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ANALYSIS OF THE ECONOMIC COST EFFECTIVENESS OF THE INTERNATIONAL GARDEN CENTER IN SLAVONSKI BROD

ANALIZA EKONOMSKE ISPLATIVOSTI INTERNACIONALNOG VRTNOG CENTRA U SLAVONSKOM BRODU

ABSTRACT

Agriculture is a key factor and one of the greatest comparative advantages of eastern Croatian and Slavonia region. The question is whether it will be attractive for business investment? The answer on this question will be given by economic analysis of project feasibility of building the international garden center in Slavonski Brod as a part of the secondary school center for agriculture Matija Antun Reljković. The project aim is the development and modernization of agricultural activities in area of eastern Slavonia according to EU standards, and stimulation of development of area through horticultural production. Garden center, apart from production, provides services of planting and decorating the garden, maintains training seminars for potential producers and has an exhibit space. It is expected that the project of garden center would contribute to the development of awareness of the dynamic agriculture and thus improve the standard of production on agricultural holdings by using modern technology in glasshouse production. The center is intended as a place where would be consolidated the expertise of the academic community, led by the Faculty of Agronomy and Agricultural Institute in Osijek on the one hand, and on the other hand the Agricultural Land Agency and the Agricultural Extension Service of the Brod-Posavina County, which would allow center to become a key location for technical and business support for agricultural producers in the broader region. Center includes three objects: the administration building, which comprises a laboratory expanse and classroom, buildings for production and storage of plant material, tools and machines, and canopies used for loading and unloading materials. Economic analysis will be based on data from the financial statements and the financial data plans that are available in public disclosures. During research of facts and possibilities that currently exist, for the formulation of the research results in this paper, the following research methods are used in a different

combination: historical method, the method of analysis and synthesis, classification and description method.

Key words: *Garden center, Investments, Cost-benefit analysis, Agriculture, Slavonia.*

SAŽETAK

Poljoprivreda je ključan čimbenik i jedna od najvećih komparativnih prednosti istočne Hrvatske i regije Slavonija. Pitanje je može li to biti atraktivno za poslovne investicije? Na ovo pitanje će se pokušati odgovoriti ekonomskom analizom isplativosti projekta izgradnje internacionalnog vrtnog centra u Slavonskom Brodu u sklopu srednjoškolskog centra za poljoprivredu Matija Antun Reljković. Cilj projekta je razvoj i osuvremenjivanje poljoprivredne djelatnosti na području istočne Slavonije prema standardima Europske unije, te stimulacija razvoja područja kroz hortikulturalnu proizvodnju. Vrtni centar, osim proizvodnje, pruža usluge sađenja i uređenja vrta, održava seminare za obuku potencijalnih proizvođača te ima izložbeni prostor. Očekuje se da će projekt vrtnog centra korištenjem suvremene tehnologije u stakleničkoj proizvodnji doprinijeti razvoju svijesti o dinamičkoj poljoprivredi te tako poboljšati standard proizvodnje na poljoprivrednim gospodarstvima. Centar je zamišljen kao mjesto gdje će se objediniti stručna znanja akademske zajednice na čelu sa Agronomskim fakultetom i Poljoprivrednim institutom u Osijeku s jedne strane, a sa druge strane Agencije za poljoprivredno zemljište i Poljoprivredno savjetodavne službe Brodsko-posavske županije što bi omogućilo da postane ključno mjesto za stručnu i poslovnu podršku poljoprivrednicima u široj regiji. Centar obuhvaća tri objekta: upravnu zgrade u sklopu koje se nalazi laboratorijski prostor i učionica, zgrade za proizvodnju i skladištenje biljnog materijala, alata i strojeva, te nadstrešnice koja služi za utovar i istovar materijala. Ekonomska analiza bit će bazirana na podacima iz financijskih izvješća i podacima iz financijskih planova koji su raspoloživi u javnim objavama. Pri istraživanju činjenica i mogućnosti koje trenutno postoje; a za formuliranje rezultata istraživanja u ovom radu su u različitoj kombinaciji korištene sljedeće znanstvene metode: povijesna metoda, metoda analize i sinteze, metoda klasifikacije te metoda deskripcije.

Ključne riječi: *Vrtni centar, Investicije, Analiza isplativosti, Poljoprivreda, Slavonija.*

1. Introduction

The company "Regional center for biotechnology research and development Brod-Posavina County Ltd" was established in Slavonski Brod at the end of 2013. Company foundation is the final part of the project worth 1.5 million euros and which was financed by European Union funds. The project leader was a high school M. A. Reljković from Slavonski Brod with the help of Brod-Posavina County and the CTR - Development Agency from Brod-Posavina County. The company was established as a limited liability company with a share capital worth 20.500,00 kn. Founder of the company is Brod-Posavina County, and members of the company are High school Matija Antun Reljković from Slavonski Brod and Technology Development Center - Development Agency from Brod-Posavina County. By project is envisaged that a regional center for biotechnology research and development of Brod-Posavina County is the main core of innovative ways of producing virus-free plants in the region. The center should initiate the development of Brod-Posavina County. The aim of this paper is according to available financial reports for the first year of business to make a financial analysis of operations of the Regional Centre for biotechnology research and development of Brod-Posavina County.

2. Financial analysis as a process

Analysis of financial reports can be described as the process of applying various analytical tools, methods and techniques by which the data is converted into usable information used internally and externally, and mostly used as a base management function. Financial management has to do primarily the business analysis which shows what has been achieved in previous periods, and that is the base on which management can work plans for the future.

Economic operators who are currently operating throughout the world, most often are organized as companies. In the case of large firms they are organized as joint stock companies. By issuing shares, the business of the company is monitored by all those who participated in the investment. Investors will, therefore, expect earnings as a result of their investment and therefore are interested in doing business. Smaller companies are founded by one or more of business stakeholders. And they will expect for its investment as higher profits.

Every company is an economic entity in its country, and many of them operate in the wider market. This means that companies must operate between themselves. In addition to all the business, there is a need for additional financial resources at the disposal of banks and other financial institutions. All this points to the fact that the operation of companies takes place a greater or lesser extent under public scrutiny. Except founders, interest for small business companies will have their suppliers, creditors and the state.

By exiting on broader market, beyond national, a company comes to business relationships with more business partners. Therefore there is a need to display position and business results on accessible way using financial reports. This is why the International Committee is established which made the guidelines entitled International Financial Reporting Standards by which the financial statements are made, that will allow all interested parties an insight into the operations of a particular company.

The Republic of Croatia also accepted IFRS.

Today all businesses throughout the world, including those in our country, must keep accounting records. Accounting starts with the very founding of the company. According to the Law on Accounting fundamental financial reports are:

- Balance,
- Income statement,
- Statement of changes in equity,
- Statement of Cash Flows,
- Accounting policies and notes to the financial statements.

All of these statements must give true and fair overview of the assets, liabilities, equity, changes in financial position and profit and loss account. Taxpayers of bookkeeping and financial reporting are all entrepreneurs based in the Republic of Croatia. International Financial Reporting Standards are the basis from which results an assembly of the basic financial statements for external users. Although these standards are related to financial reporting, they affect the collecting of accounting data, as well as their processing and the entries into the books. (Skupina autora, 2004, 26)

It is very important to monitor the share of claims in the structure of assets. By the sale revenues will be earned. Only the retail business provides a regular cash inflow, while in other sectors a certain period of time has to pass for effect the conversion of receivables into cash. In order to have the sale, it is necessary to engage the funds that will result in the product. (Crnković, 2006, 112)

The business process is a continuous series of events that begin with investment of certain assets that can be own or borrowed and the use of which leads to revenue. At the end of the business period the difference between income and expenses will be determined and it will be seen how the whole process was successful. In any business there are fixed and variable costs. Fixed costs are always present, regardless of whether they use all business capacity or not and they are difficult to influence on. Unlike these, variable costs are dependent on the

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scope of activities. On the other hand, revenues depend on the cost per unit of product sold amount. It is on management to decide on the extent of activities that will achieve the most favorable ratio of profitability.

First, it must be determined which is the minimum scope of activities that would only cover the cost of production, and the gross profit would be a zero. This points out to where the break-even point is, or how many units of a product or service has to be produced and sold in order to compensate the production costs. Any other, larger activity will lead to gain, while the smaller will bring loss. By increasing or decreasing the selling price per unit of product or service you can directly affect on income. It is therefore necessary to see whether the positions of variable costs can make different combinations, which would ensure equal pay and will reduce the selling price. The structure of the balance sheet will depend on the selection of sources of funding. The best and safest source of financing is own capital. However, in any business there is the need for external capital. It is therefore important to make the right decisions on choosing sources of financing. The first will be doubted whether this funding should be long-term or short-term.

One should always start from the golden rule of banking advises that for long term placements are taken long-term loans and for short term investments a short-term funding sources. Theoretically it is the best structure in which own and someone else's capital are represented in equal proportions. There certainly should always take into consideration the interest rate on borrowed capital, which can in some cases be very favorable, and by which the share of foreign capital can be increased. If there is an unfavorable structure of the balance sheet it is possible to change that in a way to make a decision not to pay dividends or share. In this way you can directly impact on the change in the liability structure through increased equity. The next way to improve the situation in the balance is the share capital increase, which also directly affects the change in capital structure. The total amount of capital will not be changed if a decision is made on the transformation of retained earnings in the share capital, but will only incur a change in the capital structure itself.

Analysis of financial statements is performed by various instruments and procedures, which are mainly the analyzing and comparing the results, classification of basic financial instruments and procedures of financial statement analysis. In carrying out its activities, the company aims to achieve an appropriate result (profit or profitability), which means that revenues exceed the costs. (Belak, 1995, 87)

3. Financial analysis of "Regional center for biotechnology research and development Brod-Posavina County Ltd"

Table 1 shows the balance of the company on specific days until 2014.

Table 1 *Balance of the company on the date 31.12.2012., 31.12.2013., 31.12.2014.*

ASSETS	2012.	2013.	2014.
NON-CURRENT ASSETS			
land	0	0	0
building objects	0	0	0
plants and equipment	0	0	0
tools, inventory, transportation assets	0	0	11.184,00
TOTAL NON-CURRENT ASSETS	0	0	11.184,00
CURRENT ASSETS			
stocks of merchandise	0	0	18.512,00
claims	0	0	49.994,00
money	0	0	23.668,00

	2012.	2013.	2014.
TOTAL CURRENT ASSETS	0	0	92.174,00
TOTAL ASSETS	**0**	**0**	**103.358,00**
LIABILITIES			
EQUITY	0	0	-5.725,00
share capital	0	0	20.490,00
loss	0	0	26.215,00
TOTAL EQUITY	0	0	-5.725,00
NON-CURRENT LIABILITIES			
long-term loans	0	0	0
TOTAL NON-CURRENT LIABILITIES	0	0	0
CURRENT LIABILITIES			
other current liabilities	0	0	7.561,00
liabilities to suppliers	0	0	69.340,00
liabilities for taxes and contributions	0	0	12.376,00
liabilities to employees	0	0	19.806,00
TOTAL CURRENT LIABILITIES	0	0	109.083,00
TOTAL LIABILITIES	**0**	**0**	**103.358,00**

Source: Made by author

Table 2 shows income statement of the company in 2012, 2013, 2014.

Table 2 *Income Statement of the company in 2012, 2013, 2014.*

	2012	2013	2014
SALES REVENUE	0	0	70.123,00
OTHER OPERATING INCOME	0	0	435.216,00
TOTAL INCOME	**0**	**0**	**505.339,00**
raw materials	0	0	58.930,00
sold goods costs	0	0	24.644,00
costs of salaries	0	0	280.782,00
other costs	0	0	167.198,00
TOTAL EXPENDITURES	**0**	**0**	**531.540,00**
PROFIT OR LOSS BEFORE TAXATION	0	0	-26.215,00
LOSS BEFORE TAXATION	0	0	-26.215,00
INCOME TAX	0	0	0
LOSS OF THE PERIOD	0	0	**26.215,00**

Source: Made by author

4. Financial Indicators

In order to obtain financial indicators we need to put an economic size in relationship with another economic size. By stating this we need to place in relations sizes that were got on a particular day or the result of operations in a given period. The results are going to be used as a base on which economists could work plans and make decisions about future business. What indicators will be used depends in a given moment on the user. (Novak, 2002, 54) Long-term investors are interested in the efficiency of operations, banks for granting short-term loans need financial situation, which is expressed by the coefficient of liquidity. Furthermore, the management of the company is monitoring all the aspects of financial

analysis, because it has to take care of the whole business and provide short-term and long-term stability, profitability and to ensure further development.

The most commonly used are the following indicators:

1. Liquidity indicators - measures the ability of the company to meet its short-term liabilities.

2. Debt indicators - measures how much the company is financed by external sources of funds.

3. Indicators of activity - measures how efficiently the company uses its resources.

4. Indicators of cost effectiveness - measures the ratio of income and expenditure, and shows how much the revenue is generated per unit of expense.

5. Profitability Ratios - measure return on capital.

6. Investment indicators - measures the performance of investments in ordinary shares.

For business security the most important indicators are liquidity indicators and debt indicators. However, each indicator has its own meaning, which will become apparent when it is compared with a certain standard size. These sizes can be plans, comparison of size in a given period and comparison with similar companies. (Popović, Vitezić, 2006, 7)

Using the previous operating data, it can be calculated what size the individual indicators are for all three years:

4.1. Indicators of liquidity

4.1.1. Accelerated liquidity coefficient

This coefficient is obtained as the ratio of the sum of cash and receivables with short-term liabilities. Based on the information that will be obtained from data on accelerated liquidity coefficient it can be concluded what is the ability of a company that in a very short time provide a certain amount of money. This can be of great importance in emergency situations that may occur as a sudden need for cash.

To calculate this coefficient stocks are excluded because of their conversion into money takes a long period. This is understandable because in the case of materials on stock first they should be used in the production process to obtain the finished product, and then should take some time to sell stocks of finished products.

IL =73. 662,00 / 109.083,00= 0,67

The obtained indicator reveals to us that the liquidity is very poor; 0.67. It is believed that this ratio should not be less than 1.

4.2. Debt indicators

4.2.1. Debt ratio

This is one of the most important indicators of corporate indebtedness. It is obtained as a ratio of total liabilities to total assets.

Coefficient or gearing ratio shows how much of the assets are financed by external sources of long-term or short-term either. This ratio shows how much the total liabilities are represented in the overall financial structure of the company. The gearing ratio indicates the ability of the company to cover all its short-term and long-term liabilities to creditors and investors. If this coefficient is higher, the higher is the risk of investment in the company. It is believed that the level of indebtedness should not be higher than 50%.

DI = 109.083,00 / 103.358,00 = 1,05

4.2.1. Financing ratio

This indicator is linked to the previous two and placed in relation to total liabilities and equity. The financing ratio shows the company's debt in relation to the value of shareholders' equity, or basic relationships within the financial structure or the structure of sources of assets. The ratio of debt to equity gives the same information as the debt ratio only starts from a different ratio. Based on experience, the company should not incur debt more than 50% of equity. This means that the liabilities and equity should be in the ratio of 1: 1.

FR = 109.083,00 / 20.490,00 = 5,32

It can be seen that total requirement in the first period were 532% higher than their own capital.

4.3. Indicators of activity

4.3.1. Turnover coefficient of total assets

This indicator is ratio between total revenue and total assets. This analysis is called total assets turnover although there may not be the case of a real assets revolution, rather than about the coefficient which tells how one monetary unit of assets creates monetary units of income. For this coefficient are used data on income and data of the assets from the balance sheet for the current year.

TCTA = 505.339,00 / 103.358,00 = 4,88

4.3.2. The ratio of trade receivables

It is obtained as a ratio of sales revenue and receivables.

RTR = 70.123,00 / 49.994,00= 1,40

4.3.3. Duration of collection of receivables in days

To calculate this, we will use the ratio of trade receivables obtained in the previous case, so the number of days in the year will be divided with these sizes.

DCR = 365 / 1,40 = 260

4.4. Indicators of cost effectiveness

4.4.1. Effectiveness of total activity

All the indicators of cost effectiveness are obtained by using data from the income statement. They indicate how much income is realized per unit of expenditure. The first coefficient is obtained as the ratio of total income and expenses.

ETA = 505.339,00 / 531.540,00 = 0,95

4.4.2. Activity effectiveness

In order to obtain this indicator we'll put in relationship sales revenues with expenditures from the sale.

AE= 70.123,00 / 24.644,00 = 2,84

Unlike the previous indicator, it is shown that the effectiveness of operations in the first year was very good.

5. Conclusion

Based on the analysis and financial indicators it can be concluded that the mentioned company in the first observed fiscal year recorded a modest financial result. However, it was based on the profit from financial investments, while the result from operating activities for this year was very poor. The reported loss is the result of inactivity of observed society, the indicator of liquidity is low. Investment in working assets is very small. If there is no significant shift in the phase of investments, the company will have deteriorating indicators and is likely to find itself in situation where will be noticeable increase of the loss in the future.

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