

## USE AND DEVELOPMENT OF CONTINGENCY THEORY

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**Abstract.** There is no universal way to manage an organization. Contingency theory helps to develop organization's design using subsystems in combination with an environment. The present article analyses development of contingency theory since 1998. The study used componential and document analysis method - study was made based on semantic approach using publications in scientific journals included in Web of Science or Scopus database; publications were manually selected. One research proposition was developed to focus the study, it claimed – contingency theory continues to be used to analyse specific situational factors. Our research study showed that contingency theory during last 20 years was affected by internal and external situational factors and interacted with various systems.

**Keywords:** *contingency theory, management, system.*

**JEL code:** M00, M100

### Introduction

Design of the organization and its subsystems should be combined with the environment and be able to respond to various organizational situations. According to current literature, contingency theory focuses on creation of organizational knowledge, though in its early days focused on organizations' internal and external constraints. The key idea of the research was to develop pathway of contingency theory's development (concept map) thus identifying possible potential for further theory's development. At the same time one research statement was developed in order to concentrate the study. The statement or a proposition was the following - contingency theory continues to be used to analyse specific situational factors.

The study used componential and document analysis method and was made based on semantic approach using publications in scientific journals included in Web of Science or Scopus database. Around 230 publications were manually selected on the basis of the year of issue, keywords ("contingency theory", "contingency approach", "contingency"), content analysis and later sorted into four groups:

- Group one: years 1998 – 2002;
- Group two: years 2003 – 2007;
- Group three: years 2008 – 2012;
- Group four: years 2013 – 2018.

Whereas the semantic tool could not identify some of the selected articles, it was necessary to exclude them (especially related to years 1998 – 2002). This resulted in an average of 48 publications per group. During the next step semantic tool was used in order to identify the most commonly used words along with "contingency theory", "contingency approach", "contingency" and several visual materials were developed.

Delimitation of study was inherent to research design itself – study approach allowed us to use a specific number of publications. Despite the limitations of the study, the research is significant in the context of sustainable development – since contingency theory addresses flexibility, ability to analyse and adaptability to changing contingencies and sustainable development addresses social, environmental and economic aspects, research will contribute to the management, humanitarian and social studies.

### Literature Review

Given the specifics of the study, literature review (analysis) is developed based on key findings and research proposition (in this case semantic tool not used). Thus, provides closer synergy with research results and discussion.

**Group one: years 1998 – 2002**

Literature research shows that use of contingency theory is viewed in context of relative stability of the environment, with external factors (specific situational factors) that supports overall management process based on different tests.

For example:

- Ensign, P.C., (2001) examined research design problems implications for management;
- Walker, A. and Kwong Wing, C., (1999, p. 166) research work explained “the structuring and management of project organizations”;
- Silvestro, R., (2001, p. 254) research results showed “the most conducive environment for TQM implementation”;
- Tarter, C.J. and Hoy, W.K., (1998, p. 212) analysed “matching decision strategies to situations”;
- Alexander, E.R. (1998, p. 335) presented “the concept of coordination structures”;
- Kern, T., Kreijger, J. and Willcocks, L., (2002, p. 153) developed “propositions that customers should bear in mind when considering an ASP option”;
- Zhu, Z., (2002, p. 343) searched “for contingency approaches to information systems design”.

#### **Group two: years 2003 – 2007**

Distinct perspectives were resolved over this period. Contingency theory focuses more on structural model, various strategies, resources, including environment and pays attention to organizations behavioural design. For example:

- Eschenfelder, K.R., (2004, p. 463) studied how state agencies “organized the work of reviewing and approving textual content for publications on Internet Web sites”;
- Richard, O., McMillan, A., Chadwick, K. and Dwyer, S., (2003) explored racial diversity’s influence on firm performance;
- Jin, Y. and Cameron, G.T., (2006, p. 423) developed “a multiple-item scale for measuring public relations stance”;
- Wijbenga, F.H. and van Witteloostuijn, A., (2007, p. 566) examined “impact of environmental dynamism”;
- Hyvönen, J., (2007, p. 343) investigated “relationships between organizational performance and customer-focused strategies, performance measures un information technology”.

#### **Group three: years 2008 – 2012**

Period that we analyse shows contingency’s focus on human capacity regarding leadership, networking in external and internal environments. Special attention is paid to the organisational contingencies. For example:

- Kelleher, T., (2008, p. 300) examined “whether certain organisational contingencies .... lead public relations practitioners to choose more accommodating stances toward publics”;
- Sims Jr, H.P., Faraj, S. and Yun, S., (2009, p. 149) presented “research about situational leadership during resuscitation in a trauma centre”;
- Wong, C.W., Lai, K.H. and Cheng, T.C.E., (2011, p. 161) research results showed “that the performance outcomes of information integration are contingent on both external environmental conditions and internal operational characteristics”;
- Bechor, T., Neumann, S., Zviran, M. and Glezer, C., (2010, p. 17) developed research that “investigated the success of SISP as a function of its key success factors (KSFs) in different contexts and SISP approaches”;
- Choudhury, E., (2008, p. 586) developed study “by addressing trust as a relational fact, and then, identifying the dynamic conditions of its optimization”.

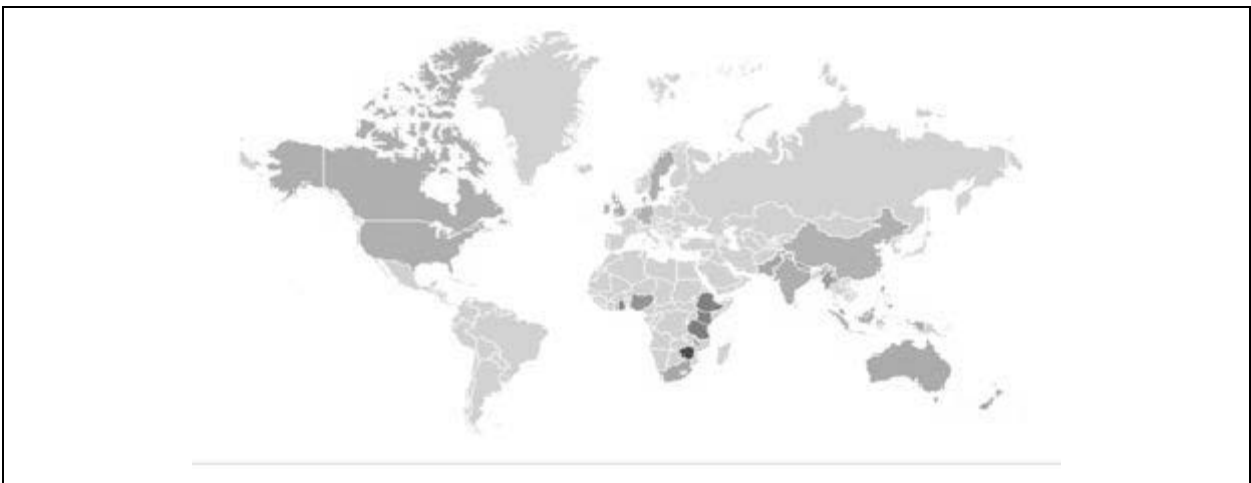
#### **Group four: years 2013 – 2018**

The literature review of the last group indicates that contingency theory is used to set a performance framework and to study general agent-systems. For example:

- Samagaio, A., Crespo, N.F. and Rodrigues, R., (2018, p. 351) focused their research on adoption of management control “systems by start-ups to internal and external contingency factors”;

- Burkert, M., Davila, A., Mehta, K. and Oyon, D., (2014) framework of the study was management accounting;
- Christ, K.L. and Burritt, R.L., (2013, p. 163) studied “whether organisational context could be used to develop a greater understanding of EMA use by Australian organisations”;
- vom Brocke, J., Zelt, S. and Schmiedel, T., (2016, p. 486) examined “contextual factors that influence BPM”;
- Yu, K., Cadeaux, J. and Luo, B.N., (2015) developed study that focused on operations management, marketing and chain management.

Before discussing research results using semantic tool, we offer insight into the “distribution” of contingency theory worldwide since 2004 (Fig. 1.). Geographical information on contingency theory’s search volume index covers<sup>1</sup> part of North America, several European countries, Asia and Oceania. The figure shows that search volume index for contingency theory in Africa region is higher than in other regions of the world. We conclude that countries, which are interested into contingency theory, represent countries of the largest advanced economies and least developed countries. On readers’ note, during analysis of words that are used mostly with theory, word “economics” was mentioned in all groups except one - group four: years 2013 – 2018.



Source: Google Trend search volume index by Google, obtained by authors in 29.11.2019

(<https://trends.google.com/trends/explore?date=all&q=contingency%20theory>)

**Fig. 1. Geographical information on contingency theory’s search volume index (2004 – nowadays)**

### **Research results and discussion**

The following information offers research results based on semantic approach. Section is divided into four parts according to each group.

Group one: years 1998 – 2002

<sup>1</sup> Malawi (100), Zimbabwe (82), Jamaica (54), Ethiopia (42), Tanzania (39), Kenya (37), Ghana (37), Nepal (33), Nigeria (24), Philippines (15), Myanmar (Burma) (13), Pakistan (9), Singapore (9), Malaysia (9), New Zealand (9), South Africa (8), Ireland (7), Hon Kong (7), Bangladesh (7), Australia (6), Denmark (5), United Kingdom (5), USA (3), The Nederland (3), Sweden (3), India (3), Canada (3), China (1), Indonesia (1), Germany (1)





Source: obtained by authors in Sketch Engine software, based on literature review (the list of reviewed literature is available upon request from authors, because listing inclusion does not match particular articles' requirement)

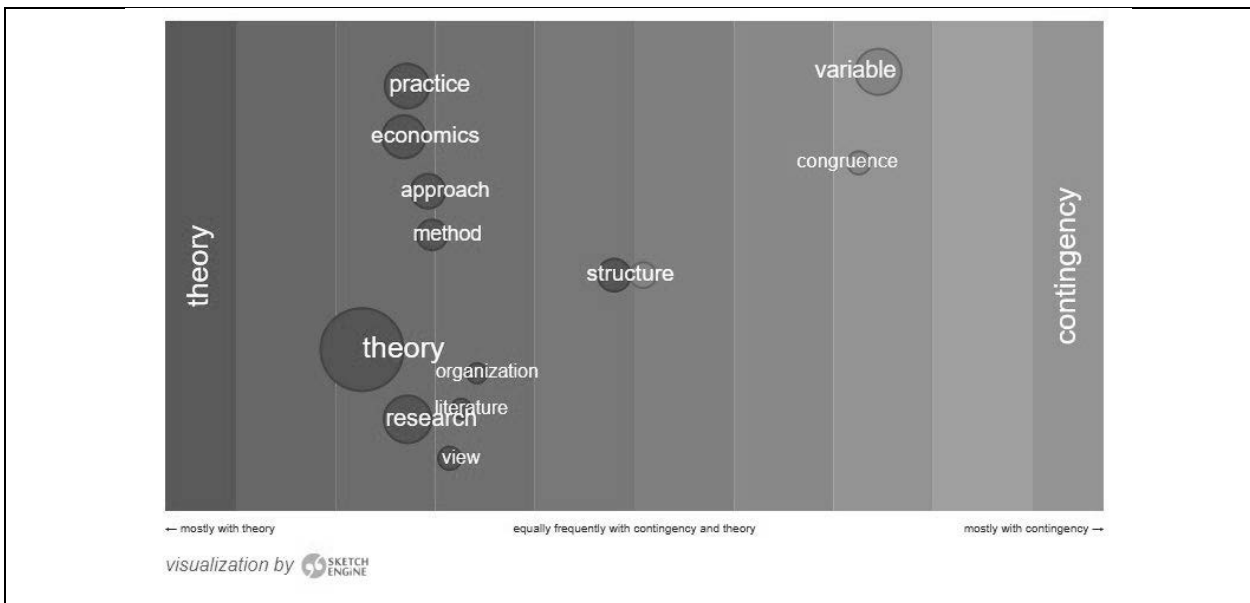
Fig. 4. Words referring “contingency” (2003 – 2007)

During the 2003 – 2007 period word “contingency” mainly refers to “strategy”, “management”, “theory”, “business” and “innovation” (Fig. 4.). Compared to previous group (years 1998 – 2002) among the most used words remains “management” and “theory” as well as new words appear – “leadership”, “business” and “innovation”.

In summary, analysing equally frequently used words with contingency theory (Fig. 5.), authors identify the following:

- a) mostly with theory are used words “theory” and “research”;
- b) word “structure” has the central role regarding contingency theory;
- c) words “variable” and “congruence” are new words that are used mostly with contingency.

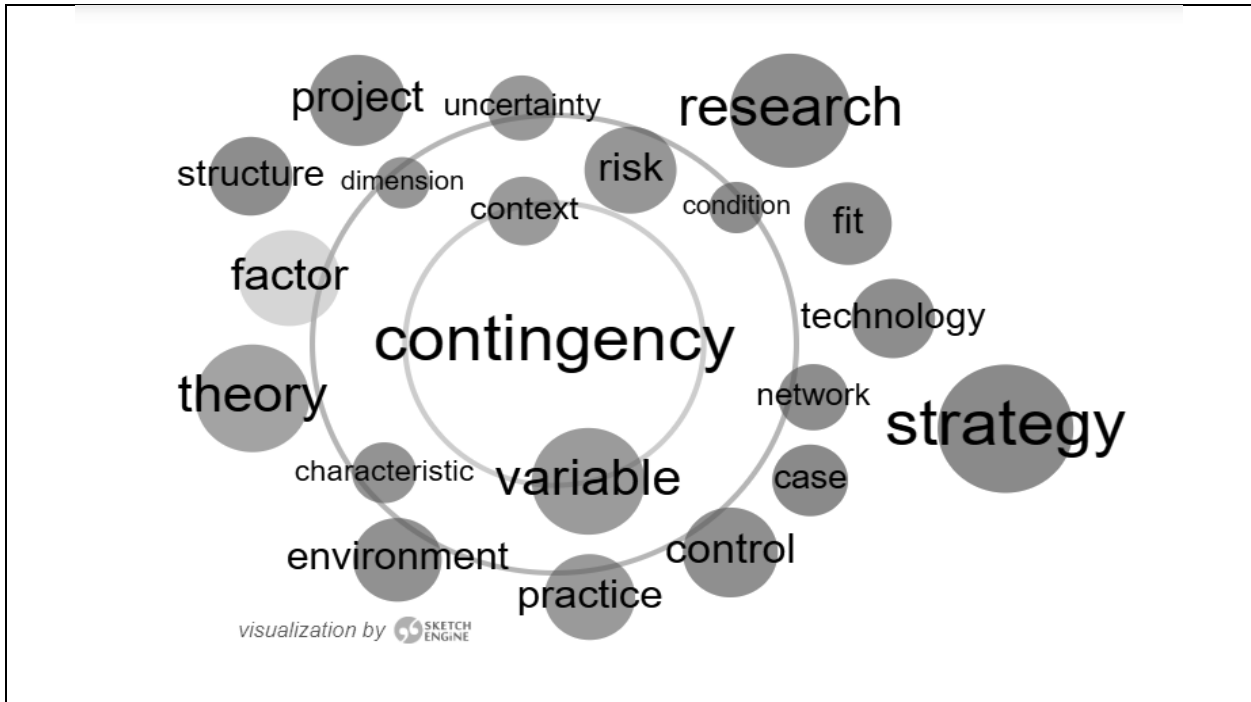
These factors allow us to make an assumption that during this period contingency theory focused on creating interactions between organization’s processes and available resources, which focuses, for example, on innovation or dynamism.



Source: obtained by authors in Sketch Engine software, based on literature review (the list of reviewed literature is available upon request from authors, because listing inclusion does not match particular articles' requirement)

Fig. 5. Use of contingency theory (2003 – 2007)

Group three: years 2008 – 2012



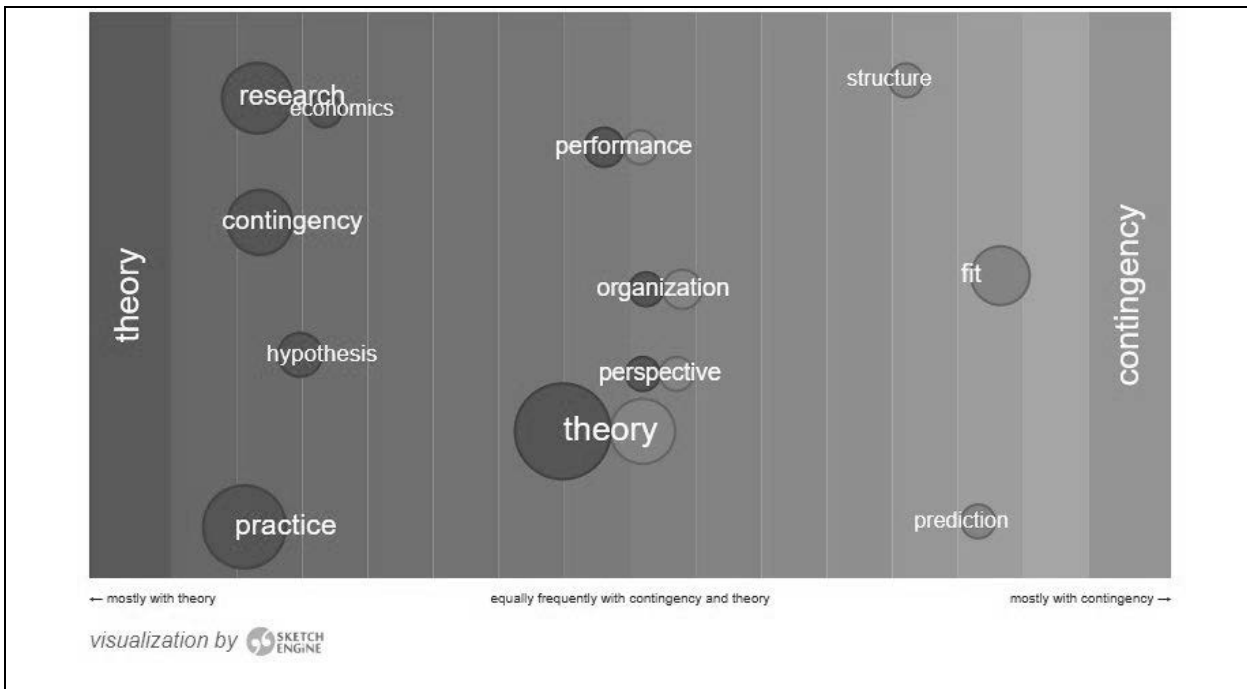
Source: obtained by authors in Sketch Engine software, based on literature review (the list of reviewed literature is available upon request from authors, because listing inclusion does not match particular articles' requirement)

Fig. 6. Words referring “contingency” (2008 – 2012)

Word “contingency” mainly refers to “strategy”, “research”, “environment”, “project”, “control” and “technology” (Fig. 6.). Comparing group three with group one and two among the most used words remains “strategy” (group two), “research” (group one). Also new words appear – “technology”, “environment”, “practice”, “control”, “structure” and “project”.

Word “theory” has changed its location (Fig. 7.) compared years 1998 – 2007 when it had another role thus reinforcing its role in theory development. During the 2008 – 2012 period it is among words that are used equally frequently with contingency and theory (“performance”, “organisation” and “perspective”).

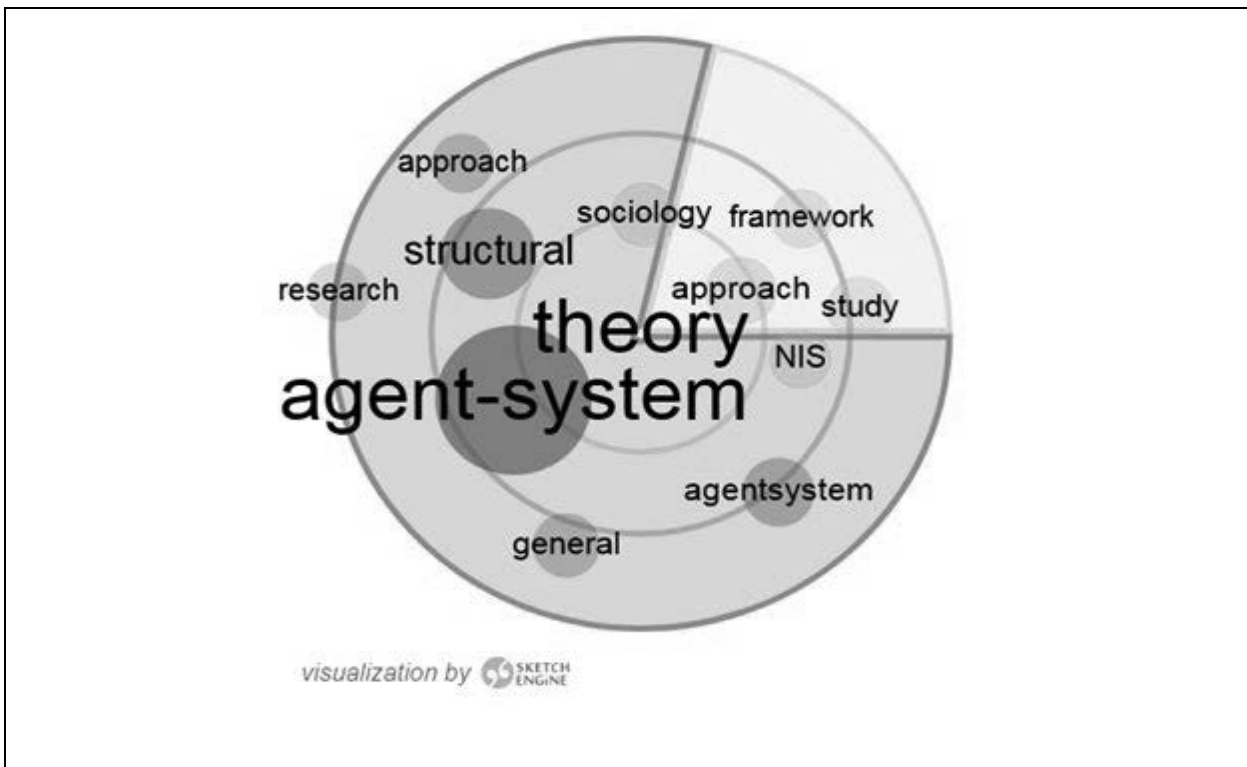
From the information given above it can be validly concluded that organisational contingencies during this period are viewed from condition, dimension, technology and environment perspective.



Source: obtained by authors in Sketch Engine software, based on literature review (the list of reviewed literature is available upon request from authors, because listing inclusion does not match particular articles' requirement)

Fig. 7. Use of contingency theory (2008 – 2012)

Group four: years 2013 – 2018



Source: obtained by authors in Sketch Engine software, based on literature review (the list of reviewed literature is available upon request from authors, because listing inclusion does not match particular articles' requirement)

Fig. 8. Words referring “contingency” (2013 – 2018)

During the 2013 – 2018 period word “contingency” mainly refers to new words - “agent-system theory” and “structural” (Fig. 8.). Words “research”, “approach” repeats from previous sections (groups). This period differs – word “contingency” mainly refers to several words, while during the 1998 – 2012 period it refers to wide variety of words.

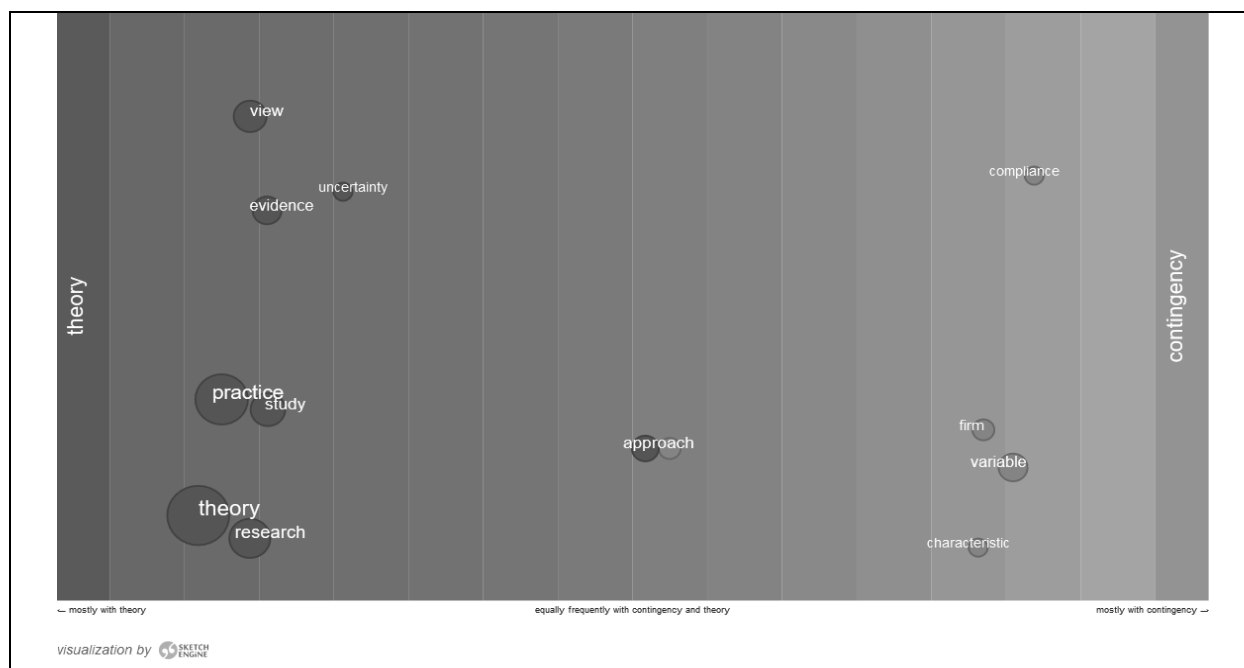


In summary, analysing use of contingency theory (Fig. 9.), authors identify the following:

- word “approach” is used equally frequently with contingency theory;
- mostly with theory are used words “theory”, “practice” and “research”;
- new words are “variable” and “congruence”.
- words “variable” and “congruence” are new words that are used mostly with contingency.

Unlike other periods, the central role is assigned to the word “approach”, which assumes that the approach is being revised not just for contingency itself but also for contingency theory (Fig. 9.). Word’s “approach” synergy with words “research”, “study”, “evidence”, “firm”, “characteristics” and “compliance” supports the statement, because synergy is necessary to continue to develop theory.

Taking into account the results of the analysis of this period we are able to deduce that focus on general-agent system has directed contingency theory towards internal and external factor analysis. Since this approach covers a much wider range features of system theory appear.



Source: obtained by authors in Sketch Engine software, based on literature review (the list of reviewed literature is available upon request from authors, because listing inclusion does not match particular articles' requirement)

Fig. 9. Use of contingency theory (2013 – 2018)

### Conclusions

- Our proposition – contingency theory continues to be used to analyse specific situational factors – confirmed. Observed dimensions of contingency theory during last 20 years showed that the theory is affected by internal and external situational factors and interact with various systems. Situational factors are related to stability of the environment, resources, organisational contingencies and system, performance framework, innovation and leadership.
- During the whole period the following words still remain more often (a) as words referring to “contingency”– “management”, “strategy”, “factor” and “theory; (b) as words that are used mostly with theory – “research”, “economics”, “theory”, “practice”; (c) as word that are used mostly with contingency – “variable”. Words that are used equally frequently with contingency and theory in every time period are different – “structure”, “theory”, “perspective”, “organisation”, “performance” and “approach”.
- It may be concluded – countries, which are interested into contingency theory, represent countries of the largest advanced economies and least developed countries.



4. Similar studies should be devoted to a deeper study of internal and external factors that are directly related to organizational structure. This would give an additional idea of the possibilities of an optimal organizational structure in a larger system and contribute to the development of contingency theory.
5. In addition, to indicate the potential for further development of contingency theory, the interaction of internal and external factors with organizational performance should be assessed. This will complement the laws of contingency theory associated with the classical theory of organization that focuses on the effective development of organizations.

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