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Indicators calculated for Competitiveness Operational Programme

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Abstract *The objective of this presentation consists in combining theoretical notions concerning the OP Competitiveness, its role with a practical study on the method of calculation of the indicators in order to adopt optimal bankable projects. The benchmark performance must be based on net benefits technique that takes into account the differences between alternative project implementation and the continuing work of contemporary society.*

Key words Operational program, indicators, internal rate, bankability, projection, evaluation profitability

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1. Introduction

The lack of a transparent set of financial indicators common to be met by applicants for European funds to be approved by banks, guarantee institutions and bodies' brokerage proved in time to be a determining factor for the failure of accessing effective money Europeans. This is due primarily to differences in aims pursued by these institutions. The IBs are interested in the social results of the allocation of public money: creating jobs, sustainable development etc. and banks are interested in the profitability of the project and the applicant's ability to pay back the loan plus the interest.

2. Literature review

Droj (2014) wrote about the bankability of the investment projects in the Sectorial Operational Programme for Economic Competitiveness Growth in North West Region, making a motion for the correlation of cost/benefit analysis with the financial and banking analysis. The Romanian Competitiveness Operational Programme 2014-2020 was developed by the Ministry of European Funds and approved by the European Commission in the summer of 2014 and shows the general directions for spending EU funds intended mainly to the development of the IT&C sector and RDI. The study of the European Investment Bank (2014) shows models of European-wide standardized financial instruments that can be taken as a model of good practice in the case of investment projects financed by POC (Operational Competitiveness Programme in Romania). The document drawn up (2014) by the Directorate General for Regional Policy of the European Commission constitute a reference for the analysis of specific investment projects in terms of cost-benefit analysis applicable in the present work. Păunică 2014 studied how infrastructure projects relating to water supply systems and the sewage can generate economic benefits in acceptance of cost-benefit analysis on the particular case of biosphere reserve Danube Delta. Aghelache and Aghel (2014) examine various aspects of modeling and economic analysis. Muntean, Voineagu and Munteanu are concerned about data sensitivity. Dumitrescu and Soare (2014) treat the types of financial instruments that can be used in financing European projects. Anghelache, Voineagu *et al.* (2013) analyzes some features of multiple linear regression estimators, the analysis method used in this paper.

3. Methodology and data

European Commission by Eurostat shows relevant statistical data on key aspects of business and European funds in Romania and other EU countries.

3.1. Evaluation of financial investment profitability and equity

For projects to be subsidized, profitability analysis is performed to determine if the subsidy was determined properly and not undue funds transferred to the project beneficiary. The following analysis will assess by calculating financial indicators, if identified in the EU contribution rate is too generous:

- RIRF/C and FNPV/C (financial profitability of investment);
- FRR/K and FNPV/K (financial profitability of equity).

Analysis of investment profitability indicators (RIRF/C, FNPV/C) is carried out in the method incremental revenues and incremental costs associated with the projection values representing the difference between "with project scenario" and the associated scenario "without the project".

Financial flows cover both investment period and operation period. In this regard, the investment costs are considered output streams and at the end of the reference period is taken into account the residual value with the sign "-" is considered inputs.

Please note that cash flows to determine the ROI indicators do not consider sources of funding and, consequently, any refund flows generated by these sources, since investment performance is assessed independently from the method of financing is chosen

Financial profitability of the investment can be assessed by estimating the financial net present value and rate of financial return on investment (FNPV/C and FRR/C). These indicators show the capacity of the net revenues to cover investment costs, regardless of how they are financed. For a project to be considered eligible for co-financing from the Funds FNPV/C should be negative and the FRR/C should thus be lower than the discount rate used for the analysis.

If the financial performance indicators cannot be calculated, because the project does not generate income, the applicant shall state in writing the pointer FRR/C "negative because the project is not revenue-generating">.

In calculating financial profitability on equity (FNPV/K, FRR/K), the financial resources - net of EU grant - invested in the project is considered output streams instead of investment costs. Capital contributions are taken into account when the project is paid for or reimbursed (in loans).

3.2. Calculation of indicators of profitability on equity (RIRF/K, FNPV/K)

It is required for projects in the state aid schemes as it indicates whether transferring public funds was done in excess or shortage to the need for funding the project.

In this regard calculate performance indicators of capital investment (FNPV/K and FRR/K) which indicates the ability of the project to have "value" and a rate of return on invested capital performance comparable to other projects in the field.

The calculation of capital ratios is based on cash flows underlying the FNPV/C and FRR/C the cost of the investment total is replaced by the amount financed from own sources of the applicant, the grant does not take into account, credit and cost it stands out as an outlet during the operation in accordance with the repayment plan.

VANF (K) with assistance from the Union should be negative or zero, and FRR (K) should be less than or equal to the discount rate; otherwise, it must present adequate justification>.

4. Competitiveness Operational Programme (POC)

Competitiveness Operational Programme (POC) (available at www.poc.research.ro and www.fonduri-ue.ro) approved by Decision Implementation Commission no. 10233 of 19/12/2014 is a strategic document that contribute to the EU strategy for smart, sustainable and inclusive growth and achieving economic, social and territorial cohesion is one of the eight operational programs provided for in the Partnership Agreement 2014-2020 (available at www.fonduri-ue.ro). POC is implemented by the Managing Authority of the Ministry Funds.

POC includes two priorities, namely: - Priority Axis 1 - research, technological development and innovation (RDI) to support economic competitiveness and business development - Priority Axis 2 - Information and Communications Technology (ICT) for a competitive digital economy.

Priority 1 Research, Technological Development and Innovation (RDI) in support of economic competitiveness and business development, hereinafter referred to as Priority 1 - CDI contributes directly to implementation of the National Research and Development Innovation 2014-2020 approved by

Government Decision no. 929/2014 (available at www.research.ro) and supports the Partnership Agreement 2014-2020 in particular by contributing directly to the thematic objective 1 - Development of research, technological development and innovation.

Priority 1 - CDI is implemented by the Intermediate Body for Research of the National Authority for Scientific Research and Innovation under the delegation agreement between the Managing Authority and Intermediate Body for Research POC. Priority 1 - CDI has a financial allocation of EUR 798 million from the European Regional Development Fund (ERDF).

5. Check the financial sustainability of the project

The cumulative net cash flows generated by the business version of the project implementation should be positive over the entire reference period considered.

In determining net cash flow, including the investment project will take into account all costs (eligible and ineligible) and all sources of funding (both for investment and for the operation and functioning), including income generated by the project.

Checking the financial sustainability of the project involves designing a cumulative positive cash flow in each year of the analyzed period demonstrating that the project does not face the risk of a shortage of cash (liquidity) which endanger the development or operation of investment.

The difference between cash inflows and outflows is deficit or, where appropriate, the extra period and accumulate the previous result. Cash flow used in sustainability does not update. Entries include all revenue from selling products/services and all cash inflows due to financial resource management. The residual value is not taken into account. The outputs are investment costs, operating costs, loan repayments, interest and other expenses incurred in obtaining credit, taxes, other payments arising from financial arrangements entered into to provide investment financing sources.

6. Study economic and financial analysis for a project financed from European funds through Operational Programme Competitiveness

"ECSIF TEST SRL" acts as a research and development enterprise innovation.

Current activities consisted primarily of:

- Contracting and project management consultancy activities for implementing an innovative project for Competitiveness Operational Programme 2014-2020;
- Conducting a recruitment campaign highly qualified personnel in science and technology necessary to implement the proposed project under optimal conditions;
- Create partnerships with businesses and national and international institutions in order to develop continuously the research and subsequent commercialization of innovative technological products;
- Realization of promotional activities and sales among commercial banks in Romania.
- Accomplishing of online marketing campaigns and target are database.

Table 1. Components of the Project Budget

No	COMPONENTS OF THE PROJECT BUDGET	VALUE
I (I=II+III)	**The total project**	14.611.107
II	***INELIGIBLE AMOUNT OF PROJECT***	6.994.667
III	***PROJECT ELIGIBLE VALUE***	11.782.849
III.1	*REFUNDABLE FINANCIAL ASSISTANCE REQUESTED*	11.782.849
III.2	*ELIGIBLE CONTRIBUTION OF APPLICANT*	**0**
III.2.1	Contributions in cash	0
III.2.2	Contributions in kind	Not applicable
III.2.3	Loan*	7.616.065

The benchmark performance must be based on net benefits technique that takes into account the differences between alternative project implementation and the continuing work of contemporary society.

Tabel 2. Analysis Scenarios

Operational result	Year								Cumulative discounted cash flow
	0	1	2	3	4	5	6	7	
Scenario project	1.512.335	3.329.581	3.483.581	3.571.581	3.607.860	3.614.790	3.739.530	3.837.980	16.785.249
The scenario without project	1.512.335	1.476.586	1.471.086	1.460.086	1.460.086	1.460.086	1.460.086	1.460.086	7.488.477

Source: Author's company based on the methodology ECSIF TEST SRL

It may be noted that the table above, following the introduction in the data analysis of the business plan, we note that the net present value for the project scenario is larger than the version without a script. To achieve modeling for calculating operating profit was used discount rate of 5%.

Table 3. Operating income generated by the project

Year	Operating costs	Total Benefits	Coefficient a.	Operating costs a.	Total Benefits a.	Cash flow a in year	The net value. Cumulative
0	0	0	1,047619	0	0	0	0
1	1.299.872	2.383.700	0,997732	1.119.622	2.162.086	983.063	983.063
2	1.319.122	2.446.950	0,950.222	1.139.507	2.113.768	974.260	1.957.324
3	1.409.872	2.636.700	0,904.972	1.159.906	2.169.220	1.009.314	2.966.637
4	1.601.843	2.699.950	0,861.879	1.255.086	2.115.482	860.395	3.827.033
5	1.640.013	2.844.050	0,820.837	1.223.802	2.122.274	8.98471	4.725.503
6	1.899.173	2.996.950	0,781.749	1.349.706,6	2.129.876	780.169,5	5.505.673
7	2.083.423	3.158.650	0,756.452	1.410.142,8	2.137.898	7.27755,6	6.233.429
Total	X	X	X	8.717.174,4	14.950.604	X	X

Source: Author's order based on the methodology ECSIF TEST SRL

Permanent increase in the net present value analysis period, reaching a value of 16785249 lei for the whole company and the value of 6,233,429 lei for activities directly related to the project that will be implemented, reflecting a high degree of sustainability important indicator + in the analysis.

Turnover indicator is an important indicator in assessing sustainability, and we can see that the scenario with the project as nostrum increase continuously, reaching 13.3% in July of analysis. The underlying indicators selected projects for funding are: Financial Net Present Value (NPV - FNPV) and the Financial Internal Rate of Return on investment (RIRF-FRR) FNPV (K) and RIRF (K). The table below is found how to determine the RIRF.

Table 4. Financial internal rate of return on investments

FRR/K = 5.11%

Y	Investment costs	Operating costs	Total benefits	Weightings	Operating costs	Total benefits of a	The net value a of the year	The net value of the aggregate
	4.479.699	0	0	0,96002	4.300.580	0	-4.300.580	-4.300.580
0	7.430.152	0	0	0,92163	6.847.848	0	-6.847.848	-11.148.427
1	0	1.327.372	2.383.700	0,88478	1.174.430	2.109.047	934.616	-10.213.812
2	0	1.352.122	2.446.950	0,84940	1.148.494	2.078.441	929.948	-9.283.865
3	0	1.453.872	2.636.700	0,81544	1.185.543	2.150.066	964.523	-8.319.342
4	0	1.645.843	2.699.950	0,78283	1.288.420	2.113.609	825.189	-7.494.153
5	0	1.684.013	2.585.500	0,75153	1.265.590	2.137.394	871.804	-6.622.348
6	0	1.943.173	2.996.950	0,72148	1.401.964	2.162.246	760.280	-5.862.067
7	-7.425.000	2.127.423	3.158.650	0,69263	3.669.280	- 2.187.788	5.857.068	-5.000
T			**x**	**x**	12.910.324	10.588.557	**x**	**x**

Source: Author's order based on the methodology ECSIF TEST SRL

Internal rate of return on investment is 5, 11% cee needles shows that the project is eligible for funding. The final step is determining the amount funded financial analysis using the Financial Gap. To determine the residual value method we used the liquidation value of the investment after seven years of operation. The residual value of the project was 7.425 million lei.

Table 5. Method Funding Gap

Y	CI (investment cost)	IAF	VACI	Operating expenses	Operating Income	VR	VN	DVN
	4.479.699	1,045	4.266.380		0			
0	7.430.152	1,001	6.739.367	0	0		0	0
1		0,946	0	1.327.372	2.383.700		1.056.327	912.495
2		0,902	0	1.352.122	2.446.950		1.094.827	900.717
3		0,858	0	1.453.872	2.636.700		1.182.827	926.775
4		0,781	0	1.645.843	2.699.950		1.054.106	786.590
5		0,704	0	1.684.013	2.844.050		1.160.036	824.416
6		0,638	0	1.943.173	2.996.950		1.053.776	679.273
7				2.127.423	3.158.650	-7.425.000	- 6.393.773	- 3.738.306
	11.909.852		**11.005.748**	**11.533.820**	**19.166.950**	**-7.425.000**	**208.129**	**1.291.963**
RAE			**5%**	**VAN**				**6.799.648,91**

Source: Author's order based on the methodology ECSIF TEST SRL

Abbreviations: COWS - present value of the investment cost; VR - residual value; VN- net income; DVN - the present value of net income)

Following the calculations made in the above table, the amount to be financed is 6,799,648.91 and the main indicators FRR/K 5.11% and the Net Present Value 199 155 lei for the investment project.

7. Conclusions

The European project, validating the hypothesis that only projects that are European and banks may reduce credit risk of the banking institution. But this can only be achieved by harmonizing the two types of assessments carried out at the level of the Managing Authorities on the one hand and credit institutions, on the other hand. How institutional level to date (December 2015) could not achieve an agreement on the use of a set of indicators joint analysis between the two sides remain at private financial institutions to succeed identify those EU projects that have received not refundable funds but are bankable.

Asymmetry financial indicators - banking on the one hand and those required by the management, on the other hand, can be mitigated by identifying a set of financial indicators to be agreed mutually accepted, so you do not be needed to achieve, documentation same different investment project, depending on the entity that makes assessments. (This is why it is important to analyze both facets of a European project analysis).

Also given the financial forecasts presented above, the project will be sustainable financially and after public assistance grants. The project has direct effect on increasing financial inclusion, the main element of social inclusion.

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