



Hungarian Organizational Creativity

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“In today's knowledge economy, creativity is more important than ever. But many companies unwittingly employ managerial practices that kill it.” (Teresa Amabile)

Abstract: In the series of Hungarian economic science research studies, the examination of the scope of innovation has a podium place. However, in the EU's 2013 Innovation Ranking, Hungary only got into the third quarter, in 21st position (Hollanders, EsSadki 2013). A vast number of studies set the possible and quantifiable series of reasons into their focus. This research study is also connected to innovation, but the author was mainly interested about the preceding and establishing step: creativity. Following the phase theory, can be assumed that creativity is a necessary (but not indispensable) precondition of innovation. If creativity (as the competence which is expected and necessary for innovation) is given, then why is that the Hungarians are only in the 21st position? The reasons have to be found in organizational characteristics. In this way the focus of this paper will be directed on the examination of organizational creativity and on its Hungarian characteristics.

Keyword: organizational creativity

1 Introduction

Organizational creativity study is a relatively new direction in the science of economic psychology. Its appearance can be put to the 1990s, but previously examinations had been already performed regarding the topic of organization and creativity. The first article is related to *Woodman, Sawyer and Griffin (1993)*, where the very first definition can be found, there are the model and some

hypotheses, as well. Although the authors did not perform empirical studies at this point. The authors designated intra-individual, intra-group and organizational characteristics, which have an effect on creativity. The highest number of empirical studies can be related to *Teresa Amabile*, who however during her empirical studies mostly concentrated on individual characteristics, particularly on intrinsic motivation and its effects on creativity. Amabile's works (the most well-known: 1996) are the most quoted regarding the topic, even if the author herself does not use the concept of organizational creativity. During her research she examined the work processes, workplace relations, organizational characteristics and systematized the effects of these on creativity. This way among many others, she examined the effect of leadership style, time pressure or workplace mood. *Ford* (1996) proceeded in this direction, but extended the circle of characteristics affecting the creative event to institutional and market characteristics as well, and distinguished between creative and habitual workplace tasks, too. *Drazin, Glynn and Kazanjian* (1999) complemented all this with the perspective of time.

Organizational creativity is the extension of the general (used by economic experts) creativity concept (or of its specification) within organizational frameworks. That is, here the problem can be related to the work, and the solution can not only appear on the individual level, and it is significantly influenced by the effects arriving from the organizational environment. Organizational creativity is no more than a new and valuable idea which is the result of a joint effort, accomplished with regard the problems arising during the work, considering the influential factors and the summary of their effects. In the definition, the result of creativity (product) was also included, but here is needed to thinking about the idea and not the product innovated for the final market.

Later, only a lesser number of complex models were created, but it can be found many studies describing and examining the effect of a single environmental factor, which factors we incorporated into our own model as well.

In this paper the process of creativity and the environmental press effecting creativity will be incorporated, which were handled on the level of the individual, the individual and work characteristics, the group, the organization and the market. Later on the basis of these, the hypotheses of the research study are conceptualized.

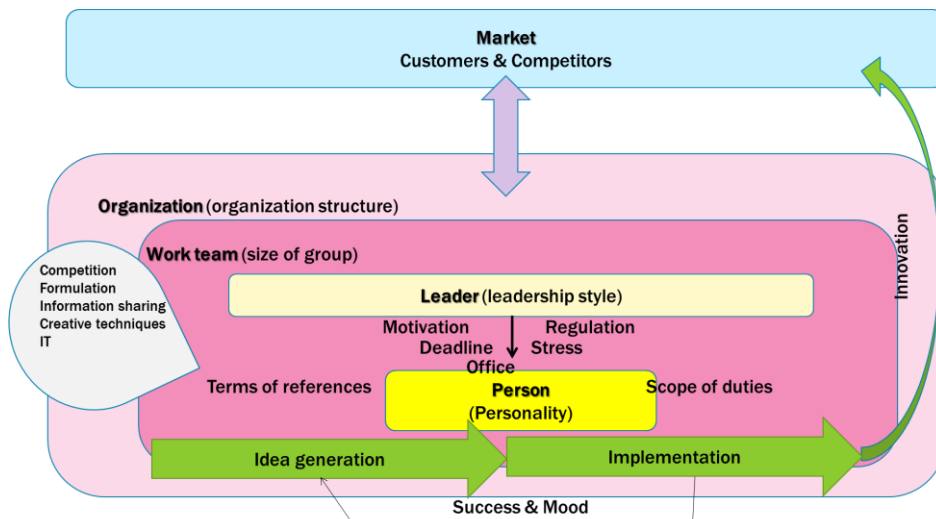


Figure 1
The model of organizational creativity

Main research question originates from the work definition of organizational creativity itself, the objective is the investigation of factors and influences effecting organizational creativity.

Which organizational factors effect can be perceived regarding organizational creativity (regarding the employee's creativity)?

According to Amabile's componential model which handled the factors separately, in the aforementioned model the factors were divided and translated into statistical hypothesis, but the main connections between the participants and those impacts can be read from the model.

It is measured which factors' effect is perceived by the respondents (and of what direction, amount could this effect be attributed to a single attribute) regarding organizational creativity. It is assumed three kinds of correlations at the effects practiced on organizational creativity of measured components (a) stimulating, positive effects (b) inhibitory, negative effects (c) U shaped correlation. It is divided the environmental effects into levels, it is separated the market level, and after that the group level is examined within the organizational level, emphasizing the leader and the resources, turning toward work specific characteristics and the individual's level. The process of creativity can be divided into further stages (Wallas, 1926). It is distinguished two stages: (1) the phase of brain storming, which includes the perception of the problem, the preparations, the latency and the enlightenment. The other one is the (2) „active” conative phase (not only cognitive). This was designated with the realization of the idea phase name, and it

is also implied the elaboration and the realization phase in it. In this paper it is focused on only the factors and it is not paid attention for the stages of creativity. However these steps are built into the main model.

2 Empirical Research

2.1 Methodology

The query of the questionnaire has been done after an extensive testing in an online format. The *sample selection* has been done by a quota; from 629 responses it could process 572. It can be extended the target group to all of Hungary, but it did not segment the sample by regions. The sample represents the present Hungarian labor market in most aspects, it was only under- or over-represented in a few aspects (for example: a division by age or educational attainment). Here however, there was only a very minor difference or the given variable was not significant for the purpose of the research so no correction weights were applied.

Characteristics	Ratios
Personal data of respondents:	
Number of answers:	612 answers, valid: 572 answers
Gender rate:	Female: 281, Male: 291
Age group:	Minimum: 18 yrs Maximum: 62 yrs Average: 28 yrs
Corporate data:	
Most common corporate profile:	Profit sector (commercial and business sector)
Most common corporate ownership:	Hungarian
Most common corporate size:	Large enterprise (with employees above 250)

Table 1
Statistics of respondents (N=572)

The sample selection happened according to quota, with snowball method. Before the quota sampling the population (Hungarian labor market) was segmented into groups. Any interviewers may be told to sample 1 female and 1 males between the age of 20 and 60 with more than 2 years long work experience. The target group is Hungarian employees with at least 2 years of work experience. This sample

represents Hungarian workforce market according to several perspectives, so the achieved results can be projected. (Table 2.) Thanks to previous careful planning it could be taken the quantitative data in a representative sample.

Ratios		Population	Sample
Gender rate:	male	56.69%	50.90%
	female	46.31%	49.10%
Age group:	15-34	32.74%	60.49%
	35-55	53.57%	32.34%
	56-75	13.71%	7.17%
Size of the corporate:	1-4	0.00%	5.60%
	5-49	37.30%	30.40%
	50-250	23.40%	16.40%
	above 250	39.30%	47.60%

Table 2

Proportion of our sample compare with the Hungarian statistics (N=572)

During the analyses, it was worked with SPSS 19 statistical program and MsOffice Excel. It has been analyzed the resulting data in two ways: (1). The descriptive statistical data indicate the working place of the subjects, thus illustrating the typical Hungarian working environment. (2). By analyzing the relationships between the variables it got an explanation for the logical connections of the underlying phenomenon. Since the data did not show a normal distribution during hypothesis testing non parametric tests were used (Kruskal – Wallis and Man - Whitney) and for the stochastic connections it was calculated Gamma indexes.

2.2 Results

The answers given to the research question can be summarized within the following. The question was: Which organizational factors' (Place) effects do the respondents perceive regarding the organizational creativity (regarding the employee's creativity)?

Hypotheses	Research objective	Most significant scientific literature background ¹	Was the hypothesis confirmed?	Result
Market level				
The knowledge of customers stimulates creativity better.	External market (knowledge of customers)	Ford (1996)	yes	Positive effect
The knowledge of competition stimulates creativity.	External market (knowledge of competition)	Ford (1996)	yes	Positive effect
Organization level				
Those organizations which are less hierarchic and are more flat stimulate creativity to a higher amount.	Organizational form	Damanpour and Aravind (2012)	yes	In the case of a flat, less hierarchic shape a positive effect
Group level				
Strong competition within an organization limits creativity.	Competition	Amabile (1996)	no (due to a definition error)	No clear data
Strong regulation within the organization limits creativity.	Regulation	Amabile (1996)	yes	Negative effect
The shape and direction of motivational tools influence creativity.	Motivation	Amabile (1997)	yes	Depending on the shape and direction (positive effect in case of positive moral and material tools)
The size of direct work group influences creativity.	Group	Damanpour and Aravind (2012)	yes	U shape correlation (the effect of a smaller 5-10 person group is positive)
The increasing number of instructions limits	Number of Tasks	Amabile (1996)	yes	Negative effect

¹ Here we only highlighted the names of the most important authors.

creativity.				
The feeling of joint success increases creativity.	Mood, joint success	Amabile (1996)	yes	Positive effect
The mood within the work group has an effect concerning the birth of creative ideas and their realization.	Mood	Amabile and Kramer (2011)	yes	Depending on the mood (the effect of friendly, confidential mood is positive)
Leader				
The style of the direct leader has an influence on creativity.	Leadership style	Amabile et al. (2004)	yes	Depending on leadership style (positive in the case of democratic style)
Resources				
The form of information sharing influences creativity.	Sharing of Information	Zhou (2008)	yes	Positive effect depending on the form in the case of discussions, meetings and primarily formal two way communication
Where they better work toward the introduction of IT innovations, there will be a stimulating effect on creativity.	IT, as a resource	Rimler (2005)	yes	Positive effect
Work characteristics				
The clear knowledge of responsibilities stimulates creativity.	Scope of duties	Oldham and Baer (2012)	yes	Positive effect
A clear scope of authorities helps creativity.	Authority	Oldham and Baer (2012)	yes	Positive effect
The location of workplace has an effect on creativity.	Workplace location	Kao (1999)	yes	Positive depending on location, in the case of a personal closed office or of work performed from home

Individual				
The conscious stimulation of creativity increases creativity.	Trainings	Talbot (1993), Sternberg and Lubart (2007)	yes	Positive effect, the effect of brainstorming and PR tools are the strongest
Stress limits the creation and realization of creative ideas.	Stress	Amabile (2002)	yes	U shape correlation
A stricter deadline limits creativity to a higher extent.	Time (stressor)	Paletz (2012)	partially (only related to the first phase)	U shape correlation
The more customized the respondents feel the applied motivational tools, the more their creativity is stimulated.	Intrinsic motivation	Amabile (2007)	yes	Positive effect

Table 3
The summary of hypothesis regarding to the literatures

Most studies investigating organizational creativity focus on a single component or on its effect. A relatively low number of such studies were created which handles the whole model or investigates it empirically as well, beyond the modeling. The characteristics within the individual must be complemented by the nature of the work, group characteristics, with organizational and external market influences as well. The direction of these effects cannot be always clearly given (stimulating or inhibiting, linear) because for example in case of stressors we have to calculate a U shaped or inverted U shaped (changing depending on the perceived quantity of the stressor) effect.

Characteristics/ Effect	Stimulates	Inhibits	U shaped correlation
Individual and work (Amabile's theory)	<ul style="list-style-type: none"> - unequivocal knowledge of responsibilities and authorities - personal workspace - customized motivation - the conscious stimulation of creativity 		<ul style="list-style-type: none"> - The amount of stress - deadlines*
Group (Woodman model)	<ul style="list-style-type: none"> - two-way communication - feeling of joint success - friendly, confidential mood - democratic leadership style - IT innovations - positive motivation 	<ul style="list-style-type: none"> - competition within the group* - excessive regulation 	<ul style="list-style-type: none"> - Group size
Organization (Woodman model)	<ul style="list-style-type: none"> - flat organizational size 	<ul style="list-style-type: none"> - hierarchic organizational form* 	
Market (Ford's theory)	<ul style="list-style-type: none"> - the knowledge of customers and competition 		

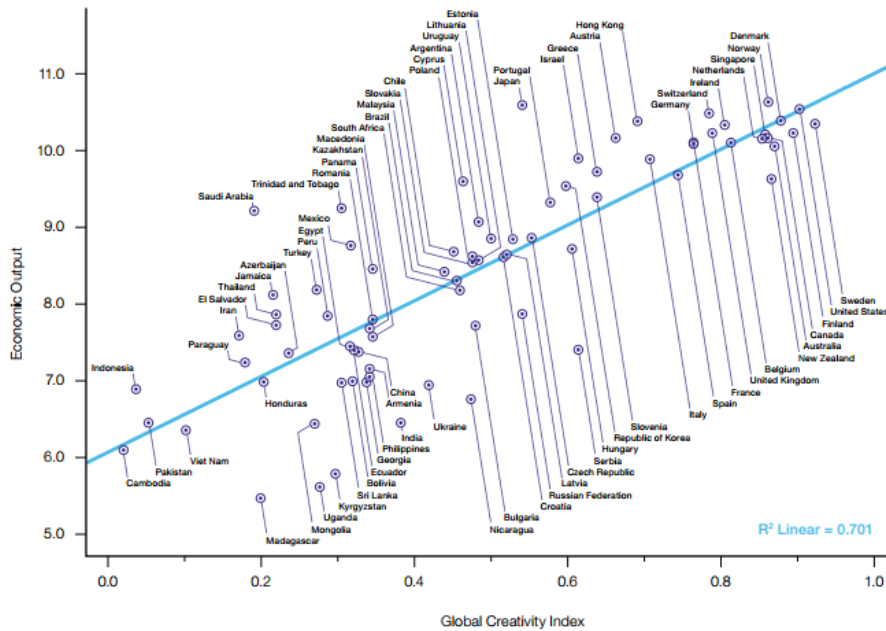
* Non-significant statistical correlation (p = next to 0,05)

Table 4

The summary of factors influencing organizational creativity

3 Conclusions

Hungarians are creative personally unfortunately only the result of their creativity can not be sold or built into innovation. However Hungarians are more creative than any other innovative nations (see Figure 2). Given the questions how could be the leaders and CEOs improve their employees order to raise the economic impact as well?



Note: Economic Output measured as log of gross domestic product per capita.

Figure 2

The summary of factors influencing organizational creativity

Source: GCI Report, Martin Prosperity Institute 2011

Altogether it can be gained a picture about *what kind is the ideal environment stimulating ideal creativity and the creative colleagues working in it.*

Characteristic of the organization:

- the organization is imbued with a transparent, flat, less hierarchic or friendly, confidential mood
- the size of work groups is average, they are characterized by non-isolated lonely employees and not too big groups
- they ensure private personal space (enclosed office) and there is a possibility for work performed at home
- they seek to implement IT innovations and to consciously stimulate creativity
- there are rules and deadlines, which can be complied with and followed
- competence-based (customized) and emphatically positive motivational tools are applied

- discussions are frequent and are characterized by a two-way communication
- The feeling of joint success and joint work within the group are present.

Characteristic of employees:

- the employees know the market (both the company's customers and the competition)
- the colleagues are aware of their tasks and of their related responsibilities
- they share information between each other, this way the competition within the group is not typical,
- they are aware of the joint success,
- unequivocal, two way, open communication is characteristic and the employees receive a followable amount of instructions from their leaders who primarily follow a democratic leadership style
- They feel the amount of stress motivating, since they are still able to handle its level.

The much emphasized significance of innovation is indisputable; nevertheless it can be handled as the step prior to the innovation, a lot depends on the environment, how it stimulates the individual and how it accepts the birth of new ideas. Of course, it is an important question and the problem is shown in many innovation research studies that mostly due to the lack of sources are why innovation is falling behind in Hungary. But according to the results the main problem is rooted in a much earlier phase, because organizational culture and leadership style frequently kills or rarefies the ideas and in lack of useful, good ideas the innovation process cannot even start. Regarding the innovation it can be understood not only the radical changes, but all those innovations which are useful and help the advancement from the perspective of the work. This way organizational creativity (whose result can be organizational innovation as well) similarly to organizational innovation may appear and have an effect in any territory of the organization.

Acknowledgement

The whole research is more detailed in the author's PhD Dissertation: Organizational creativity, The components of organizational creativity in Hungary (2015). Thank you for the lector's precious remarks, which raised the paper's value. I agree with the lector's opinion there are no statistical data in this paper, because I mentioned only the hypothesis tests (regarding to the SPSS non parametrical two tailed test with 0.05 significant level is significant if the result in the table shows $p = 0.000$). I think it is not so important to sign (.0000) after all

significant data. In a nutshell the data of measured sample (N=572) can be extended to Hungarian labour market (as population). Which means all of this influences are valid or true for the research's target population.

The strengths of the impacts were measured mostly with Gamma indexes. The data followed and verified the literature, because the Gamma indexes were generally around 0.5 – 0.6 which mean a moderated connections. The strengths of all factors' impact can not be separately measured because the multicolleration and cross impacts have to be filtered out but these steps are not detailed in this paper. Hopeful that will be the topics of the following papers.

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