

Published in: The Opportunities for and Constraints to Organizational
Development in the Information Society edited by A. Srtabryła,
publishing house: Mfiles.pl, Kraków 2012

Joanna Żukowska

Szkoła Główna Handlowa w Warszawie / Warsaw School of Economics

Mikołaj Pindelski

Szkoła Główna Handlowa w Warszawie / Warsaw School of Economics

Keywords: innovation, innovativeness, cooperation

Innovation Against Cooperation

The notions of innovation and cooperation by far more frequently appear in overseas literature. Although numerous authors discuss innovation or cooperation, the research on their co-occurrence and mutual relationships is a rarity.

Therefore, the analysis of Polish and overseas references has been carried out. Both bibliographic and netographic references have been used.

Google search engine was used to diagnose the frequency of innovativeness and cooperation occurrence. Synonyms and various punctuation marks were applied for more prospective grasp of the topic. The results are presented in the table below.

Table. 1. Diagnose the frequency of innovativeness and cooperation occurrence in Google

Expressions	Number of displays
Influence of innovation on cooperation	0
Influence of cooperation on innovations	0
Influence of cooperation on innovativeness	1
Influence of innovativeness on	0

cooperation	
Influence of innovativeness on collaboration	0
Influence of innovation on collaboration	0
Innovativeness and collaboration	101 000
Innovativeness and cooperation	6
Innovations and cooperation	1
Innovation and cooperation	5
Innovation and collaboration	30
Innovations and collaboration	2 680
Innovations against collaboration	1
Innovation against collaboration	0
Innovativeness against collaboration	3
Innovativeness against cooperation	0
Innovations against cooperation	0
Innovation against cooperation	0

Reference: the authoress' own analysis based on <http://google.pl/>

The interesting thing is that only two expressions „innovativeness and collaboration” and “innovations and collaboration” evoked a large number of displays.

Databases in terms of co-occurrence of the notions of innovation and cooperation were also analyzed.

Ebsco and Proquest databases were considered. Papers published in English, German, French, Dutch, Spanish, Portuguese were examined.

Significantly more papers appear in Ebsco than in Proquest. It should be emphasized, however, that the papers appearing in Proquest are directly related to the topic discussed. The figures are presented below.

Table. 2. Diagnose the frequency of innovativeness and cooperation occurrence in Ebsco and Proquest

Years	Number of papers appearing with co-occurring notions	
	Ebsco	Proquest

1946-2010	1453	163
2000-2005	387	34
2005-2006	277	10
2006-2007	314	10
2007-2008	355	11
2008-2009	379	17
2009-2010	297	24
2010 (January - July)	102	11

Reference: developed by the authoress basing on Ebsco and Proquest

The analysis carried out shows the growing interest in the topics of cooperation and innovation co-occurrence. Particularly, the attention paid to the subject has intensified for the last six years. However, few publications concerning the relationships between the terms can be noticed. This is the basis for a wider exploration of the topic.

INNOVATION AND INNOVATIVENESS

J.A. Schumpeter was the precursor of research on innovations and innovativeness as early as in the 1950's. He treated innovations as creating new production functions, classifying the implementation of new products, new production methods, new enterprise organization forms and opening new trade markets and acquiring new sources of raw materials.¹ Contemporarily, the definition offered by J.R. Rothwell deserves particular attention. Rothwell grasps innovations as technical and financial actions concerning the area of management, design, production, marketing, actions focused on the popularization of modernized product or manufacturing process.²

P. Drucker emphasized the notion stating „An enterprise that cannot create innovation shall cease to exist”.³ He thought that „An enterprise that cannot create innovation shall cease to exist”. According to his point of view, innovation represents a substantial tool of entrepreneurship, is more related to the economic and social aspect than to the technical one. Basically, it focuses on the management system, environment protection and social system, thus comprising the sphere of organization, economy and society⁴. Therefore, it should be grasped as a change of the value and satisfaction it brings to the consumer⁵. He also created a list of innovativeness sources where he included:

- Unexpected events,
- Discrepancy between reality and imagination,
- Innovation needs appearing,

¹ J.A. Schumpeter: *Business Cycles*, McGraw-Hill. New York and London 1939, s.22 i następne.

² J.R. Rothwell: *Public Innovation Policy: To Hale or not to Hale?* w: Langdon R., Rothwell R., *Design and Innovation, Policy and Management*, Frances Printer, London 1985, s.188 .

³ P. Drucker: *Innowacja i przedsiębiorczość. Praktyka i zasady*. PWE, Warszawa 1992, s.21 i następne.

⁴ P. Drucker: *Innowacja i przedsiębiorczość. Praktyka i zasady*. PWE, Warszawa 1992

⁵ P. Drucker: *Natchnienie i fart, czyli innowacja i przedsiębiorczość*. Studio Emka, Warszawa 2000

- Sudden changes in the structure of industry or market,
- Demographic changes,
- Changes in the perception of moods, changes of value,
- New knowledge both in the field of exact sciences and other⁶.

P. Kotler in turn presents innovations as product, service or idea that is perceived as new by someone⁷.

Innovations influence the rate, development direction or global, transborder cooperation of organizations. They also influence the competitive advantage being incorporated in the functions of planning or organizing. Numerous contemporary organizations have care about innovativeness included in their mission even.

Analyzing the references we may come to the conclusion that innovativeness is a synonym of novelty. It consists in introduction of something new. The process of implementation of a concept is multistage and complex. It concerns both the very concept of a prototype, its testing and customer education prior to launching on the market as well as the commercialization process.

Innovation may refer either to technology or organization, institution or social life. It is assessed from the point of view of such novelty extent. The combination of the target being the result of the concept produced as well as various tools that allow for the achievement of such target. Innovation perceived through the prism of novelty always has a positive implication.

One out of ten innovative ideas are usually capable to survive to the commercialization phase, which is not a synonym of its success. So avoiding risky innovations on the one hand may enable the organization to function without stress, on the other hand restricting high income and fast development. The solution may represent the implementation of a

⁶ P. Drucker: *Innowacja i przedsiębiorczość. Praktyka i zasady*. PWE, Warszawa 1992

⁷ P. Kotler: *Marketing Management*. Prentice Hall International, New Jersey 2000

unified, disciplining, regular process of innovation implementation, considering the spectrum of hazards and risk varieties⁸.

Butryn differentiated innovation styles presented in the table below.

⁸ G.S. Day: Is it Real? Can we win? I sit Worth doing? Managing Risk and Reward In an Innovation Portfolio. Harvard Business Review, 12.2007, s. 110-120

Table 3. Innovativeness styles

Innovativeness through:		
<i>Challenges</i>	<i>Sensitivity</i>	<i>Creativity</i>
Brave, vision going beyond the competence held, approved and supported by employees, sensed as challenge, stimulating creativity; vision of enterprise with identity different from the current one, tending to radical changes in the product and working conditions area.	Ability to notice unsatisfied social needs, unnoticed by others; the organization's culture is rich with values participatively developed, spontaneous, emotional considerations often appear here; hi-tech and low-tech solutions are characteristic to it.	Individual creativity of employees, openness to others, positive attitudes towards various types of personality, democracy, communication, but also individualism.
Innovativeness through:		
<i>Requirements</i>	<i>Links</i>	<i>Synergies</i>
Focus on demanding client with sophisticated needs, permanent improvement of processes and products.	Search for market occasions, wide cooperation with business, untypical distribution channels, new segments, innovative sales techniques	Unique correlation of internal competence, resources with external surroundings, strategic alliances.

Reference: Butryn W., Metody redukcji czasu trwania procesu innowacyjnego, „Innowacje” nr 22/2004

DEPENDENCY BETWEEN COOPERATION AND INNOVATION

The review of references indicates a strong dependency between cooperation and innovation. It needs to be indicated that the academics signalize multidimensional cooperation, starting from a business partner in the meaning of another enterprise appearing in the role of a supplier, through B2B clients and individual consumers, universities and colleges, research centers, entities with expanded departments of activity and development, up to government and local government units.

Independent of the cooperating entity, the importance of collaboration and its creative influence on innovations are conspicuous. The analysis of references shows that in most case innovations are the effect of cooperation. The opposite dependency when innovations generate cooperation dominates less frequently.

The necessity to improve cooperation, the rise or creation of new demands, ideas resulting from brainstorming of the cooperating parties - bring about in most cases innovations.

Aleksandra Laskowska-Rutkowska highlights the correlation between innovation and cooperation in the chain of supplies being the effect of network cooperation.⁹ In her opinion, client satisfaction, cost management and correct delivery time appear to be the most important aspects in the chain of supplies. Therefore, the search for innovative ways leading to the fulfillment of target – i.e. the real time response to the varying market expectations appear to be immensely important¹⁰.

The leaders among global players manage to achieve this. The solutions in the sphere of research and development, production and

⁹ A. Herman: Kilka refleksji na temat nowych źródeł wzrostu wartości przedsiębiorstwa, [w:] B. Dobięgały-Korony i A. Hermana (red.), Współczesne źródła wartości przedsiębiorstwa, Difin, Warszawa 2006

¹⁰ A. Laskowska-Rutkowska: Czas, kooperacja, innowacja - presja czasu a innowacyjne formy kooperacji sieciowej w: zeszyty naukowe uniwersytetu szczecińskiego 123 nr 453 ekonomiczne problemy usług nr 8 2007

logistics, despite the diversification, have one common characteristic. It is the cooperation of internal or external chains of supplies.

A. Laskowska-Rutkowska, basing on her research, states that the cooperation is not restricted to the circle of supplies. For example, the BMW Group with innovation centers in Europe (European Development Network), USA (California Innovation Triangle) and Japan (BMW Group Technology Office Japan) cooperates with universities, research institutes and enterprises in order to develop the best solutions possible. The Technological Office of BMW in Palo Alto, located in the center of Silicon Valley tries to transpose state-of-the-art technological solutions of onto car designs. The cooperation with the neighbor University of Stanford and University of California, and companies producing software and electronics provide access to the newest ideas and solutions. The research-development network of BMW Group consists of 8500 people. Throughout the past decade, the Group managed to reduce the time of pre-production research-development activities from 60 to just 30 months¹¹.

The activities of Procter&Gamble represent a perfect example of creating a new cooperation model, going far beyond the enterprise frames, aimed at the creation of a new product. Around 2000 they realized at the company that the traditional B+R model did not prove to be successful under the hyper-competition conditions. It was replaced with a new one named "Contact and Develop". Two forms coexist in this model: the company's own and open networks. Open networks base on the networking force, while the company's own networks are identified with internal ones¹².

The companies function, so they actually base on global internal networks, i.e. their own entities and external ones based on the

¹¹ Materiały informacyjne Grupy BMW. Information from the BMW Group 2004. The BMW Group Research and Innovation Network. Bayerische Motoren Werke, Muenchen

¹² K. Ferdows, M. Lewis, J. Machuca: Umiejętność szybkiego reagowania, Harvard Business Review Polska, listopad 2005

cooperation of several units. They operate under strong time pressure, representing the effect of transformation of the surroundings and customer demands. So time is the driving force of cooperation and cooperation in turn is the catalyst of innovation¹³.

The research made by J. Markiewicz underlines the importance of innovation and cooperation. Co-operation seems to be more accurate in gaining the competitive leadership than open destructive competition¹⁴. Particularly, the entities belonging to the sector of Small and Medium-Sized Enterprises are willing to carry on a synergic cooperation thanks to which they would make a diffusion of knowledge, benefit from solutions tested by other entities and actively discover and implement innovations together¹⁵. The role of network structure is emphasized another time here.

According to J. Markiewicz the cooperation of enterprises with supporting units, e.g. Regional Industrial or Economic Chambers, plays a significant role in distinguishing innovations. The actions mainly consist in computer and consulting services, entrepreneur training, promoting enterprises on the domestic and overseas market, financial support of enterprise development or promotion of new techniques and technologies. She also emphasizes that co-operation seems to be more accurate in gaining the competitive leadership than open destructive competition¹⁶.

S. Wyciślak also carried out research over the role of transnational cooperation in creating innovation. He underlined the significance of product innovations, being the cooperation effect. The research was made

¹³ A. Laskowska-Rutkowska: Czas, kooperacja, innowacja - presja czasu a innowacyjne formy kooperacji sieciowej w: zeszyty naukowe uniwersytetu szczecińskiego 123 nr 453 ekonomiczne problemy usług nr 8 2007

¹⁴ J. Markiewicz: Wpływ Instytucji Wsparcia na Rozwój Kooperencji i Innowacyjności Przedsiębiorstw w Województwie Zachodniopomorskim w: Zeszyty Naukowe Uniwersytetu Szczecińskiego Nr 453 Ekonomiczne Problemy Usług Nr 8 2007

¹⁵ G. Stonehouse, J. Hamill, D. Campbell, T. Puride: Globalizacja. Strategia i zarządzanie. Felberg SJA, Warszawa 2001, s. 43.

¹⁶ J. Markiewicz: Wpływ Instytucji Wsparcia na Rozwój Kooperencji i Innowacyjności Przedsiębiorstw w Województwie Zachodniopomorskim w: Zeszyty Naukowe Uniwersytetu Szczecińskiego Nr 453 Ekonomiczne Problemy Usług Nr 8 2007

in turn of 2006 and 2007 on 60 enterprises of confectioned food market (55% of the market). Thus, he identified some behaviors while implementing innovations:

- Implementing innovations as a source of getting ahead of transnational corporations
- Implementation of product innovations as an element of direct confrontation.
- Implementation of product innovations as a way of avoiding rivalry.
- Implementation of product innovations as an element accompanying confrontation with transnational corporations
- Resignation from implementation of product innovations as a confrontation element.¹⁷

Steve Radley the main EEF economist thinks that the future of development of economy, modernization, progress and creation of innovation is the mutual cooperation of enterprises and the use of research unit potential¹⁸. Similarly, M. Atkins, the President of Boston-based Invention Machine finds success of his own organization in the cooperation resulting in a number of innovations. He emphasizes even the transformation towards the cooperation culture basing on innovations¹⁹. Malory Davies and his team represent the same point of view. In their papers they underline the precious role of cooperation in creating various types of innovation²⁰.

R.Gilmore pays special attention to the value added of cooperation in creating innovation in the area of industry and research. He

¹⁷ S. Wyciślak: Innowacje produktowe w strategiach firm o zasięgu krajowym, a zachowania korporacji transnarodowych w: Ochrona wiedzy i innowacji (red. K.Piech), Instytut Wiedzy i Innowacji, Warszawa 2009

¹⁸ Innovation results from collaboration, 09.2008, <http://www.worksmanagement.co.uk/> 2010-08-16

¹⁹ Business & Industry News - Airport Business News • Feb 16, 2010, <http://airportbusiness.com/> 2010-08-20

²⁰ Time to involve the customers? Supply Chain Standard 04.11.2008, <http://supplychainstandard.com> 2010-08-20

emphasizes that they are the result of complementary competence of cooperating team members²¹

B.Hall points out cooperation as a key factor of team success. No cooperation between the entities cause the lack of resources, ideas, innovativeness, technological progress²².

Cooperation and innovative solutions being the effect thereof rescued the West European property and banking market against the consequences of the crisis of 2008.²³

The infinite value of cooperation between profit and non-profit entities on the market, generating a number of innovations was the subject of writings and research of J.Jones²⁴, E.Crell²⁵, Stewart K. Mehlman, Silvia Uribe-Saucedo, Ronald P. Taylor, Gene Slowinski, Ed Carreras, Matt Lowe²⁶ or María Jesús Nieto and Lluís Santamaría²⁷ or Tessa Van Der Valk, Govert Gijsbers²⁸, Robert D. Weaver²⁹

The authors also point out the significant cooperation factors – trust, complementary, key competences and skills, enhancing the strong points and restricting weaknesses, organizational intelligence, unique knowledge and mutual motivation³⁰.

Basing on the opinions of academics and cross-sectional reference analysis, we may find the convergence of cooperation and innovation.

²¹ Where to now for innovation, [http:// www.anthillonline.co.uk/](http://www.anthillonline.co.uk/) 2010-08-22

²² B. Hall: Five Traits of Effective Learning Teams, Chief Learning Officer, 05.2010

²³ M.J. Heid: Innovation and Industry Collaboration Are the Keys to Avoid Preventable Foreclosures, Mortgage Banking | October 2009

²⁴ J. Jones: Faraday innovation report prompts pack designers to call for better collaboration, Design Week 26.11.09

²⁵ E. Crell: Beyond boundaries business innovation Baylor Business Review, Fall 2009

²⁶ M. Lowe: McKesson stresses execution, innovation, collaboration, Chain Drug Review 07.06.2010

²⁷ M. J. Nieto, L. Santamaría: Technological Collaboration - Bridging the Innovation Gap between Small and Large Firms, Journal of Small Business Management 2010 48(1)

²⁸ T. Van Der Valk, G. Govert Gijsbers: The use of social network analysis in innovation studies - Mapping actors and Technologies, Innovation: management, policy & practice (2010) 12

²⁹ R.D. Weaver: Collaborative pull innovation: origins and adoption in the new economy, Agribusiness 24/3, 18.07.2008

³⁰ R.D. Weaver: Collaborative pull innovation: origins and adoption in the new economy, Agribusiness 24/3, 18.07.2008

The cooperation between entities usually represents the catalyst of creating and implementing various types of cooperation.

The more so, the subject seems to be worth a thorough analysis and further research.

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