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EFFICIENCY EVALUATION OF INVESTMENT IN EXPANDING THE CAPACITY OF THE RUBBER INDUSTRY COMPANY

Abstract

The aim of this paper is to determine and evaluate the economic efficiency of investment of the company from the field of rubber industry in the injection molding press and tool, with which the company expands the capacities intended for the production of rubber seals. The effects of the investment were estimated using the payback period, as a static method of investment efficiency evaluation, as well as the net present value and profitability index, as dynamic methods. In addition,in paper was used sensitivity analysis, as a method for evaluation of investment in conditions of uncertainty. The obtained results showed that the payback period of the investment is 2.93 years, while the net present value of the investment is 149,914 euros, and the profitability index is 1.79. All the obtained results indicate that the investment should be implemented. In addition, the sensitivity analysis, whose focus was primarily to consider the impact of increased material costs, on the results of the investment evaluation methods used, showed that the project is acceptable in all considered cases, because it contributes to increasing value of the company.

Key words: *investment evaluation, payback period, net present value, profitability index, sensitivity analysis.*

JEL classification: G31, D22

ОЦЕНА ЕФИКАСНОСТИ ИНВЕСТИЦИЈЕ У ПРОШИРЕЊЕ КАПАЦИТЕТА ПРЕДУЗЕЋА ИЗ ГУМАРСКЕ ИНДУСТРИЈЕ

Апстракт

Циљ овог рада јесте утврђивање и оцена економске ефикасности инвестиције предузећа из области гумарске индустрије у ињекциону пресу и алат, којим предузеће проширује капацитете намењене производњи гумених заптивки. Ефекти инвестиције су оцењени помоћу периода повраћаја, као статичког метода оцене ефикасности инвестиције, као и нето садашње

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вредности и индекса профитабилности, као динамичких метода. Поред тога, у раду је коришћена и анализа осетљивости, као метода оцене инвестиције у условима неизвесности. Добијени резултати су показали да је период повраћаја инвестиције 2,93 године, док нето садашња вредност инвестиције износи 149.914 евра, а индекс профитабилности 1,79. Сви добијени резултати указују да инвестицију треба спровести. Осим тога, анализа осетљивости, чији је фокус, пре свега, био да сагледа утицај повећања трошкова материјала, на резултате коришћених метода оцене инвестиције, је показала да је пројекат прихватљив у свим разматраним случајевима, јер доприноси повећању вредности предузећа.

Кључне речи: *оцена инвестиције, период повраћаја, нето садашња вредност, индекс профитабилности, анализа осетљивости.*

Introduction

Investments represent present investments that are made in real goods, in order to obtain certain effects in the future, which will, in that way, increase the overall wealth of the company and the social community as a whole. (Jovanović, 2013, p. 44) Investments are, therefore, the base of growth and development of companies, as well as social community, and they should be realized in such a way to provide maximum effects per unit of (limited) invested financial resources. For investment analysis and evaluation are used various static and dynamic methods, as well as investment evaluation methods in conditions of uncertainty. (Malešević and Malešević, 2011, pp. 111-138, 156-180)

The main goal of this research is to analyze and evaluate the effects of the investment of the company "X", which operates in the field of rubber industry, in injection molding press and tool. In paper for evaluation of investment is used the payback period, as a static method of assessing the efficiency of the investment. In addition, in paper are used net present value and profitability index as dynamic methods of assessment. Since from the beginning of 2021 there has been instability in the procurement market and an increase in the price of raw rubber, in the paperis also used sensitivity analysis, as a method of assessment of investments in conditions of uncertainty.

Literature Review

A number of papers, both in domestic and foreign literature, deal with the analysis and evaluation of economic efficiency of investments. Thus, Novković et al. (2006) examined the effects of investing in silo capacity expansion. On the example of silos PP Titel AD in Titel, they presented the procedure of assessing the effects of investing in the expansion of silo capacity. The research showed that the investment should be undertaken, because the paybeck period is slightly higher than five years, the net present value of the investment is around 190,000 euros, and the internal rate of return is 13.01%. Similarly, Novković et al. (2017) investigated the economic effects of investing in hazelnut plantation on an area of 0.5 hectares. The obtained results indicated that the

project has a positive net present value for a period of 10 years (1,212,200 dinars), as well as that the internal rate of return of the project is 16.97%. In addition, the results showed that after eight years, the project returns the invested funds, and can be assessed as profitable.

Subić (2017) examined the economic efficiency of investments in the field of crop production, ie he investigated the effects of the project of purchasing agricultural land, as well as the procurement of machinery for agricultural production. For investment evaluation he used dynamic methods, as well as investment evaluation methods in conditions of uncertainty. He concluded that there is a justification for investment in all analyzed cases. Similarly, Subić, Kljajić and Jeločnik (2017) examined the economic effects of introducing energy from renewable sources into the raspberry production process. The authors evaluated two investment scenarios (conventional way of establishing and using raspberry plantation, as well as raspberry plantations that include investing in a mobile solar robotic generator). The assessment of the economic effects of the projects was performed using the methods of net present value, internal rate of return, payback period and break-even point. The results of the study indicated that investing in a device for the transfer of renewable into electrical energy, during the process of growing raspberries, has a high economic justification.

Assessment the economic efficiency of the investment using several dynamic methods of capital budgeting on the example of the purchase of 10 hectares of agricultural land for corn cultivation by an agricultural farm was performed by Vlaović Begović, Momčilović and Tomašević (2018). The research showed that the net present value of the investment is 43,415 euros, the internal rate of return is 9.91%, and the profitability index is 1.22, and they concluded that the investment should be implemented.

Baruwa and Fabode (2019) investigated the investments, as well as a structure of costs and returns of the layer and broiler production investments in the state of Osun, Nigeria. The results of the research showed that the investment in layer production has a higher, positive net present value and the value of the internal rate of return in relation to the investment in the production of broilers, as well as a shorter discounted payback period. It should be emphasized, however, that the used indicators of the efficiency of the investment in the production of broilers also indicated that this investment should be accepted too. The authors concluded that small scale layer producer is more profitable compared to broiler producer, because it has higher net present value, internal rates of return, as well as a shorter discounted peyback period of investment.

Lopes Santos et al. (2020) evaluated two soybean cultivation systems on three different rural property profiles, using three different price scenarios. Using discounted cash flows of the investment (which includes the net present value method), as well as cost-volume-profit analysis, the authors found that production makes economic sense, with different strategies, property production profiles and price scenarios, if it is performed on land that according to the size varies between 29 ha and 1,065 ha.

Data and Methodology

The investment project, which is analyzed and evaluated in the paper, is being conducted for the company “X”, that has been operating in the field of production of

other rubber products since 1992. Company "X" has the opportunity to market additional quantities of rubber seals to long-term customer. Since it does not have unused production capacity, the company is considering investing in an injection press and tool, as it could to produce an additional, required quantity of products. Data related to investment in equipment and permanent working capital, planned (economic) utilization life of equipment, minimum quantity of products that can be produced and marketed, costs of raw materials, energy, labor and other costs, as well as the expected minimum selling price, were obtained from management of company "X" on the basis of conducted interview.

Since the management estimated that the demand for the product will exist for at least 5 years, the assessment of the efficiency of the investment is based on the economic life of the project operation of 5 years. In the paper was carried out a projection of the income statement, as well as the cash and economic flow of the project.

It is well known that the net present value is method of investment evaluation to which a large space is devoted in the literature (Peterson and Fabozzi, 2002, pp. 71-79; Malešević and Malešević, 2011, pp. 113-118; ACCA Study Text, 2014, p. 163-167, 172; Damodaran, 2015, pp. 196-204; Todorović and Ivanišević, 2018, pp. 325-327; Stančić and Čupić, 2020, pp. 173-177; CFA Institute, 2020, pp. 52- 53), and, as such, will be used in this paper to assess the efficiency of the investment.

In addition, when selecting additional methods for investment evaluation, the authors started from the results of research conducted by Todorović, Kaličanin and Nojković (2015)[4], who surveyed financial managers of 64 companies in Serbia in order to determine the most common practices of investment project evaluation. Namely, Todorović et al. (2015) found that ¾ of sample firms always or almost always use the profitability index, as well as the payback period, when evaluating investments.

They assume that managers prefer to use the profitability index, because it is a relative measure for which fewer shortcomings are cited in the literature in relation to the internal rate of return (see Peterson and Fabozzi, 2002, p. 106). Also, they believe that the payback period is well ranked due to its simplicity and comprehensibility, and state that managers mostly use metrics based on discounted cash flow and believe that the payback period represents an additional metric when evaluating investments. Due to the stated reasons, for assesment of investment efficiency, in addition to the net present value, will be used payback period and profitability index.

In addition, in the paper will also be used sensitivity analysis as an investment evaluation method suitable for uncertainty conditions. Namely, in the first part of 2021, Covid-19 contributed to the instability of the procurement market in the rubber industry, ie there was a significant increase in the price of raw rubber. As a result, in the paper will be performed a sensitivity analysis, which focus will be examination of acceptability of the investment in the case of a further increase in raw rubber prices and other material costs.

[4] In the world numerous similar studies have been conducted about investment and financial decisions made by corporate financial managers (Graham and Harvey, 2001; Ryan and Ryan, 2002; Dedi and Orsag, 2007; Correia, 2012; Andres, Fuente and San Matin, 2015, etc.).

Research Results and Discussion

The total investment in the project include investment in equipment, as well as investment in permanent working capital, in the total amount of 190,000 euros. The company has unused space in the existing production facility, as well as the accompanying infrastructure, which are needed for the installation of new equipment, and during the realization of the project, no investment will be made in construction facilities. The structure of investments is presented in Table 1.

Table 1: Structure of investments in the project (in EUR)

No.	Description	Amount	Share (%)
I	**Fixed assets**	**140,000**	**74**
1.	Plant and equipment	140,000	74
1.1	Injection press MTF2000/250	130,000	69
1.2	Injection tool	10,000	5
II	**Permanent working capital (PWC)**	**50,000**	**26**
	TOTAL:	**190,000**	**100**

Source: Authors calculation

The company will finance part of the investment in plant and equipment from credit. The rest of the investment in plant and equipment, as well as investment in permanent working capital, company will finance from its own sources (Table 2).

Table 2: Structure of project financing sources (in EUR)

No.	Description	Amount	Share (%)
I	**Own capital**	**100,000**	**53**
1,	Plant and equipment	50,000	26
2	PWC	50,000	26
II	**External capital**	**90,000**	**47**
1,	Plant and equipment	90,000	47
	TOTAL:	**190,000**	**100**

Source: Authors calculation

The company estimated that by expanding its production capacity, it can produce 160,000 pieces of rubber seals per month, as well as that it can place the total annual produced quantity of products to an existing, foreign customer with whom it has been successfully cooperating for more than 10 years. The sale price of 0,11 EUR / piece was agreed with the customer. Table 3 shows the projected total revenue by years of exploitation of the investment.

Table 3: Total planned investment revenue (in EUR)

No.	Description	Years				
		1	2	3	4	5
Total revenue						
I	Operating revenue					
1	Revenue from sales of products and services	211,200	211,200	211,200	211,200	211,200
	TOTAL:	**211,200**	**211,200**	**211,200**	**211,200**	**211,200**

Source: Authors calculation

It is estimated that the direct cost of materials (raw rubber) per product is 0.05 euros. In addition, the monthly fuel and energy consumption is estimated at 1,000 euros, and other material costs at 5,000 euros per year. Gross labor costs are estimated at 2,000 euros per month. Estimated material costs of the project are presented in Table 4, and labor costs in Table 5.

Table 4: Material costs (in EUR)

No.	Descrition	Years				
		1	2	3	4	5
I	**Material costs**					
1	Cost of material (raw rubber)	96,000	96,000	96,000	96,000	96,000
2	Costs of fuel and energy	12,000	12,000	12,000	12,000	12,000
3	Other costs	5,000	5,000	5,000	5,000	5,000
	TOTAL:	**113,000**	**113,000**	**113,000**	**113,000**	**113,000**

Source: Authors calculation

Table 5: Labor costs (in EUR)

No.	Description	Years				
		1	2	3	4	5
1	Gross labor costs	24,000	24,000	24,000	24,000	24,000
	UKUPNO:	**24,000**	**24,000**	**24,000**	**24,000**	**24,000**

Source: Authors calculation

The annual depreciation rate of the equipment in which the investment is made is determined on the basis of the planned useful life of the equipment exploatation and the linear depreciation method. When determining the annual depreciation cost for the injection press, it was started from the assumption that the useful life of the press is 20 years, and its annual depreciation rate (write-off) is 5%. The planned useful life of the injection tool is 10 years, and its annual depreciation rate is 10%. Depreciation costs are presented in Table 6.

Table 6: Depreciation costs (in EUR)

No.	Description	Dep, rate (%)						Unamortized cost
			1	2	3	4	5	
1	Injection press	5	6,500	6,500	6,500	6,500	6,500	97,500
2	Injection tool	10	1,000	1,000	1,000	1,000	1,000	5,000
	TOTAL:		**7,500**	**7,500**	**7,500**	**7,500**	**7,500**	**102,500**

Source: Authors calculation

To finance the project, a 90,000-euro loan will be provided by a commercial bank with a fixed interest rate of 5.56%, a repayment period of 5 years and a grace period of 1 year. Repayment of the loan will be made in equal annuities (Table 7).

Table 7: Loan repayment dynamics (in EUR)

No.	Description	Years				
		1	2	3	4	5
1	Interest expenses	5,004	4,108	3,163	2,165	1,114
2	Debt repayment	16,107	17,003	17,948	18,946	19,997
	TOTAL:	**21,111**	**21,111**	**21,111**	**21,111**	**21,111**

Source: Authors calculation

Table 8 presents the income statement of the investment project, with an income tax rate of 15%. It can be seen from the table that the implementation of the project will have a positive financial result in all years of the observed period.

Table 8: Project income statement (in EUR)

No.	Description	Years				
		1	2	3	4	5
1	**Total revenue**	**211,200**	**211,200**	**211,200**	**211,200**	**211,200**
1.1	Operating revenue	211,200	211,200	211,200	211,200	211,200
	1,1,1 Revenue from sales of products and services	211,200	211,200	211,200	211,200	211,200
2	**Total expenses**	**144,500**	**144,500**	**144,500**	**144,500**	**144,500**
2.1	Operating expenses	144,500	144,500	144,500	144,500	144,500
	2,1,1 Material costs	113,000	113,000	113,000	113,000	113,000
	2,1,2 Depreciation costs	7,500	7,500	7,500	7,500	7,500
	3,1,3 Gross labor costs	24,000	24,000	24,000	24,000	24,000

3	**Operating profit**	**66,700**	**66,700**	**66,700**	**66,700**	**66,700**
4	Financial expenses	5,004	4,108	3,163	2,165	1,114
5	**Profit before tax**	**61,696**	**62,592**	**63,537**	**64,535**	**65,586**
6	Income tax (15%)	9,254	9,389	9,531	9,680	9,838
7	**Net profit**	**52,442**	**53,203**	**54,006**	**54,855**	**55,748**

Source: Authors calculation

The cash flow of the project is presented in Table 9. From the table can be seen that in each observed year of cash flow, the project generates a positive net inflow. In the last year, the net inflow is significantly higher compared to previous years, due to the residual value of fixed assets and permanent working capital. The residual value of fixed assets is estimated at their unamortized value.

Table 9: Cash flow of the project (in EUR)

No.	Description	Years					
		0	1	2	3	4	5
I	**Total inflow**	**190,000**	**211,200**	**211,200**	**211,200**	**211,200**	**363,700**
1	Total revenue	0	211,200	211,200	211,200	211,200	211,200
2	Sources of financing	190,000					
2.1	Own capital	100,000					
2.2	External capital	90,000					
3	Residual value						152,500
3.1	Fixed assets						102,500
3.2	PWC						50,000
II	**Total outflow**	**190,000**	**167,365**	**167,500**	**167,642**	**167,791**	**167,949**
1	Value of investment	190,000					
1.1	Fixed assets	140,000					
1.2	PWC	50,000					
2	Material costs	0	113,000	113,000	113,000	113,000	113,000
3	Gross labor costs	0	24,000	24,000	24,000	24,000	24,000
4	Loan liabilities	0	21,111	21,111	21,111	21,111	21,111
5	Income tax (15%)	0	9,254	9,389	9,531	9,680	9,838
III	**Net inflow (I-II)**	**0**	**43,835**	**43,700**	**43,558**	**43,409**	**195,751**

Source: Authors calculation

From Table 10, which shows the economic flow of the project, can be seen that the net inflows of economic flow in all years are positive, except in the year of project implementation (because in year zero is not expected to generate revenue from the project). The obtained results indicate that the economic potential of the project is positive.

Table 10: Economic flow of the project (in EUR)

No.	Description	Years					
		0	1	2	3	4	5
I	**Total inflow**	**0**	**211,200**	**211,200**	**211,200**	**211,200**	**363,700**
1	Total revenue	0	211,200	211,200	211,200	211,200	211,200
2	Residual value						152,500
2.1	Fixed assets						102,500
2.2	PWC						50,000
II	**Total outflow**	**190,000**	**146,254**	**146,389**	**146,531**	**146,680**	**146,838**
1	Value of investment	190,000					
1.1	Fixed assets	140,000					
1.2	PWC	50,000					
2	Material costs	0	113,000	113,000	113,000	113,000	113,000
4	Gross labor costs	0	24,000	24,000	24,000	24,000	24,000
5	Income tax (15%)	0	9,254	9,389	9,531	9,680	9,838
III	**Net inflow (I-II)**	**-190,000**	**64,946**	**64,811**	**64,669**	**64,520**	**216,862**

Source: Authors calculation

The payback period of investment represents the time required for the net inflows to cover the invested funds (capital expenditure) of the project, and in particular case it amounts 2.93 years (Table 11). A project is considered eligible if the payback period is shorter than the maximal acceptable period (which is determined by management based on an assessment).

Table 11: Investment payback period

Year	Net inflow (EUR)	Cumulative (EUR)
0	-190,000	-190,000
1	64,946	-125,054
2	64,811	-60,243
3	64,669	4,426
4	64,520	68,946
5	216,862	285,808
Investment payback period (PP)		**2.93 years**

Source: Authors calculation

The application of net present value and profitability index, as more complex dynamic methods of investment evaluation, requires the determination of the discount rate. As a rule, the weighted average cost of project capital is used as a discount rate. Given that the analyzed company has the ability to borrow funds from the bank at an interest rate of 5.56%, as well as the ability to invest equity at an a-vista interest rate of 1.06%, the weighted average cost of capital is 3.18% (or 2.78%, if the income tax rate of 15% is taken into account). Since the obtained weighted average cost of capital is quite low, in the

paper as a discount rate will be used a rate of 10%, which is usually used by the majority of authors in business plans (according to Paunović and Zipovski, 2018, p, 267).

Table 12: Net present value and profitability index of investment

Year	Net inflow (EUR)	Discount factor	Present value (EUR)
0	-190,000	1,00	-190,000
1	64,946	0,91	59,041
2	64,811	0,83	53,563
3	64,669	0,75	48,587
4	64,520	0,68	44,068
5	216,862	0,62	134,654
Present value of net inflows (for yeats from 1 to 5)			339,914
Net present value (NPV)			**149,914**
Profitability index (IP)			**1.79**

Source: Authors calculation

From the Table 12 can be seen that the net present value is 149,914 euros. Net present value represents the present value of the assets for reproduction that project generate in the economic life, and any positive value of this indicator shows that the project should be implemented.

Also, from the table can be seen that the profitability index is 1.79, which means that each euro of the present value of capital investment brings 1.79 euros of the present value of net inflow. Since the profitability index is higher than one, the theory indicates that the project should be also accepted according to this method of evaluating the investment project.

Table 13: Sensitivity analysis

Parameter	Change in parameter (%)	Payback period (years)	Net present value (EUR)	Profitability index
Base value	**0**	**2.93**	**149,914**	**1.79**
Selling prices	+5	2.57	183,940	1.97
Selling quantit, quontities	+5	2.57	183,940	1.97
Selling quantit, quontities	+10	2.29	217,966	2.15
Costs of rubber	+5	3.13	134,447	1.71
Costs of rubber	+10	3.36	118,981	1.63
Costs of rubber	+15	3.62	103,515	1.54
Material costs	+5	3.17	131,709	1.69
Material costs	+10	3.44	113,503	1.60
Material costs	+15	3.77	95,298	1.50

Source: Authors calculation

Table 13 shows the results of the sensitivity analysis. Since the minimum sales prices and quantities were determined during the company's negotiations with the customer, sensitivity analysis was used to examine the impact of possible increases in sales prices and product quantities on the value of payback period, net present value and profitability index. However, the focus of the analysis is the impact of the increase in costs of raw rubber (by 5, 10 and 15%), as well as total material costs (by 5, 10 and 15%) on the results of the methods used to assess the effectiveness of investments.

The obtained results indicate that the project is acceptable in all considered cases. The project contributes the least to increasing the value of the company in the event of an increase in total material costs by 15%, while a slightly better result would be achieved if only the cost of raw rubber increased by 15%.

Conclusion

Based on the data collected by interviewing the management of the company "X", an analysis and evaluation of the investment project of the purchase of injection presses and tool in order to expand capacity. The assessment was performed using the method of investment payback period, net present value and profitability index, as well as sensitivity analysis. The obtained results showed that:

- The payback period is 2.93 years, which means that it takes 2.93 years to cover the capital investment from the net inflow of investment;
- The net present value of the investment is 149,914 euros, assuming that the economic life of the project is 5 years and the discount rate is 10%. The obtained result indicates that the five-year use of the injection press and tools would provide the company a profit of 149,914 euros, ie that the value of the company would increase by that amount. Since the net present value of the company is greater than 0, based on the net present value criterion, the project should be accepted;
- The profitability index is 1.79 and shows that, at a discount rate of 10% and an economic life of the project of 5 years, the project adds 0.79 euros of surplus of present value on every euro of present value of investment in the project. Since the profitability index is higher than 1, according to this method, the project should be accepted;
- Sensitivity analysis indicates that the project is acceptable for all analyzed changes in input parameters.

All the methods used to evaluate the investment speak in favor of its implementation. Future research could further examine the efficiency of the investment in conditions of uncertainty using the break-even point, the scenario analysis and the decision tree.

Reference

ACCA Study Text. (2014). Paper F9. Financial Management. London: BPP Learning Media Ltd.

Andres, P. de, Fuente, G. de, & San Martin, P. (2015). Capital budgeting practices in Spain. Business Research Quarterly, 18(1), 37-56.

Baruwa, I. O., & Fabode, O. A., (2019). Uporedna investiciona analiza za male proizvođače brojlera i jaja u državi Osun, Nigerija. Journal of Agricultural Sciences, 64(3), 279-291.

CFA Institute (2020). Corporate Finance and Equity. Level I, Volume 4. New Yersey: Wiley Global Finance.

Correia, C. (2012). Capital budgeting practices in South Africa: A review. South African Journal of Economics and Management.

Dedi, L., & Orsag, S., (2007). Capital budgeting practices: A survey of Croatian firms. South East European Journal of Economics and Business, 2(1), 59-67.

Damodaran, A. (2015). Applied Corporate Finance (4th Ed.). Hoboken, NJ: John Wiley & Sons Inc.

Graham, J. R., & Harvey, C. R. (2001). The theory and practice of corporate finance: Evidence from the field. Journal of Financial Economics, 60(2-3), 187-243.

Jovanović, P. (2013). Upravljanje investicijama. Beograd: Visoka škola za projektni menadžment.

Lopes Santos, D. F., de Morales Farinelli, J. B., Horita, K., da Silva, B. L., & Fonseca Souza, C. A. (2020). Investment analysis of soybean production system in sugarcrane renewal areas. Custos e @gronegocio on line, 16(3), 130-164.

Malešević, E., & Malešević, Đ. (2011). Upravljanje investicijama. Bečej: Proleter.

Novković, N., Ćosović, J., Šilić, & Topić, M. (2006). Efekti investiranja u proširenje kapaciteta silosa – studija slučaja. PTEP, 10(1-2), 50-53.

Novković, N., Vukelić, N., Mutavdžić, B., Lukač-Bulatović, M., & Milošević, M. (2017). Ekonomski efekti investiranja u zasad lešnika. Agroekonomika, 46(74): 21-29.

Paunović, B., & Zipovski, D. (2018). Poslovni plan: vodič za izradu. Beograd: Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu.

Peterson, P.P., & Fabozzi, F. J. (2002). Capital Budgeting: Theory and Practice. New York: John Wiley & Sons.

Ryan, P. A., & Ryan, G. P. (2002). Capital budgeting practices of the Fortune 1000: How have things changed? Journal of Business and Management, 8(4), 355-364.

Stančić, P., & Čupić, M. (2020). Korporativne finansije. Kragujevac: Ekonomski fakultet Univerziteta u Kragujevcu.

Subić, J., Kljajić, N., & Jeločnik, M. (2017). Renewable energy use in raspberry production. Economics of Agriculture, 2, 821-843.

Subić, J. (2017). Assessment of investments by the use of software application for development of the business plan in agriculture. Ekonomika, 63(2), 1-14.

Todorović, M., Kaličanin, Đ., & Nojković, A. (2015). Prakse merenja performansi u preduzećima u Republici Srbiji. Ekonomski horizonti, 17(1), 45-59.

Todorović, M., & Ivanišević, M. (2018). Poslovne finansije. Beograd: Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu.

Vlaović Begović, S., Momčilović, M., & Tomašević, S. (2018). Ocena ekonomske efikasnosti investicija, Anali Ekonomskog fakulteta u Subotici, 54(39): 187-204.