

The Cost Analysis of a Start-up Company in the Information Technology Domain

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Abstract: Most countries more or less developed rely on the dynamism and resistance to risk of the private companies. Worldwide, the SMEs represent 85% of private companies that engages approximately 60% of the workforce. The company's performance is reflected in expenditure analysis which is an important factor to be considered in an enterprise. Because of the importance of this issue, we performed an analysis and the presentation of costs of a company working in the field of IT. The expenses, if they are well established and commensurate with the income, the company will certainly be able to overcome the economic barriers that occur during the course of business activity. The research methodology lies in analyzing and highlighting the company's expenses, aiming at the necessary equipment, acquisition of intangible fixed assets, administrative expenses, external services and not least the wage costs. Spending is a factor that depends entirely on the company's control, so it represents a primary factor for analysis. In conclusion the biggest expenses in the first year are those aiming at the acquisition cost of intangible fixed assets, respectively 103.090.00 representing the software necessary for conducting the activity, and those with external performance executed by third parties amounting to 330,800.00 lei, the largest share could be found in the research activity. Salary expenditures in the first year of operation are of 299.267.00 lei.

Keywords: enterprise; costs; acquisition

JEL Classification: E17; E20

1. Introduction

Small and medium enterprises represent the main sector of the national economy due to the high degree of mobility and flexibility, thus constituting, on segments, the most adaptable one in terms of volume and adjusting the offer to the demand volume and specifics, and not least the most important factor of labor force absorption. The number of SMEs as a whole, their distribution by size categories

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and activity sector, influences significantly the economic performance indicators. Also, the SMEs are better adapted to modern market structures, as it represents a major source of innovation and economic growth, and it has a decisive contribution to increasing the competition environment in the market economy.

Most countries more or less developed, rely on the dynamism and resistance to risk of the private companies. Worldwide, the SMEs represent 85% of private companies that engages approximately 60% of the workforce. At EU level, there are nearly 21 million of SMEs representing over 98% of all enterprises. Given the role of SMEs as the main source of creation and supply of labor force, of generating over 50% of GDP for many economies, a source of revenue to the state budget, etc., it is obvious that SMEs play an essential role in any country's economic growth and development for any country.

The overall objective of the project proposed by the company is to create an added value through research and innovation in human resource performance management based on information technology domain. The project proposal is based on research and development results obtained by the company in the field of human resource performance management, based on software. The beneficiary is a start-up in information technology and the project aims at introducing a new, innovative product on the market, a result of research and development activity, i.e. the software solution, designed for every public or private organization that wishes to implement a performance evaluation platform of human resources.

The need identified in the market, to which the company wants to respond by implementing the project, is represented by the nationwide lack of complex solutions covering both the assessment and the management part of human resources performance.

The novelty of the software solution proposed by the company is mainly based on three major contributions that have no equivalent at national level:

- The combination of assessment methods and indicators based on specific algorithms.
- Module for monitoring the employee's behavior in the use of specific computer applications, and recommendations for improvement through adequate training.
- Assessment algorithm of the effort for replacing an employee.

The expenses, if they are well established and commensurate with income, the company will certainly be able to overcome the economic barriers that occur during the course of business activity. Expenditure represents a factor that depends entirely on the company control, so it is a primary factor that needs to be taken into

consideration. The analysis of expenditure is very useful as it is important for the manager to know exactly the expenses' circuit within the company.

2. Research Methodology

The research methodology lies in analyzing and highlighting the company's expenses, aiming necessary equipment, acquisition of intangible fixed assets, administrative expenses, external services and not least the wage costs.

The purpose of using technological support for individual performance management is to identify and minimize the gaps in performance between strategy implementation, improvement and support of the employee's performance, and the evaluation of results in relation to the requirements and the established targets. Most software solutions designed to meet the individual performance management covers mostly the establishment, reviewing and evaluation of the employee's performance, but it also generates opportunities for their improvement.

3. Results

In estimating the cost elements we considered both project costs in the development period, and all of the costs during the operation period:

Costs for necessary equipment:

No.	ICT Equipment / Furniture	Year 0			Year 1			Year 4		
		No pieces	Price - lei - without VAT	Value - lei - without VAT	No pieces	Price - lei - without VAT	Value - lei - without VAT	No pieces	Price - lei - without VAT	Value - lei - without VAT
1	PC	4	2.100,00	8.400,00	2	2.000,00	4.000,00	4	1.800,00	7.200,00
2	Multi-Function Printer	1	2.000,00	2.000,00				2	1.500,00	3.000,00
3	UPS	5	420,00	2.100,00	2	500,00	1.000,00	2	400,00	800,00
4	Switch	1	300,00	300,00						
5	Router	1	300,00	300,00						
6	Server	1	10.000,00	10.000,00				1	14.000,00	14.000,00
7	Projector									
8	Furniture				2	400,00	800,00			
Total facilities in the category of fixed assets				23.100,00			5.800,00			25.000,00

- We took into account the purchase of two computers and two UPS in the first year of sustainability for two new employees (commercial director and financial director)
- In year 4 there is purchased a server in order to improve the commercial activities. There are also purchased another 4 computers, two UPSs and two multi-function printers in order to replace the obsolete equipment.

Costs for the acquisition of intangible fixed assets:

Software	Year 0			Year 1	Year 2	Year 3	Year 4	Year 5
	Quantity	Price - lei – without VAT	Total value without VAT					
Windows 7 Ultimate	4	720,00	2.880,00					
Windows Server 2008 R2	1	1.800,00	1.800,00					
Office 2010	4	1.800,00	7.200,00					
SQL Server	1	3.500,00	3.500,00					
Visual Studio With MSDN	4	4.200,00	16.800,00					
Antivirus Server + 5 client	1	900,00	900,00					
Packs with assessment tests	25	550,00	13.750,00					
Procedures and evaluation methods	5	2.495,00	12.475,00					
Performance indicators	139	315,00	43.785,00					
Total intangible assets			103.090,00	0	0	0	0	0

The administrative costs during the project are:

Implementation period - no. of months	12	
Expenditures	Month	Total period
Telecommunications + Internet	350	4.200
Electric power	250	3.000
Water	75	900
Sewerage	75	900
Sanitation	50	600
Space for rent	6250	75.000
TOTAL		84.600

During the sustainability period the costs are estimated as follows:

Administrative expenditures	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Growth index		3,0%	3,0%	3,0%	3,0%	3%
Telecommunication	4.200	4.236	4.456	4.589	4.727	4.869
Rent + Maintenance	80.400	82.812	85.296	87.855	90.491	93.206
TOTAL	84.600	87.138	89.752	92.445	95.218	98.075

Based on the statistics made by the specialized institutions for the period 2009 - 2013, it was considered an index average of annual growth of 3% of the administrative expenditures.

Company's costs with external services

External Services	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Research services	232.800,00					
Innovation Consulting Services	5.000,00					
Innovation Support Services	40.000,00					
Publications and subscriptions	-					
Marketing and advertising expenses on the project	45.000,00	29.466	34.099	38.732	43.366	47.999
Financial audit (ineligible expenditure)	3.500,00					
Security Audit (ineligible expenditure)	4.500,00					
Total external services	330.800,00	29.466	34.099	38.732	43.366	47.999

In years 1-5 of operation there will be invested in promotion and marketing 5% per year from the achieved revenues.

Job	No Of people	Net Salary - Lei	Gross Salary -Lei	Total gross salaries	Taxes	Monthly Cost of salary/Job	Total gross salaries	Taxes	Total cost of salary - Lei-
Solutions Architect	1	4.800	6.840	6.840	1.984	8.824	75.240	21.820	97.060
Tester	1	3.750	5.344	5.344	1.550	6.893	42.750	12.398	55.148
Programmers (Software Development)	1	4.000	5.700	5.700	1.653	7.353	57.000	16.530	73.530
Programmers (Software Development)	1	4.000	5.700	5.700	1.653	7.353	57.000	16.530	73.530
Total	4		23.584	23.584	6.839	30.423	231.990	67.277	299.267

Salary costs in the first year of operation:

Job	No Of people	Net Salary -Lei	Gross Salary -Lei	Total gross salaries	Taxes	Monthly Cost of salary/Job	Total gross salaries	Taxes	Total cost of salary - Lei-
Solutions Architect	1	4.920	7.011	7.011	2.033	9.044	84.132	24.398	108.530
Tester	1	3.844	5.477	5.477	1.588	7.066	65.728	19.061	84.789
Programmers (Software Development)	1	4.100	5.843	5.843	1.694	7.537	70.110	20.332	90.442
Programmers (Software Development)	1	4.100	5.843	5.843	1.694	7.537	70.110	20.332	90.442
Financial Director	1	645	919	919	267	1.186	11.030	3.199	14.228
Commercial Director	1	2.150	3.064	3.064	888	3.952	24.510	7.108	31.618
Total	6			28.156	8.165	36.322	325.620	94.430	420.049

In the first year of operation, there are employed 2 new colleagues: a Commercial Director and a Financial Director. The Commercial Director was hired from the 5th month (May). The salaries of the new colleagues are highlighted in the table above.

In the first year there will not be achieved any pay rises to the existing employees.

During the operation period, the wages will increase by 5% in year 2 and with 10% in year 3, 4 and 5. There were taken into account also the possibility of new jobs in the years of operation, if the conducted activity will require.

	Operation					
Expenditure on Staff	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
The rate of the increase in salaries			5,00%	10,00%	10,00%	10,00%
Cost salary	299.267	420.049	457.651	503.416	553.758	609.134
Gross wages	231.990	325.620	354.768	390.245	429.270	472.197
Taxes on salary	67.277	94.430	102.883	113.171	124.488	136.937

4. Conclusions

Small and medium enterprises represent the main sector of the national economy due to the high degree of mobility and flexibility, thus constituting, on segments, the most adaptable one in terms of volume and adjusting the offer to the demand volume and specifics, and not least the most important factor of labor force absorption. The number of SMEs as a whole, their distribution by size categories and activity sector, influences significantly the economic the economic performance indicators. Also, the SMEs are better adapted to modern market structures, as it represents a major source of innovation and economic growth, and it has a decisive contribution to increasing the competition environment in the market economy.

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In conclusion the biggest expenses in the first year are those regarding the acquisition cost of intangible fixed assets, respectively 103,090.00 lei representing the software required for conducting the activity, and those with external services executed by the third parties of 330,800.00 lei, the biggest share could be found in the research activity. The salary expenditures in the first year of operation are of 299,267.00 lei.

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6. Bibliography

Pislaru, Dragos; Modreanu, Ileana & Citu, Florin (2012). *Contributia IMM-urilor la cresterea economica: prezent si perspectiva/The SME contribution to economic growth: Present and Perspectives*. Bucharest: Ed Economica.

Nicolescu, Ovidiu Maniu; Alexandru, Isaic; Dragan, Irina Maria; Nicolescu, Ciprian; Bara, Oana Mihaela; Borcos, Mirabela Lavinia; Lavric, Victor & Sotian, Georgiana (2013). *Carta Alba a IMM-urilor 2013/The White Book of SMEs in 2013*. Bucharest.

Popa, Lucia Ramona (2013). *Efectele Crizei Asupra Intreprinderilor Mici si Mijlocii si Necesitatea Dezvoltarii acestora in Romania, Strategii Manageriale/The effects of the crisis on small and medium enterprises and their need for development in Romania, Managerial Strategies*. Pitesti: Universitatea Constantin Brancoveanu.

Hodorogel, Roxana Gabriela (2011). Criza economica globala/Global economic crisis. *Provocari pentru IMM-urile din Romania, Economie si teorie aplicata/Challenges for SMEs in Romania, Applied Economics and Theory*, Vol. XVIII, No. 4 (557), pp. 113-124, Bucharest.