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## Social Media in Creating Enterprise Innovation: A Systematic Literature Review

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**Abstract:**

**Purpose:** This review attempts to provide a synthesis of the available results of the scientific activity of researchers to cover the use of social media to create innovations in enterprises. This article aims to identify the research gaps and determine further research directions on the use of social media in creating innovations in enterprises.

**Design/Methodology/Approach:** The research has been based on a systematic literature review using EBSCO Discovery Service and EdWordle tools. The analysis covered the 2010-2020 publications describing the use of social media in creating innovations in enterprises.

**Findings:** With the systematic literature review, four significant research gaps and directions of future studies were identified. The first gap refers to most research publications focus only on four types of social media (Facebook, Twitter, LinkedIn, and YouTube). The second gap refers to the fact that most of the publications investigated the impact of social media only on the product innovations, rarely other types of innovation were addressed. The third research gap identifies a lack of systematic theoretical explanations about which capabilities of using social media must be created and how they should be managed at respective stages of innovative processes. It is thus justifiable to perform studies to account for those doubts. The fourth one refers to how the tangible and intangible resources of the organization affect the use of social media in innovation processes, which is an exciting direction for future studies.

**Practical Implications:** The analysis performed in this article has important implications for business practitioners who, due to an ongoing technological advancement, access to information, and growing market requirements, face a challenge of the possibly most effective use of social media to create innovations. The results of this article provide the representatives of enterprises with tips on how to get the innovation potential from social media, how to use the wisdom of the crowd in making essential business decisions.

**Originality/Value:** The article contributes to the existing state of knowledge, identifying research gaps and directions of future studies to cover the use of social media in creating enterprise innovations and systematizing the existing applicable scientific activity.

**Keywords:** Social media, innovations, enterprises, systematic research review.

**JEL:** M39, O31.

**Paper type:** Literature review study.

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## **1. Introduction**

Today's social media essentially change the way the enterprise communicates with the environment and how organizations cooperate and create innovations. The technological advancement and the growing popularity of social media coincide with the enterprises' approach to creating innovations in which there is an integration of new ideas and opinions from various sources (both internal and external). An effective sharing of knowledge, which is possible with social media, promotes global coordination and relations of the enterprise with clients.

The studies of using social media in creating enterprise innovations in the sharing of knowledge have still been at an early stage of development. The concept of social media is developed gradually, and for a few years, it has been enjoying a growing interest of both practitioners and business theoreticians (Behringer and Sassenberg, 2015). Nevertheless, the available literature offers few tips on social media applications in creating innovations (Muningera *et al.*, 2019). Thus, the challenge to the existing enterprises is to understand what possibilities are offered by social media in terms of creating innovations. For scientists, it becomes necessary to systematize the knowledge of the use of social media in creating enterprise innovations. To review the literature, identify the research gaps, indicate further directions of study, and systematize the valuable knowledge, this article uses the systematic literature review method.

## **2. Literature Review**

### **2.1 The Term "Social Media"**

Social media enjoy high popularity both with business theoreticians and practitioners; however, defining the term is not simple. In the relevant literature, the term is relatively new, and, on top of that, it keeps on undergoing modifications because of the presence of various communication tools on the Internet. It is thus not surprising that there are many social media definitions. Table 1 presents a few selected social media definitions presented by scholars in the available literature.

Langolis (2018), defines social media "as a software platform creating a place for providing input to create new importance of consumer products, knowledge, objects, social contacts as well as an existential sphere of subjectivity and existence." Kaplan and Haenlein (2010), claim that "social media is a group of internet-solutions-based applications, drawing on ideological and technological grounds of Web 2.0, and which facilitate creating and exchanging the contents generated by the users." Drab-Kurowska (2012), on the other hand, refers to them as to "communication channels allowing the interactions between Internet users benefiting from such technologies as forums, discussion groups, blogs, communicators, e-mails, sharing music, etc.," whereas Mount and Martinez (2014), claim that social media are "a set of tools online, open to public users and supporting the exchange of ideas, creating and editing contents via interaction and cooperation."

Another approach to defining social media is presented by Vuori (2014), claiming “that social media must be referred to Web 2.0 technology in the social environment based on the contents generated by the users, communities and the web.”

**Table 2.1.** Selected social media definitions

Definition	Authors
Social media are the measures thanks to which people share their knowledge as part of cooperation online.	T. Papadopoulos <i>et al.</i> (2013)
Social media are Internet media which facilitate people sharing information and knowledge.	H.H. Chang and S.S. Chuang (2011)
Social media are "the means of interaction between people where they create, share and exchange knowledge and ideas in virtual communities and networks".	B. Zeng and R. Gerritsen (2014)
Social media are defined as "a group of Internet applications based on ideological and technological grounds of Web 2.0, which facilitate creating and sharing contents generated by the users".	A.M. Kaplan and M. Haenlein (2010)
The use of social media for sharing knowledge involves interactive digital tools, allowing the users not only to share the knowledge but also to create or to affect the content.	N. Chomsky (2012)
Social media refer to "new media technologies facilitating the interaction and co-creation, which allow creating and sharing the contents created by the users between organizations (e.g., teams, management bodies, media agencies and groups) and individuals (e.g., consumers, sportspeople and journalists)".	K. Filo <i>et al.</i> (2015)

**Source:** Y.A. Ahmed, M.N. Ahmad, N. Ahmad, N.H. Zakaria. 2018. *Social media for knowledge-sharing: A systematic literature review. Telematics and Informatics*. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S0736585317306688#b0105>.

Social media can be considered the mass media that are only subject to social control, they are used for communication of any impact, and they contain the contents shared. It results from the specificity of social media, which focuses on discussion, polemics, exchange of ideas, and dialog.

## 2.2 The Term “Innovation”

The literature on innovation is not only vast but also varied. Zalewski (2007) stresses that it covers the authors who present a different approach and have different professional experience, thus developing an abundance of definitions. It is still worth quoting the approach of Schumpeter (1960). Their works have had a considerable effect on the theory of innovation. Much importance is given to a combination of resources and technologies, which he considered the grounds for new production methods and new products (Schumpeter, 1960).

Drucker (1985) defines innovation as “a specific tool of entrepreneurs, the means with which they use changes as an occasion for another business or another service”. The concept changes from a definite, traditional approach to a co-created more

personalized insight at innovations in which an individual plays a central role, while Wheatley (2011) stresses the role of “information collected from new contacts from insights made from traveling to other disciplines or places; from active, joint networks and flexible open borders”. That approach highlights the role played by cognitive diversity in a creative process, leading to innovations. According to Chauvel (2013), innovations are the source of competitive advantage. They support culture, which triggers a creative potential of the employees and facilitates the management of knowledge resources (Chauvel, 2013). Innovation comes from the interaction between individuals, knowledge owners; it comes from the process of exchange of knowledge and re-combinations, and it depends on the capability of the organization to use the resources of knowledge and a search for new paths (Galunic and Rodan, 1998).

According to the Oslo Manual, innovation is “an implementation of new or essentially improved product (goods, services) or process, a new organizational method or a new marketing method in economic practice, job organization or relations with the environment. A new or essentially improved product is implemented when it has been launched on the market. New processes, organizational methods or marketing methods are implemented when their actual use for the operation of the enterprise starts” (OECD, 2008). Therefore, the enterprises, by creating innovations, can compete internationally. Innovativeness is only found for enterprises that can create and popularise innovations (Haffer, 2008).

### **2.3 Importance of Social Media in Creating Enterprise Innovations**

Social media and innovations are closely related to each other. For a long time, business leaders have claimed that enterprises should use social media to provide the clients with an environment they can cooperate in and participate in the life of the enterprise. Social media affect not only the organizational actions but also, more and more frequently, innovation management (Treem and Leonardi, 2012). The cases described in the literature demonstrate that social media start to be used by enterprises to create ideas, feedback, and open innovations (Brandtzaeg *et al.*, 2016).

The traditional process of innovations involves a few stages. Creating innovative ideas for monitoring texts as part of the netnography method is an alternative method of collecting innovative ideas without an active engagement of clients. The information used in the innovation process is enterprise mining from informal texts and data shared in social media. At the stage of innovation diffusion in the social media, e.g., wiki, one can create space for joint development of concepts, product prototypes as they facilitate an active interaction and exchange of knowledge between persons. Thanks to it, enterprises can develop their design tools and use them effectively for product development (Cui and Wu, 2015). At the stage of implementing innovations, the awareness of using social media is of crucial importance. Kim and Hanssens (2017) stress that the enterprise's activity in social media before launching innovation on the market is an effective form of advertisement. It encourages the potential users to search for new products triggers

viral marketing. However, once the innovation is implemented, social media facilitate the enterprises' access to feedback. That way it enhances the relations with the environment and the clients' involvement in the organization's actions.

Therefore, social media can be defined as a factor allowing the creation of innovation and managing it, and it can be considered a driving force and support for the enterprises at various stages of the innovation process (Nascimento and da Silveira, 2017).

### **3. Research Methodology**

#### **3.1 Review of the Studies of the Use of Social Media in Creating Innovation in Enterprises**

A systematic literature review was made following the methodology by Czakon (2015) as part of 6 stages, determining the study objective, identifying the primary literature, selecting the publications, developing the publication database, analyzing the contents (including the analysis of frequency – keywords) and a bibliometric analysis (including the citation rate).

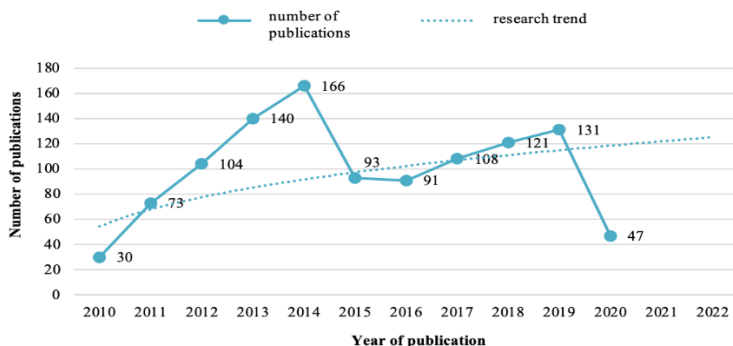
The analysis covered the resources of popular databases, which include scientific publications, e.g., conference proceedings. The analysis involved full-text foreign databases, especially EBSCO Host, ScienceDirect, Scopus®, Web of Science, Scopus, and Springer. To search for the publications, the EBSCO Discovery Service tool was used to integrate foreign full-text databases. The use of the tool facilitated, on the one hand, the research process and, on the other hand, a search for the databases with a single standard interface. Despite it, for each database, separate repeated searches were done. The analysis covered the 2010-2020 publications. To search for the English-speaking publications, a combination of the keywords (“social media”) AND (“innovation” OR “innovations”) was applied.

The bibliometric analysis, with an indication of the scientific trend, was limited to the EBSCO Host since the EBSCO Host, as compared with other databases, showed the highest number of articles containing the phrases social media and innovation in the topic, summary, or keywords (Table 3). The EBSCO Discovery Service tool integrated the other foreign full-text databases, thus avoiding the problem of article duplicating. After the bibliometric analysis, it can be concluded that in 2010-2020 the number of publications that contain those phrases in the topic, summary, or critical words (even though in 2015 and 2016, a decrease was recorded) was increasing. It points to a growing interest of scientists in the field under study (Figure 1 shows an extrapolation of the power trendline for the successive two years).

While analyzing the contents, the focus was only on those publications that presented social media's use in creating innovations following an empirical approach, and the publications addressing only the theoretical considerations were disregarded. Besides, there were selected only the publications that have gone through scientific

reviewing for the analysis, with access to the full text and included in scientific journals.

**Figure 1.** Number of publications in the 2010-2020 EBSCO database the topic, summary or key words contain the phrases “social media” and “innovation”



*Source:* Own study.

To avoid the repetition of the results used, a few inclusion and exclusion criteria of a given publication for analysis were applied. The inclusion criteria were:

- As for the duplicates of publications in two databases, for the purpose of the analysis, the one from EBSCO Host was selected,
- As for the publications describing the identical studies, the latest ones were selected,
- The publication should describe the use of social media to create enterprise innovations,
- The publication should discuss at least one of the innovation types,
- The publication should discuss at least one of the types of social media.

The exclusion criteria, on the other hand, were:

- Unavailable full-text publication in the database,
- Publications published in a form of monograph,
- Publications referring to social media without their use for creating enterprise innovations,
- Publications referring to innovations without focusing on social media,
- Publications referring to the enterprises without focusing on social media and innovations,
- reports, lists, technical summaries, or reviews editorial in nature.

The final search with the above limitations resulted in the selection of 10 English-language publications. Most of the applicable publications were found in EBSCO. A detailed course of creating the literature database has been described in Table 3. After the analysis of the contents, the articles describing the results of single studies were mainly identified. However, some publications constituted a review and contained the analysis of the studies reported in many articles referring to the use of social media

in creating innovation. The analysis also identified many English-language publications on the use of social media in creating innovation in general (not in enterprises). As such articles did not refer to any enterprise innovations or the social media were partially described, they were not considered in the analysis. The study focused exclusively on the articles which concerned the use of social media in creating enterprise innovations.

**Table 3.** Course of creating a literature database

Search criteria	EBSCO	ScinceDirect	Scopus	Spinger	Web of Science
Phrase <i>social media</i> in the topic, summary or key words	337,650	14,429	229,676	5,065	125,492
Phrase <i>innovation</i> in the topic, summary or in key words	1,044,178	595,713	438,636	12,203	330,612
Phrase <i>social media</i> and <i>innovation</i> in the topic, summary or key words	<b>7,456</b>	5,705	6,556	2,545	5,028
Phrase <i>social media</i> and <i>innovation</i> in key words	624	367	1,105	No data	No data
Phrase <i>social media</i> and <i>innovation</i> in the topic	316	29	242	94	213
Publications on management and economics	No data	26	32	43	76
2010-2020 full-text reviewed publications + the other inclusion criteria*	15	12	8	4	23
After verifying the abstracts, topics and key words	7	3	2	0	12
After deleting the publications duplicating	<b>10</b>				

**Note:** \*publication analysis-inclusion criteria:

- as for the publication duplicates in two databases, one from the EBSCO Host was selected for analysis,
- as for the publications describing identical studies, the latest ones were selected,
- the publication should describe the use of social media to create enterprise innovations,
- the publication should discuss at least one of the types of innovation,
- the publication should discuss at least one of the types of social media.

**Source:** Own study.

The analysis of the citation rate of 10 publications was based on the Scopus and Google Scholar databases (Table 4). The highest number of citations was noted for the publication by Nguyen, Yu, Melewar, and Chen (2015), describing the relationship between acquiring knowledge from social media and two forms of market orientation (proactive and reactive), the strategic potential of social media, and the brand innovation strategy with an example of the Chinese technology sector online.

The problem identified while performing the analysis of citation rate is a different number of citations of the same publication in different databases. An inconsiderable number of citations of the top items and the publication date demonstrate that the use of social media in creating innovations is relatively new, which requires further exploration.

**Table 4.** Analysis of citation rate of the publications analysed

Item	Publication analysed	Number of citations in Scopus	Number of citations in Google Scholar
1.	A.Papa, G. Santoro, L. Tirabeni, F. Monge, Social media as tool for facilitating knowledge creation and innovation in small and medium enterprises, "Baltic Journal of Management", Emerald Publishing Limited. July 02, 2018, Vol. 13, Issue 3, pp 329-344.	33	50
2.	E. L. Hitchen, P.A. Nylund, X. Ferrás, S. Mussons, Social media: open innovation in SMEs finds new support, "Journal of Business Strategy", 2017, Emerald Publishing Limited. May 15, 2017, Vol. 38, Issue 3, pp 21-29.	22	60
3.	M.-I. Muninger, W. Hammedi, M. Dominik, The value of social media for innovation: A capability perspective, "Journal of Business Research", February 2019 Volume 95, pp 116-127	29	55
4.	D.L. Roberts, F.T. Piller, D. Lüttgens, Mapping the impact of social media for innovation: the role of social media in explaining innovation performance in the PDMA comparative performance assessment study, "Journal of Product Innovation Management", 2016, 33(S1), s.117-135.	30	59
5.	D. L. Roberts, F. T. Piller, Finding the right role for social media in innovation, "MIT Sloan Management Review", 2016, 57(3), s. 41-47.	34	60
6.	B. Nguyen, X. Yu, T. C. Melewar, J. Chen, Brand innovation and social media: knowledge acquisition from social media, market orientation, and the moderating role of social media strategic capability, "Industrial Marketing Management", 2015, Issue 51, pp 11-25.	<b>81</b>	<b>157</b>
7.	T. J. Marion, G. Barczak, E. J. Hultink, Do social media tools impact the development phase? an exploratory study, "Journal of Product Innovation Management", 2014, Issue 31(S1), pp.18-29.	No data	76
8.	V. Scuotto, M. Del Giudice, M. R. della Peruta, S. Tarba, The performance implications of leveraging internal innovation through social media networks: An empirical verification of the smart fashion industry, "Technological Forecasting and Social Change", 2017, Issue 120, pp.184-194.	57	89
9.	D. L. Roberts, M. Candi, Leveraging social network sites in new product development: opportunity or hype? "Journal of Product Innovation Management", 2014, Issue 31(S1), pp.105-117.	53	82
10.	K. Samek, I. Wasielewska-Marszałkowska, Creating types of innovation by modern enterprises: selected research results, Education excellence and innovation management, a 2025 Vision to sustain economic development during global challenges: proceedings of the 35th International Business Information Management Association Conference (IBIMA), Seville 2020, 10919-10930.	No data	No data

*Source: Own development.*

The last element of the systematic literature review was the analysis of frequency which, thanks to verifying the frequency of a specific feature, e.g., the occurrence of critical words, facilitates identifying the dominant perspective /trend of studies and the methodology tendencies applied in each study area (Czakon, 2016).



**Figure 1.** Analysis of key words performed based on the word cloud created



*Source:* Own study with the use of EdWordle tool.

The key words analysis was performed using the cloud of key words created (Figure 1) in EdWordle. Considering the most frequent key words in the publications analysed, it can be found that the topic coverage is mostly related to product development, cooperation, webpages, clients, knowledge, and business.

### **3.2 Results of the Systematic Literature Review on the Use of Social Media in Creating Enterprise Innovations**

The analysis of the contents of the 19 publications identified has specified a number of features which referred to the contents presented in them. The features covered the following elements:

- *objective*: determining the objective of the study or publication (when the objective of the study has not been specified); if the objective referred to different aspects of study, there are presented only those which concern the use of social media in creating enterprise innovations;
- *research methods/type of study*: specifying whether the qualitative or quantitative research methods were used;
- *sample characteristics*: specifying the basic information on the sample covered by the study;
- *results/ conclusions*: specifying the general conclusions on the use of social media in creating enterprise innovations.

The detailed results of the analysis have been presented in Table 5.

The state of the literature which covers the studies of the use of social media in creating enterprise innovations is limited and scattered. It is evident from a low number of publications investigating it, especially all the articles with empirical studies.

**Table 5.** English-language publications presenting the results of the study on the use of social media in creating innovations in enterprises

Item	Author/publications (issue date)	Objective	Research methods/Type of study	Sample characteristics	Results/ conclusions
1.	A. Papa, G. Santoro, L. Tirabeni, F. Monge (2018)	Investigating the effect of the use of social media on four knowledge-creating processes; socialising, externalizing, combining, and internalizing as well as innovations in small- and medium-sized enterprises (SMEs).	Quantitative – a survey using a standardized questionnaire.	96 small- and medium-sized enterprises.	Social media enhance three out of four processes of creating knowledge and they help supporting the innovation process. Managers of small- and medium-sized enterprises are recommended to implement and to engage social media in business and innovation processes.
2.	E.L. Hitchen, P.A. Nylund, X. Ferràs, S. Mussons (2017)	Investigating the use of social media in open innovations and explaining how the practice is performed in small- and medium-sized enterprises (SMEs).	Qualitative – a case study	The authors investigate a case of open innovations in business-commencing Aurea Productiva and introduce frameworks for open innovations in SMEs supported by social media.	The enterprises wanting to fully use the advantages of the social media should create a strategy which focuses on the co-evolution of innovations and resources, sharing its vision and goals as well as ensuring frameworks for innovations.
3.	M.I. Muninger, W. Hammedi, M. Dominik (2019)	Defining the key opportunities, the organizations need to create to acquire value from social media.	Qualitative – in-depth interviews	Experienced managers from various departments (e.g., digital, marketing, innovations, general management) from 16 SMEs	<ol style="list-style-type: none"> <li>1. The results stress a complexity of using social media for innovations and a need of both strategic and operational capabilities as well as engaged people from various departments and organization levels to acquire and to distribute the knowledge from social media.</li> <li>2. Especially the social media managers must demonstrate sufficient fluency in manipulating information, developing ideas and accomplishing strategic objectives supported by technology.</li> <li>3. Enterprises should get prepared to employ co-workers responsible for operating social media, re-designing its functions (e.g., social media manager not related to one department only) and implementing the complementing opportunities and well-established processes (e.g., files combining a contribution of a few innovation, digital and marketing teams).</li> </ol>

					4. The high management, especially, should work on building a powerful interorganizational culture which will encourage to a common use of social media and will establish interdisciplinary teams for a fast work towards the same goal with an exchange of information and fast decision-making processes.
4.	D.L. Roberts, F.T. Piller, D. Lüttgens (2016a)	Analysis of the effect of the use of social media on the innovative efficiency in enterprises	Quantitative – a survey	186 enterprises	<ol style="list-style-type: none"> <li>1. The use of information from social media can lead to a higher innovation efficiency of the enterprise, including the effect on the process of creating new products.</li> <li>2. Capability of enterprises to use social media considerably depends on complementing internal organization processes.</li> <li>3. Managers must be careful when using information from social media in radical projects as in such projects it was possible to observe only an inconsiderable contribution of social media in the new product creation process efficiency.</li> </ol>
5.	D.L. Roberts, F.T. Piller (2016b)	How do the enterprises use social media to support innovation and a new product development process?	Quantitative – a survey	209 enterprises from the north of Europe used by social media to develop new products, a set of data from Global Comparative Performance Assessment Study of 2012 by Product Development and Management Association (PDMA), the biggest professional organization in the new product development sector: 453 enterprises (198 from North America, 149 – from Asia and 106 from Europe).	<ol style="list-style-type: none"> <li>1. The benefits of using social media to develop new products are insufficient for many enterprises.</li> <li>2. Enterprises should include social media in the execution of their corporate goals, especially introducing various improvements.</li> <li>3. There were observed positive effects for enterprises which used social media at all the stages of innovation development process, however, it was also found that enterprises should operate a dedicated structure and culture of innovation to be able to benefit from them.</li> </ol>
6.	B. Nguyen, X. Yu, T. C. Melewar, J. Chen	Investigating the relationship between acquiring knowledge from social media and two forms of market	Qualitative – a case study	357 technology enterprises online	<ol style="list-style-type: none"> <li>1. The brand innovation is affected by both acquiring knowledge from social media and market orientation.</li> </ol>

	(2015)	orientation (proactive and reactive), strategic possibilities of social media and the brand innovation strategy with an example of the Chinese technology sector online.			<ol style="list-style-type: none"> <li>2. Social media enhance the brand innovations, and they serve as a moderator between knowledge acquisition, market orientation and brand innovations.</li> <li>3. Social media enhance brand innovations as the users specify their needs there.</li> <li>4. The needs of the clients in social media can be identified more comprehensively than in traditional conditions.</li> </ol>
7.	T.J. Marion, G. Barczak, E.J. Hultink (2014)	Investigating the effect of social media on the new product development (NPD)	Quantitative – a survey	193 respondents from 198 big enterprises	<ol style="list-style-type: none"> <li>1. The use of the social media is much lower than the use of traditional IT tools, e.g., email and computer-aided designing.</li> <li>2. Social media, however, have a considerable positive impact on generating product concepts / prototypes and management evaluation.</li> </ol>
8.	V. Scuotto, M. Del Giudice, M.R. della Peruta, S. Tarba (2017)	Investigating the effect of using social media on return on investment (ROI) as external factors supporting the external processes of searching for innovations.	Qualitative - classification and regression tree (CART)	2548 SMEs representing the fashion sector headquartered in Italy and in Great Britain.	<ol style="list-style-type: none"> <li>1. The use of social media enhances the ROI.</li> <li>2. Social media users play a dominant and active role in innovation seeking.</li> <li>3. Social media are valuable external factors supporting innovation search processes.</li> </ol>
9.	D.L. Roberts, M. Candi (2014)	Investigating the use of social media in the process of creating new products and how their use enhances efficiency in terms of innovativeness, market growth and profitability.	Quantitative – a survey	351 high-level managers, mostly general directors of European enterprises.	The use of social media in the new product development process is still embryonal, and the expected benefits are not accomplished in many cases.
10.	K. Samek, I. Wasielewska-Marszałkowska (2020)	Identifying the types of innovations created by contemporary enterprises.	Quantitative – a survey	150 Polish enterprises using social media in creating innovations for the last 5 years	Over the last five years the enterprises under study have expressed a high level of activity in implementing product, technological, market and organizational innovations.

*Source: Own research.*

With the systematic literature review the following conclusions can be formulated for the ten publications involved in the analysis:

1. The authors of the publications aimed at determining the effect of social media on creating innovations and the enterprise innovativeness.
2. Nine studies presented in the publications were based on the quantitative methods and six – on the qualitative methods.
3. The studies presented in the publications were dominated by the samples ranging from 1 to 200 units (ten publications), whereas bigger samples (more than 200 units) were observed in four publications.
4. In six publications analyzed the authors investigated SMEs. In the others, the size of the organization was not specified. However, it must be noted that in

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is rarely the case that the topic or summary of the article specifies whether they are micro, small, medium, or big enterprises. Nevertheless, after a thorough analysis of the empirical parts of the articles analyzed, one can conclude that most of them describe mostly the cases of micro, small- and medium-sized enterprises.

5. In all the cases, the effect of the use of social media was evaluated from the respondents' opinions. As for eight publications, the authors reported that the sample was made of the firms/ enterprises/ brands/ undertakings. In five publications the respondents were employees of enterprises and in two publications – social media users.
6. In most of the publications there was found a positive impact of the use of social media on creating enterprise innovations. It is stressed that social media are helpful for the enterprises while creating innovative solutions.

#### **4. Results and Discussion**

After a thorough analysis of the results of the systematic literature review, one can formulate a few general conclusions from the studies of the use of social media in creating enterprise innovations.

1. First, most of the publications describe the use of social media in creating innovations in micro-, small- and medium-sized enterprises (SMEs). It is justified with the statement that the enterprises, when developing innovations, do not have such big financial potential or so many communication channels to reach the clients as big companies, therefore, most frequently, they use relatively cheap and generally accessible social media (Hitchen *et al.*, 2017). At the same time, they have an opportunity to acquire precious information from the environment which can facilitate the existing products or contribute to the creation of brand-new products. Besides, SMEs, as compared with big companies, are more flexible while introducing changes at the early stage of creating innovation and, as such, they are open to suggestions from social media users (Pukas, 2014).
2. Second, the systematic literature review has identified the main four types of social media; Facebook, Twitter, LinkedIn, and YouTube, used to create innovations. There is therefore a research gap of the impact of other types of social media on the process of creating enterprise innovation.
3. Third, most of the publications investigated the effect of social media on product innovations. Rarely other types of innovations (e.g., process, organizational and marketing innovations) are addressed. It provides another research gap in the existing literature output and it points to the direction of further studies.
4. Fourth, benefiting from the use of social media in creating innovations is based on the capability of the enterprise to broaden their mind to acquire new ideas. The authors of the publications describe in detail several features of social media which can support the enterprise innovation development process. The most frequently identified ones include interactions between

clients and employees or the openness in providing the users with a platform for unrestricted opinions.

5. Fifth, the studies show that it is difficult for the organizations to use social media to create innovations effectively, mostly due to a lack of adequate tips and recommendations. Each stage of the innovation process requires taking other measures in social media and including various groups of interest-holders. Considering a lack of systematic and theoretical explanations on which capabilities must be created and how to manage them in social media at respective stages of innovation processes, studies are required to address those reservations.
6. Sixth, one can assume that there is also a research gap on how the tangible and intangible resources of the organization affect the use of social media in innovation processes. Such studies could use the concepts from other disciplines, especially cognitive psychology, and economics, to explain why some enterprises are more successful at the use of social media to win a competitive advantage through innovations, and others – are not successful at all.

## **5. Conclusions**

Modern models of mass cooperation of enterprises with the environment differ from the existing ones. More and more enterprises are open to cooperation with clients. To do so, they transfer their problems, idea, and actions to the virtual world. The literature review confirms the importance of social media in creating enterprise innovation.

The use of social media for creating innovations in enterprises is now an inconsiderable part of scientific publications. While many studies refer to the use of social media from the consumer's perspective, relatively few investigate the use of social media by enterprises for creating innovations. The justifiability of performing further and in-depth studies is also stressed by the research gaps identified from the systematic literature review.

The first research gap concerns the fact that in most of the publications analyzed; the authors focus only on selected types of social media (especially Facebook, Twitter, LinkedIn, and YouTube) used to create innovations. The second gap refers to the fact that, in most of the publications, there was only investigated the impact of social media on product innovations; other kinds of innovations were rarely addressed. The third research gap points to a lack of systematic theoretical explanations on what capabilities of using social media must be created and how they should be managed at respective stages of innovation processes. It is, therefore, justifiable to perform studies to address those reservations. The fourth research gap concerned how the tangible and intangible resources of the organization affect the use of social media in innovation processes, which is an exciting direction for further studies.

With all those findings, it is assumed that the results of the systematic literature

review presented in this article will be a springboard for a more profound knowledge of the area of study as the use of social media in creating enterprise innovations is a new aspect. Still, hardly considered in the literature and could be a topical and exciting research area.

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