in which the firm acts.Heavy investmentpoint of view the necessary for the success of the food industry, profit in the accounting term tends to become a long term objective which measures not only the success of the product, but also of the development of the market [2].

The potential contribution of food processing enterprises can make the overall development of the agricultural sector particularly, in rural economy in Ethiopia. The major constraints hindering the development of food processing enterprises in the study are include: a lack of access to working capital for investment and operation; the limited technology choice for entrepreneurs; poorly developed technical and owner skills among entrepreneurs, and lack of technical and market information available to entrepreneurs, lack working place[1]. The rural economy of the study area is predominantly by agriculture which constitutes more than 75% of the economy.The urban economy is predominantly based on industrial investment and service giving activities, like manufacturing and services like food processing, age-processing constriction, hotel, retailer, transport and petty farming around in the town, however food processing is limited few private sector and small enterprise. Food processingindustry, Even if governments support the sector in many ways, but their profitability is still weak. There were few studies done in macro level however it does show degree and magnitude of profitability in the food processing enterprise in the study area. So, the study shows there is scant empirical study that assesses factors affecting the profitability of manufacturing firms in the study area context. Thus, studyinvestigated both internal and external factors that affect the profitability of the food process enterprise in study area.

## **2. Objective of the study**

The general objective of the study is toidentify determinants of profitability and financial management of food processing Enterprise in the study area.

### **Specific objective of the study:**

1. To evaluate financial management in food processing enterprise
2. To assessing proportion and ratio of profit in food processing enterprise.
3. To analyze determinants of profitability food processing Enterprise

### 3. Research Methodology

#### The Study Area

The study was conducted Wolaita Zone it located in Southern Nations, Nationalities and Peoples' Region of Ethiopia. Wolaita zone was situated at 378 km to south of Addis Ababa city, the capital of Ethiopia [7], estimated population projection of the Zone is 1,796,578 out of which 49.27 percent were males and 50.73 percent were females. The population density of the Zone was 445 persons per Km<sup>2</sup> the average urban household size was 4.8. The zone was located in 5° 45' to 7° 33' north latitude and 35° 22' to 38° 46' East longitude [7].

#### Data source and method of data collection

Both qualitative and quantitative data was collected from primary and secondary source. The quantitative data from primary source collected through structured interview schedule and the survey included the interview schedule that describes current socio economic, institutional and demographic factors.

#### Sample size determination

To determine appropriate sample size simplified formula which was developed by Yemane 1967 was employed. Total populations enterprise in the study area was six hundred and sampled food processing enterprises were taken proportional sampling method from sample towns.

$$n = \frac{N}{1 + N(e^2)} \quad (1)$$

**Table 1:** Sample size determinant of proportional sampling.

No	Town	Total population	Proportional	Sample respondents
1	Sodo	137	0.4	55
2	Boditi	109	0.4	43
3	Araka	105	0.4	42
4	Tebela	87	0.4	35
5	Gesuba	83	0.4	33
6	Gununo	79	0.4	32
	Total	600		240

**Source:** own field survey, 2021

#### Method of data analysis

Multi stage sampling techniques was employed to draw an appropriate sample. The study employed both descriptive and econometric methods. Descriptive analysis used to summarize some important characteristics of

food processing enterprises, that included the frequency, mean, percentages and ratio. Multiple regression model employed to determine the profitability of food processing enterprises conducted by STATA software.

### Multiple linear regressions

Multiple Linear Regression is analysis procedure to use when more than one explanatory variable is included in the model distinguish between the explanatory variables by putting subscripts next to in the equation [4].

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k + \varepsilon \quad (1)$$

## 4. Result and discussion

Descriptive statistic total targeted sample population mean evaluate financial management of working capital, loan utilization, expenditure and operation cost of enterprise during the production period.

**Table 2:** Summarize mean working capital of food processing enterprise in (thousand birr).

Variable	Obs	Mean	Std. Dev.	Min	Max
Working capital	240	6177	3259.758	1000	20000

Source survey STATA output, 2021

The above table 2 reveals that working capital measures the efficiency with which the food processing enterprise capital is put to use to generate profits. It indicates how efficiently firm's capital is earning profits. A higher income of the firm indicates more productive and efficient use of the firm's capital and a lower ratio indicates under-utilization of capital. The total mean of the firm is 6177 which implies the higher the working capital the more firms run their business.

**Table 3:** Summarize mean loan utilization of food processing enterprise in (thousand birr).

Variable	Obs	Mean	Std. Dev.	Min	Max
Loan utilization	240	348.4874	177.9188	0	1000

Source survey STATA output 2021

The above table 3 shows that the loan provision food processing enterprises mean is 348.487 which Securing loan utilization and Profitability of food processing enterprises notwithstanding of how large they are require financing from the start and throughout their progression and expansion. The initial capital as well as acquisition of required equipment will affect at a great value, the scope of the enterprise which in turn

determines the continued existence of a venture and future profitability The provision of financial services to food processing enterprise's controls the scope of a firm in several ways, especially in use of available expertise, access to trade agreements, and access to raw materials which in turn at great lengths impact on the sustainability and profitability of a business.

**Table 4:** Summarize mean Expenditure of food processing enterprise in (thousand birr)

Variable	Obs	Mean	Std. Dev.	Min	Max
Expenditure	240	986.2917	491.0797	220	2000

The above table 4 shows that the expenditure or expense incurred food processing enterprises f mean food processing enterprise decided to operate based on its business model. In general rule an increase any type of business expense lowers profit. Determinants of profitability and financial management food processing enterprises in wolaita zone, Ethiopia

**Table 5:** Summarize mean operation cost incurred in food processing enterprise in (thousand birr).

Variable	Obs	Mean	Std. Dev.	Min	Max
Expenditure	240	986.2917	491.0797	220	2000

The above table5 shows that the operation or production cost incurred food processing enterprises average mean is 3898.426 that indicates production or operation cost affects business by having strong influence on cash flow and overall health of food processing enterprise model. In general the lower production or operation cost the higher the profit gain or the amount have left over after subject expense from revenue however how production or operation cost do not necessarily guarantee a high profit

**Table 6:** proportion of profitability of food processing enterprise from sample population.

Variable	Frequency	Percent
profitable food processing enterprise	169	70.4
None profitable food processing enterprise	71	29.6
Total	240	100

Table 6 shows the performance of profitable Food Processing Enterprises profit in birr during the study period is 219 enterprise (91%) are profitable and from total sample food processing enterprise 21 enterprise(9%) are non-profitable. This implies most of food processing enterprise is profitable in the study

area.

**Table 7:** profit ratio of food processing enterprise.

Total sales	Gross profit	Profit ratio
246,599,206	15,674,200	15.733

Profitability in group of ratios which measure the ability of the food processing enterprise to generate revenues out of their assets. It indicates the performance of the enterprise in terms of return on investment and also assists prospective investor decision making. The following explain the profitability position of the selected food processing enterprises during the study period Gross Profit Ratio measures the percentage of gross profit to the total sales of an enterprise. It is calculated by dividing the Gross profit with Sales. Higher the ratio, higher the gross profit and the enterprise is more profitable and vice versa. Table 6 reveals that total sum of 169 food processing Enterprise the profit ratio is 15.73 which indicates that enterprises performance of profit batter during the study period

#### Post diagnostic tests of R-square

The most common interpolation of r-square is how well the regression model fits the observed data. In the STATA output r-square is 0.7793 (78%) reveals that the data fit the regression model. Generally a higher r-squared indicates a better fit for the model

**Table 8:** multiple regression result of STATA output

Equation	Obs	Parms	RMSE "	R-sq"	F	P
profitability	239	11	1262.89	0.7662	74.71966	0.0000
profitability	Coef.	Std. Err.	t	P>t		
Age	-22.55184	15.96245	-1.41	0.159		
Training	10.65889	76.65423	0.14	0.890		
Edu	-.374782	.2172534	-1.73	0.0867*		
Workplace	-52.9377	191.8135	-0.28	0.783		
Workingcap	.4740592	.0407865	11.62	0.000 ***		
Mktdist	.086806	.0631422	1.37	0.171		
Loan ut	.8022293	.4967819	1.61	0.108*		
expenditure	-.3685189	.1740997	-2.12	0.035**		
Saving	.0629109	.020267	3.10	0.002 ***		
Prodacost	.3352613	.0587575	5.71	0.000 ***		
Cons	2910.212	694.3558	4.19	0.000		

Significant level 1% \*\*\* 5% \*\* 10% \*

Profitability = 2910.212 + 0.374782 edu + 0.4740592wk + 0.8022293 lonutil - 0.3685189 exp + 0.0629109

saving + 0.3352613 prdcost + e

The table 8 results show that profitability and education a positive relationship in food processing enterprise and statically significant at 10%. This implies that A year of schooling raise up level food processing enterprise 0.374 increase in their profitability. There is a positive relationship between profitability and working capital of food processing enterprise and statically significant 1%. This implies that aunit increase in the working capital of food processing enterprise results a 0.474 unit increase in their profitability. In the above table 8results indicated that there is a positive relationship between profitability and loan access of food processing enterprise and statically significant 10% .This implies that A unit increase in the loan utilization of food processing enterprise results 0.802 unit increase in their profitability. In the same table output shows that there is a negative relationship between profitability and expenditure of food processing enterprise and statically significant 5% .This implies that one unit decrease in the expenditure of food processing enterprise raise up 0.368 unis in their profitability. The table 8 STATA output indicated that there is positive relationship between profitability and saving of food processing enterprise and statically significant 1% .This implies that percentage saving of food processing enterprise results 0.062 unit raise up in their profitability The table 8 STATA output implies that there is positive relationship between profitability and operation cost of food processing enterprise and statically significant 1% .This implies that percentage operational cost of food processing enterprise results 0.335 units raise up in their profitability To sum up the multiple regression analysis of STATA output conclude that from ten independent or explanatory variables six are statistically significant at 1%.5% and 10%level of statistics in dependent variable. In generally fiveindependent variable are positive relationship with dependent variable and one independent variable are negative relationship with dependent variableSummary specifies discussions, conclusions, and findings as well as offers suggestions and counsel to the challenges have been brought farther study .The literature reviewed was utilized in making conclusions of the study. The investigation intentions were used to guide the collection of required data from the respondents.

## **5. Summary**

The investigation shows determinants of profitability and fanatical management of food processing enterprise in wolaita zone. The finding measuring the effect of loan utilization, working capital, saving, production cost and education level on profitability food processing enterprise.Six independent variables are statically significant that represented by profitability and finical management of food processing enterprise at 1% .5% and 10% significant level. The study found the relationship among profitability and financial management system in the firm. capital as well as acquisition of required equipment will affect at a great value, the scope of the enterprise which in turn determines the continued existence of a venture and future profitability The provision of financial services to food processing enterprise's controls the scope of a firm in several ways, especially in use of available expertise, access to trade agreements, and access to raw materials which in turn at great lengths impact on the sustainability and profitability of a business.Performance of Food ProcessingEnterprises during the year's 2021 saving capital posting mean is 3752.083 total Food processing enterprises. Saving is critical variable to generate income effectively and efficiently for the firms. This study implies that investigated effect on the private sector profit and saving ratesplaying an important role in creating cyclical functions. In other words, an increase profit and saving rates causes the upward expenditure or expense inured food processing

enterprises mean food processing enterprise decided to operate based on its business model. In general rule an increase any type of business expense lowers profit. Profitable Food Processing enterprises during the study period is 169 enterprise or 70.4% of total sample food processing enterprise non-profitable is 71 enterprise or 29.6% is non-profitable while the gross profit group ratio is 15.74. This implies most of food processing enterprise is profitable.

## **6. Recommendation**

Food processing enterprises are continuously investing profit maximizing, which aimed at achieving rapid industrial growth of food processing enterprise, the government should formulate measures which would bring out the best performance of enterprise. Policy measures are required to strengthen the sector by assist finance, through facilitating loan accesses, supporting working capital to enhance the product and sales. Food processing enterprise that prioritize production expenditures of research and develop new business ideas and innovations. The government potentially provide expertise, technical professionals and Working partnership with research departments that made new business commercial developments creating profit maximizing strategy for food

## **References**

- [1] Alam, S. Assessing Barriers of Growth of Food Processing Manufacturing Industrial enterprise:  
A Factor Analysis Assessing Barriers of profitability of Food Processing SMIs in Malaysia:  
A Factor Analysis, International Business Research, January 1, 2010. Vol. 4, No. 12
- [2] Central statistic Authority report, 2012/13 report on large and medium scale manufacturing  
Industries Survey, different years statically Bulletin with different volumes 6 -126.
- [3] Central Statistic Authority report, 2015/15 food and beverage manufacturing industry in Ethiopia
- [4] Gujarati, DN, Basic econometrics, 4<sup>th</sup> edition, the McGrawHill, New York, 2004.
- [5] Stierwald, A. Determinants of Firm Profitability the Effect of Productivity and its persistence.  
Melbourne Institute of Applied Economic and Social Research. 2009.
- [6] Yodit Y, determine firm's profitability; one of the most frequently used tools is financial ratio analysis  
which includes profitability ratios, 2017.
- [7] Central statistic Authority report, of Wolaita zone administrative map 2007.