DYNAMICS OF MAIN PROFITABILITY INDICATORS IN DISTRIBUTION OF FOOD AND AGRICULTURAL PRODUCTS OF THE COMPANY EL CASIO COM SRL-SLOBOZIA

Laurentiu MUNTEANU

University of Agricultural Sciences and Veterinary Medicine, 59 Marasti Blvd, District 1, 011464, Romania, Phone: +40754200100, E-mail: laurentiu.f.munteanu@gmail.com

Corresponding author: laurentiu.f.munteanu@gmail.com

Abstract

The return of distribution companies is related to the performance of activity based management, which can be expressed through a system of indicators reflecting their activity. This paper aims to analyse the company EL CASIO COM SRL Slobozia, active in the distribution field of food and agricultural products in Ialomita and Calarasi counties. We analysed the economic indicators between 1999-2009 from which resulted the main elements influencing the company's revenue and profitability. The analysed period revealed that the break-even was achieved in 2003 with 5 employees, a revenue of 1899, 16 thousand lei whereas the expenses amounted 1732 thousand lei and labour productivity was set at 379, 8 thousand lei/ worker. The resulted trend after presenting and interpreting the exponential function $Y=3,862 \cdot X_1^{0,5480866} \cdot X_2^{1,239971}$ is given based on the changes of income level (Y), from the factors of influence, represented by the amount of equity (x_1) and labour used (x_2). The multiple correlation ratios ($rx_1x_2 = 0, 9505$), confirm the influence intensity of the two factors upon the trends in revenue growth. As result we can see trends in revenue growth with amplification factors of influence

Key words: *equity, expenses, labour productivity, polynomial equation*, *productivity, revenues*

INTRODUCTION

The company is profitable (advantageous) when its income (revenues) is higher than the expenses incurred to carry out its activity. These two elements, revenues and expenses are major factors which define profit, respectively the return of the company. The profit of the company increases when its income increases using the same resources but with a smaller increase than in its economic activity. The covering of expenses and assurance of profit depends from each individual player active in the field of goods distribution. The actual distribution expenses and trade markup determine the selling price of the product. Of course while in the market, we should not forget that the price is subject to competition and many prices tend to approach the lowest cost of production and circulation, which indirectly determines the size margins of trade markups which may be charged.

This paper aims to analyze the activity of the company El Casio Com SRL from 1999 to 2009, to emphasize the evolution of the main indicators of profitability (revenue, expenses, profit, and break-even) in the field of distribution of food and agricultural products in Slobozia and Calarasi counties.

MATERIALS AND METHODS

The approach of the problem required the use of normative and constructive estimation models as well as economic–mathematic models through indicators in physical, value and percentage units. The indicators were displayed from 1999 to 2009, where we comparatively followed following aspects: the income and expenses on which the profit was revealed the dynamics of the number of workers on which was highlighted annual productivity, the ratio of income and total number of workers. The determination and annual presentation of these indicators aimed

to highlight the trend of the upper mentioned period.

The analysis of income variation based on equity and labor is an ancient practice because revenues include all acts of (legal) enrichment values of the company related or not to its ordinary activity. Through annual deviations level of economical and financial indicators we aimed to follow the achievement of designed parameters in bi-dimensional aspect: on one hand the structure level of these indicators in the studied annual growth rate and on the other hand the trend of variation/correlation level.

Simultaneously the carried research has sought to reveal results by using the exponential function. We used the adjustment achieved through the second degree polynomial equation as follows: $Y(adjusted) = a + bt + ct^2$, where t = adjusted time (Begu, L-V., 2009[1]). We applied the calculation of the exponential production function of the type y (income / thousand) $= a \cdot x_1{}^a \cdot x_2{}^b$ whereas

a= constant x_1 = total equity; a= marginal exponential coefficient: x_2 = number of workers, b = marginal exponential coefficient.

The assessment of significance was made by comparing the values obtained at structural level. The analysis of indicators as a whole and of their main structural elements aimed to highlight the variations by formulating differentiated meanings. Effectively, the working methodology followed to acknowledge the trend of production and economic indicators that would allow a final financial decisions making process by highlighting the distribution activities of the upper analyzed company.

The multiple correlation ratio (which can take values between -1 and +1), highlights the value of elements that are close to +1 (the higher the correlation ratio has values closer to +1 the stronger is the linear correlation between the variables x and y and vice versa). In case of the performed correlation, the level of correlation ratio can be regarded as a test of the link $Y/x_1 x_2$.

RESULTS AND DISCUSSIONS

Short description of the company EL CASIO COM SRL- Slobozia:

The upper mentioned company with headquarters in Slobozia carries out operations in Ialomita and Calarasi counties. This company started its activity in 1997 having as main activity wholesale. Although it started only with a single manufacturer and two sales agents, gradually as the business developed the company reached a number of 73 workers. The company's distribution activity which began in 2003 was focused mainly on distribution of food and non-food products in the following counties: Slobozia and Calarasi. The company is endowed with a modern car fleet and employs a team of well-trained professionals. The company distributes products of some well-known manufacturers (Primola, La Festa, Boromir, Pan Group) with a wide coverage area in Ialomita and Calarasi counties.

The logistics of the company can be described by the following structure: warehouse + office area with a surface of 2000 m², freezer warehouse with a surface of 500m ², 16 Matiz cars, 3 Logan cars, 7 Sandero cars, 23 utility vehicles of different brands such as: Fiat, Peugeot, Mercedes, Volkswagen, Iveco, Ford. The company owns 1 grocery store (represented by commercial ensemble Slobozia). The activity is carried out within 3 food divisions (food and non-food products inclusive products which require cold storage).

Evolution of distribution characteristic indicators:

In the distribution activities carried out during1999-2009, can be found some differences regarding the framing structure depicted through the activity result.

During this period the business development of the company was focused on its horizontal policy development, reaching a total number of 3 divisions. In this regard at the beginning of 2007, there was an opportunity for distribution of frozen and refrigerated products and consequently there was established a third division in order to represent the manufacturer (called "La Festa").

The level and interpretations presented in *Table 1* seeks to highlight the dynamics of the indicators resulted from operative outcome of distribution, and the derived indicators synthesis. Considering the upper stated we notice following:

Table. 1 - Dynamics of main indicators in establishing the company's breakeven

Year	Income		Expenses (ths. Ron)		Gross profit		No. of employees		Productivity	
	ths. lei	%	ths. lei	%	ths. lei	%	no.	%	ths.lei/employee	%
1999	91	100.0	91	100.0	-0.2	100.0	3	100.0	30.2	100.0
2000	273	301.9	272	299.9	1.5	50.0	4	133.3	68.3	226.2
2001	89	98.8	110	121.0	-20.3	-676.7	7	233.3	12.8	42.4
2002	22	24.1	37	41.2	-15.5	-516.7	3	100.0	7.3	24.2
2003	963(*	1063.9	880	970.8	83.3	2776.7	5	166.7	192.6	637.7
2004	3908	4318.7	3793	4186.9	115.1	3836.7	20	666.7	195.4	647.0
2005	10311	11393.1	10003	11041.1	307.6	10253.3	27	900.0	381.9	1264.6
2006	13987	15454.7	13556	14961.9	431	14366.7	30	1000.0	466.2	1543.7
2007	25575	28259.2	25066	27666.1	509.2	16973.3	80	2666.7	319.7	1058.6
2008	38871	42951.6	38009	41952.1	862.6	28753.3	74	2466.7	525.3	1739.4
2009	39041	43139.6	38956	42997.5	85.6	2853.3	73	2433.3	534.8	1770.9

Processed according to: Total Firme Român.a, http://www.totalfirme.com/466964/EL_CASIO_COM_SRL
*) Break-even [2]

The revenues correlated with expenses register annual successive growths. In comparison to first year (2009/1999) is emphasized an increase of 491.39, respectively of 429.97 times. Simultaneously the number of employees is rendered by a succession which occurs until 2007, followed by a slight decrease (in 2007 compared to 1999 is registered, an increase of 26.66 times, then again in comparison in 2009 this growth level would be only of 24.33 times);
Synthetic indicator of gross profit is showed through varying levels where we can distinguish two periods: the first period 1999-2002 where the values are negative for most years (loss between -0.2 and -20.3 thousand lei per year) and in the period 2003-2009 is recorded an significant annual growth (a profit of 862,000 lei was reached in 2008). Specific causes from 2009 led to a great decrease of the profit;
Labor productivity per employee defines the description of the same periods, respectively: between 1999-2002 where the productivity varies (between 7.3 and 68.300 lei/employee)

is kept at low level and in period 2003-2009 the labor productivity records a significant increases in the mentioned period (2009/1999 shows a growth rate of 17.70 times, and 2009/2003 shows a growth rate of 2.77 times)
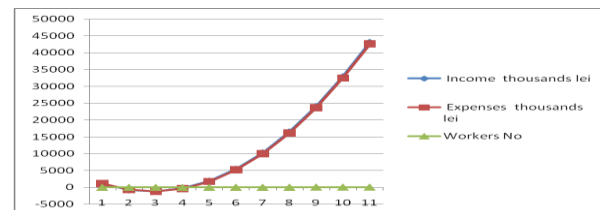

Fig.1. Evolution of distribution characteristic indicators in the company El Casio Com SRL.

Suggestive, Fig. 1 shows the annual evolution of revenues, expenses and number of employees, correspondent to the annual growth rate.
Break-even rendered through adjustment calculations. By means of adjustment calculations of income and expenses, we determined the company's breakeven. The used calculation formulas were following: Y adjusted income (thousand) = $4175.53-3786.18t+666.18t^2$ and for expenses: Y adjusted expenses (thousand) = $4355,69-3862,55t+667,56t^2$
The results are presented in Table 2, where we can observe, that the break-even point was achieved in 2003 and the company achieved revenues worth 1899, 16 thousands lei and the expenses amounted 1.732 thousand lei. The number of employees is 5 and the labor productivity was set at 379,8 thousand lei /worker.
Revenue growth and influencing factors trends (equity and labor). In order to highlight the possible achieved income trends we referred to the influence variation in of changes of equity and the number of employees during the 1999-2009. Thus appeared the necessity of studying by the exponential function of the link between changes in equity (x_1) and change employee number (x_2) upon the recorded revenue(Y).

Table 2. - Results of production function for the income (adjusted y), through the influence of equity

factor (x_1) and number of employees (x_2) within the company El Casio Com SRL.

Total equity (x_1)	No. of employees (x_2)	Income (Y)	Income (Y adjusted)
Ths. lei	Ths. lei	Ths. lei	Ths. lei
38	3	90	110
39	4	273	160
27	7	89	264
25	3	22	88
32	5	963	190
118	20	3908	2169
371	27	10311	5885
716	30	13986	9616
1140	80	25575	41876
1855	74	38871	49657
2046	73	39041	51518

Processed according to: Total Firme România, http://www.totalfirme.com/466964/EL_CASIO_COM_SRL[3]

Based on the data from Table 2 we calculated by using the product-program SIMUL [4], the following exponential function:

$Y = 3{,}86 \cdot x_1^{0,5480866} \cdot x_2^{1,239971}$ where 3,86 is a constant, 0,5480 is a marginal contribution of the equity factor and 1.23 is the marginal contribution of the labor factor. The correlation ration ($rx_1.x_2 = 0{,}95$), signifies a strong intensity of equity and number of employees factors upon the achieved income.

The level of variations $Y/ x_1 x_2$, are drawn in fig.2 from which may result annual comparison elements within the dynamic of analyzed period.
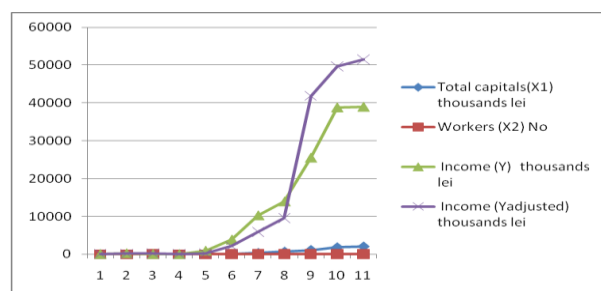

Fig. 2.- Variation curves in equity and number of employees figures in comparison with revenues of the company El Casio COM SRL.

The analysis of the production function revealed following:
a) A growth of the equity factor (x_1) by 1%, ie. 2.066 thousand (+ 20 thousand lei), which means an increase in revenues to 51799 thousand lei (plus 282 thousand lei);

b) An increase in the number of employees (x_2,) by 1%, ie at 73.73 employees (plus 0.73 employees), whereas the income may reach a level of 52155 thousand lei (plus 637 thousand lei);
c) A concomitant increase of 1% of the equity (x_1) (+20 thousand lei) and of the number of employees (x_2) (+0.73 employees) one can achieve an income of 52437, 17 thousand lei. The final increase amounts to 919 thousand. It is noteworthy that this value is the sum of the two increases, respectively 282 thousand lei due to equity and 637 thousand lei due labor force because the coefficients represent the marginal exponential contributions of the upper mentioned factors.

CONCLUSIONS

1. From the analysis based on the financial statements of the company El Casio Com SRL results, that the revenues of this company are influenced by variations of the factors, which by their nature have been structured in: equity and its component elements (equity: ordinary shares, share premiums, reserves and other items) and the growth rate of the number of employees (with reference to quantitative and qualitative evolution of the existing categories of employees).
2. The breakeven of the company El Casio Com SRL was achieved in 2003, when the company earned revenues worth 1899, 16 thousand lei the expenses amounted 1732 thousand. Number of employees in the company was 5 and the labor productivity was of 379,8 thousand lei /worker
3. From the analysis of the production function, the company El Casio Com SRL, expressed exponentially was revealed that the marginal contribution of equity is 282 thousand, and the labor contribution is of 637 thousand.

REFERENCES

[1]Begu, L-V., ş. a., 2009, Statistica teoretică şi economică. Biblioteca digitală ASE, http://www.biblioteca-digitala.ase.ro.

[2]***Date din evidenţa economică a Firmei El Casio COM SRL.
[3]***Total Firme Romania, http://www.totalfirme.com/466964/EL_CASIO_COM_SRL

[4]***SIMUL,2000, Produs-program de calcul al funcţiilor de producţie. USAMV-Bucurşti