Erasmus+

innome

Babes-Bolyai University

General Report

Training on Corporate Innovation Management System for Competitiveness

6/6/2016

Project N°: 2015-1-HU01-KA202-13551

General report on the profile of the innovation manager

This report outlines the findings of data analysis that has been performed as part of the InnoMe research [2015-1-HU01-KA202-13551], conducted in February - May 2016. Research took place in four countries [Poland, Romani, Hungary and Slovakia], and consisted in 450 online questionnaires and 32 interviews.

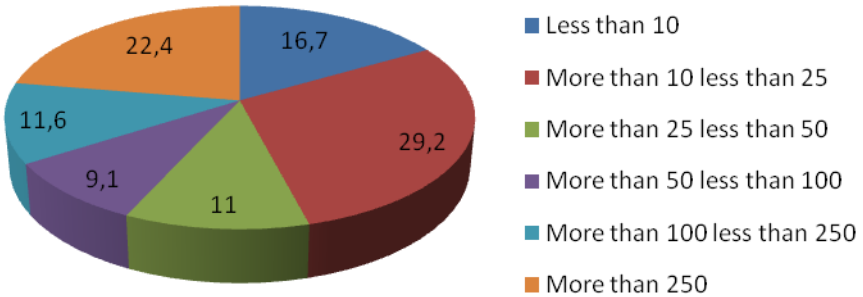
The survey was run on 450 respondents from four CEE countries: Hungary, Poland, Romania, and Slovakia. Because there were differences in the number of respondents across the entire sample, in our analysis we tried to control the sample inequalities, and thus reveal the general profile of the innovation manager.

	Hungary	Poland	Romania	Slovakia	Total
Number of responses	42	324	59	25	450

The sample covered a large variety of organisations concerning the size and the economical field of activity. Moreover, because the opinions on innovation might depend as a function of a large number of individual characteristics, the survey included questions on the seniority, age, education, and gender of the respondents. We aimed to include in the sample respondents that vary according to their professional experience, age, gender, education.

The final sample included both small and large organisations, which to allow us to draw general conclusions with regard the main important skills, competencies, and knowledge of an innovation manager. The final sample included 77.6% small organisations and 22.4% medium and large organisation.

Fig. 1 Number of employees (percentages)



With regard the economical sector, 35.8% of the organisations were in Services/NGO&Public, 20.5% were in Industry, 13.2% in Culture&Education, 9.8% in Business, 9.6% in IT, and 4.8% in Financial Services. With regard education, the large majority of the respondents in the sample had higher education degree. There was a rather balanced gender ratio, with 53.5% male and 46.5% female respondents.

Working experience (%)	Less than 5	5-10 years	10 - 15 years	15-25 years	25+ years
	5%	17.8%	17.6%	35.4%	24.2%
Education (%)	Secondary education			Higher education	
	6.9%			93.1%	
Sex (%)	Female			Male	
	46.5%			53.5%	

The main purpose of the survey was focused on identifying the general profile of the innovation manager. In order to outline the fundamental skills, competencies, and knowledge that run across countries, we applied two methods. First, we computed the general weighted mean on the four countries for each of the characteristics of the innovation manager that were included in the questionnaire. To control for the differences in the size of the samples, we then computed the general mean without taking into account the volumes of the country samples. We next analysed the two hierarchies. In a fourth step we ranked separately the skills, competencies, and knowledge for each country and kept those characteristics that were top three ranked by most of the countries (at least by three countries). For each section in the model we kept the top ranked skills, competencies, and knowledge for each innovation process stage: planning, implementation, and assessment.

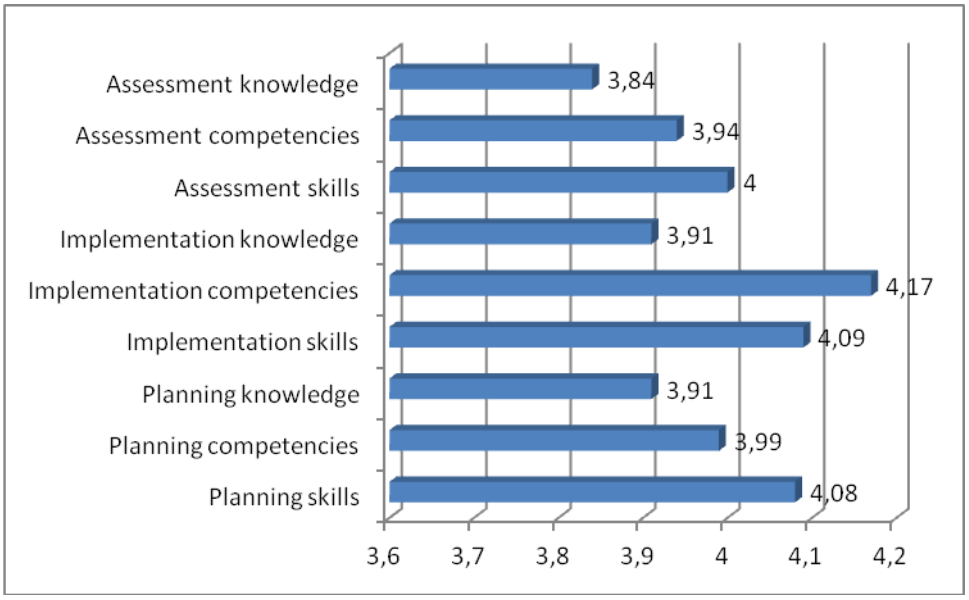
The top three skills, competencies, and knowledge that were obtained for each of the three stages of the innovation process, which form the profile of the innovation manager are presented in the table below:

GENERAL PROFILE OF THE INNOVATION MANAGER		
In the planning phase - skills		
Skills	Ability to generate ideas and think outside the box	4,39
	Ability to support the generation of ideas within organization	4,26
	Ability to understand emerging trends in technology and business	4,23
In the planning phase - competences		
Competences	Creativity	4,39
	Strategic thinking	4,32
	Ability to set targets	4,16
In the planning phase - knowledge		
Knowledge	Knowledge on existing and emerging trends in technology and business	4,17
	Knowledge on development of the innovation projects	4,14
	Knowledge on innovation strategy	4,12
In the implementation phase – skills		
Skills	Ability to implement innovation projects	4,31
	Ability to implement the strategy into operation	4,26
	Ability to apply research findings in new products/services	4,12
In the implementation phase – competences		
Competences	Decision making and taking responsibility	4,36
	Problem solving	4,22
	Communication	4,18
In the implementation phase – knowledge		

Knowledge	Knowledge on coordination of people and resources	4,11
	Knowledge on leadership techniques	4,02
	Knowledge on motivation techniques	3,93
In the assessment phase – skills		
Skills	Ability to monitor the business impact of the innovation	4,19
	Ability to monitor the progress of the projects	4,08
	Ability to set realistic evaluation criteria for the innovation process	4,05
In the assessment phase – competences		
Competences	Consistency	4,08
	Objectivity	4,01
	Ability to set priorities	3,99
In the assessment phase – knowledge		
Knowledge	Knowledge on market introduction of the innovation	4,06
	Knowledge on the evaluation techniques	3,95
	Knowledge on quantitative and qualitative evaluation methods	3,94

It is important to mention that there were differences in the perceived importance of the skills, competencies, and knowledge for the three innovation stages. Among them, the most important ones were the *implementation competencies* (mean 4.17), *the implementation skills* (mean 4.09), and the *planning skills* (mean 4.08).

Fig. 2 General means for the skills, competencies, and knowledge for each innovation stage



As mentioned, to reveal the profile of the innovation management system, we analysed the skills, the competencies, and the knowledge in the view of the participants, according to a set of different features: the size of the organisation, the perceived expertise of the respondent, the field of activity.

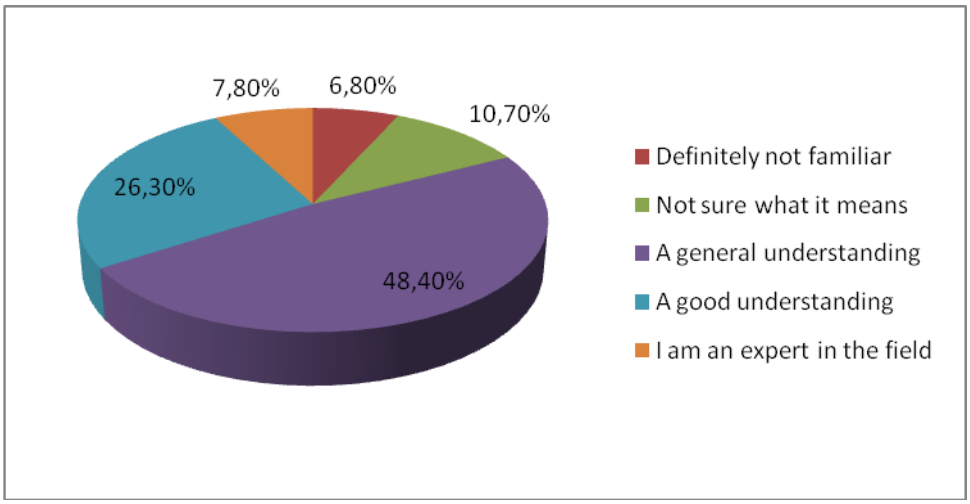
According to the size of the organisations, the ANOVA results showed statistical significant differences between small and large organisations mostly with regard Implementation characteristics. The participants from large organisations considered the

Planning Skills ($F_{1,436}=7.89$, $p<0.05$) and the Planning knowledge ($F_{1,436}=5.43$, $p<0.05$) to be more important compared to the participants from smaller organisations.

We also aimed to see if the profile of the innovation manager varies according to the perceived expertise of the respondent. The results show that the respondents who have larger experience in innovation perceive all the skills, competencies and knowledge to be more important compared to those who have less or no experience in innovation. The ANOVA results show statistical significant differences especially for the planning skills ($F_{4,433}=3.42$, $p<0.05$), competencies ($F_{4,433}=2.92$, $p<0.05$) and knowledge ($F_{4,433}=3.09$, $p<0.05$).

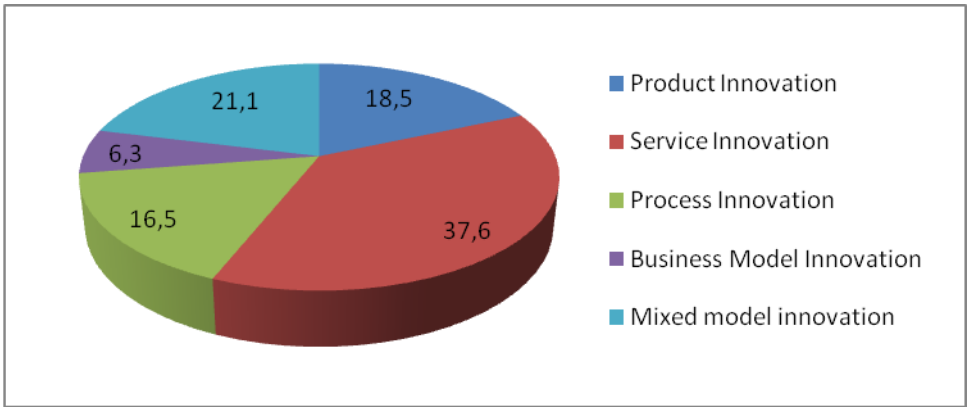
An important aspect analysed in the survey was the respondents' familiarity with the innovation process. The final sample included a rather balanced ratio of respondents (48.8% declared a general understanding, 6.8% Definitely not familiar, and 7.8% I am an expert in the field). The results show that there was an association between the size of the organization and the perceived familiarity (Pearson Chi-Square = 11.36, $p<.05$). There was no association between the domain of the organization and the perceived familiarity

Fig. 3 Familiarity with innovation (%)



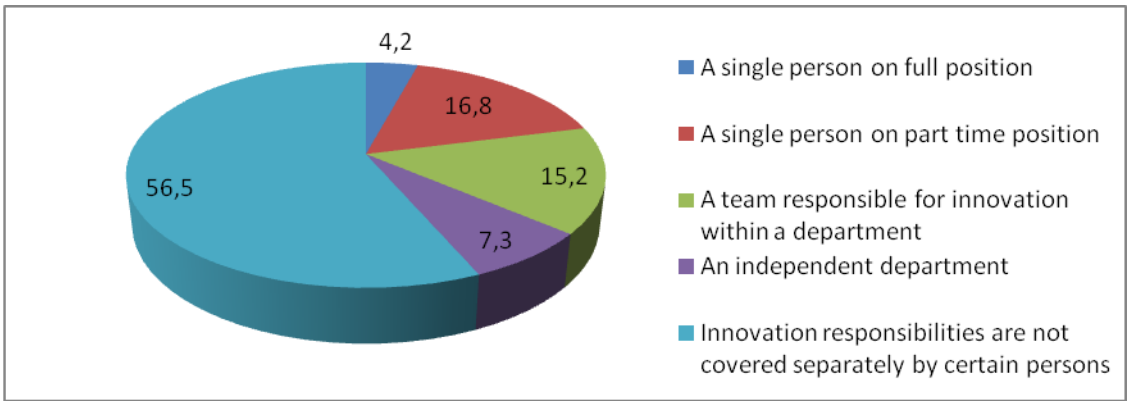
The survey aimed to explore the branches in which the organisations were using innovation. The results showed an association between the size of the organization and the focus of the Innovation (Pearson Chi-Square = 44.36, $p<.01$): larger companies are more focused on product and process innovation, while smaller ones on service innovation.

Fig. 4 Use of innovation (%)



Further on, the survey aimed to find out how the innovation process is organised within the organisations. The data showed that in more than half of the organisations, the innovation responsibilities are not covered separately by certain persons. As expected, there was a strong association between the size of the organization and the assigned responsibilities (Pearson Chi-Square = 52.1, p<.01): larger organizations more often use teams and independent departments, while smaller ones use single individuals.

Fig. 5 Innovation responsibilities



Comparison of the skills, competencies, and knowledge between the four countries

For differences on assessments of importance of skills, competencies and knowledge in the four countries please refer to the individual country analysis and also the English language summary of the general report.

Interviews

The qualitative component of the survey was represented by 32 semi-structured, face to face interviews. The interviews gave an insight into a more precise picture on what people exactly think about the innovation project and the profile of the innovation manager. For details please read the individual country reports or the English language General report.

Conclusions

The main purpose of the survey was focused on identifying the general profile of the innovation manager. The top three skills, competencies, and knowledge that we obtained for each of the three stages of the innovation process are presented in the table below:

No	Competence area and innovation process phase	*Characteristics of an Innovation Manager in the examined CEE countries*
1.	**PLAN (Idea generation and idea management, planning the innovation process)**	
Competence of an Innovation Manager		▪ Creativity ▪ Strategic thinking ▪ Ability to set targets
Knowledge of an Innovation Manager		▪ Knowledge on existing and emerging trends in technology and business ▪ Knowledge on development of the innovation projects ▪ Knowledge on innovation strate
Skills of an Innovation Manager		▪ Ability to generate ideas and think outside the box ▪ Ability to support the generation of ideas within organization ▪ Ability to understand emerging trends in technology and business
2.	**Implementation (Implementation, protection, exploitation, marketing)**	
Competence of an Innovation Manager		▪ Decision making and taking responsibility ▪ Problem solving ▪ Communication
Knowledge of an Innovation Manager		▪ Knowledge on coordination of people and resources ▪ Knowledge on leadership techniques ▪ Knowledge on motivation techniques
Skills of an Innovation Manager		▪ Ability to implement innovation projects ▪ Ability to implement the strategy into operation ▪ Ability to apply research findings in new products/services
3.	**ASSESSMENT (Assessment and improvement)**	
Competence of an Innovation Manager		▪ Consistency ▪ Objectivity

	▪ Ability to set priorities
Knowledge of an Innovation Manager	▪ Knowledge on market introduction of the innovation ▪ Knowledge on the evaluation technique ▪ Knowledge on quantitative and qualitative evaluation methods
Skills of an Innovation Manager	▪ Ability to monitor the business impact of the innovation ▪ Ability to monitor the progress of the projects ▪ Ability to set realistic evaluation criteria for the innovation process

Comparing the results obtained across the four countries, we could notice a general agreement for the importance of the implementation skills and implementation competencies. Also, the four countries showed a general agreement for perceiving the knowledge in each of the three innovation stages to be less important compared to the skills and abilities. Still, it is important to remember that larger organisations assigned a stronger importance for the planning knowledge compared to the smaller ones. As a general remark, comparing the four countries, the respondents from Romania showed a tendency to assign higher scores, while the respondents from Slovakia lower scores for each of the skills, competencies, and knowledge.

An important focused was put on the transversal/general competencies. The results showed that the respondents in each country emphasised the importance of the transversal competencies. The most important transversal competencies were revealed for the planning and implementation stage: creativity, strategic thinking, decision making and taking responsibility, problem solving, communication.

To conclude, while there were both individual and country differences in the perceived importance of the characteristics of the innovation manager, the results showed that the common characteristics allow the identification of a general profile across the four countries.