

# The Proposed Research Framework Of Organizational Agility

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## ARTICLE INFO

### Article history:

Received: 15 April 2022

Revised: 8 May 2023

Accepted: 12 May 2023

### JEL Classification:

L21, L25, M10

### DOI:

10.14414/jebav.v26i1.2994

### Keywords:

Organizational agility, Research framework, Systematic literature review

## ABSTRACT

Organizational agility is the ability of an organization to respond to organizational dynamics. This paper applies a systematic literature review (SLR) based on the PRISMA protocol and theory-context-characteristic-methodology (TCCM) analysis to find research gaps and construct a research framework concerning organizational agility. By reviewing previous research publications with the following criteria: quantitative research documents indexed by Scopus as journals; in the subject area of Business, Management, and Accounting; written across 2005–2020 in English and downloadable in full text; and empirical studies using structural equation modeling in data processing presents several research gaps. A research framework proposal is compiled concerning these research gaps, comprising 14 propositions. The proposed research framework of organizational agility is expected to provide the basis for future empirical studies.

## ABSTRAK

Kelincahan organisasi merupakan kemampuan suatu organisasi dalam merespon dinamika organisasi. Makalah ini menerapkan tinjauan literatur sistematis (SLR) berdasar protokol PRISMA dan analisis teori-konteks-karakteristik-metodologi (TCCM) untuk menemukan kesenjangan penelitian juga membangun kerangka kerja penelitian tentang kelincahan organisasi. Dengan meninjau publikasi penelitian sebelumnya dengan kriteria sebagai berikut: dokumen penelitian kuantitatif terindeks Scopus sebagai jurnal; dalam bidang studi Bisnis, Manajemen, dan Akuntansi; ditulis sepanjang tahun 2005–2020 dalam bahasa Inggris dan dapat diunduh dalam teks lengkap; dan studi empiris menggunakan pemodelan persamaan struktural dalam pemrosesan data, menyajikan beberapa kesenjangan penelitian. Proposal kerangka penelitian disusun mengenai kesenjangan penelitian ini. Kerangka penelitian yang diusulkan tentang kelincahan organisasi diharapkan dapat memberikan dasar untuk studi empiris di masa depan.

## 1. INTRODUCTION

Presently, the dynamics of organizational environments (particularly in business) have experienced rapid development and transformation in a Volatile, Uncertain, Complex, and Ambiguous (VUCA) manner (Pangarso et al., 2020). Thus, an organization nurturing a common goal must be able to respond to the dynamics of the VUCA organizational environment accordingly (Pangarso, 2014). Organizational agility is the ability of an organization to respond to stimuli from a dynamic external environment (Tallon & Pinsonneault, 2011). If the organization is not agile, it will be difficult for an organization to meet the fast and unpredictable market conditions, resulting in the organization being unable to perform well and even being unable to compete sustainably. The importance of organizational agility for business organizations is partly because agility is a vital organizational asset, especially in a hypercompetitive environment (Fosso Wamba, 2022). In addition, agility is an essential organizational capability that allows organizations to respond appropriately to changes in the external environment while capturing existing business opportunities to survive and even excel in competition (Ciampi et al., 2022). Mainly related to the COVID-19 pandemic, business organizations also need the ability to be agile in responding to changes that require some preparation of organizational scenarios against various possibilities to remain innovative to maintain performance and competitiveness sustainably (Arsawan et al., 2022).

Previous research related to organizational agility is mainly associated with the IT field, including those conducted by Gao et al. (2020), Khayer et al. (2020), Zhen et al. (2021), and Panda (2022). IT is one of the organization's resources to achieve superior performance and sustainable competitive advantage. RBV is a

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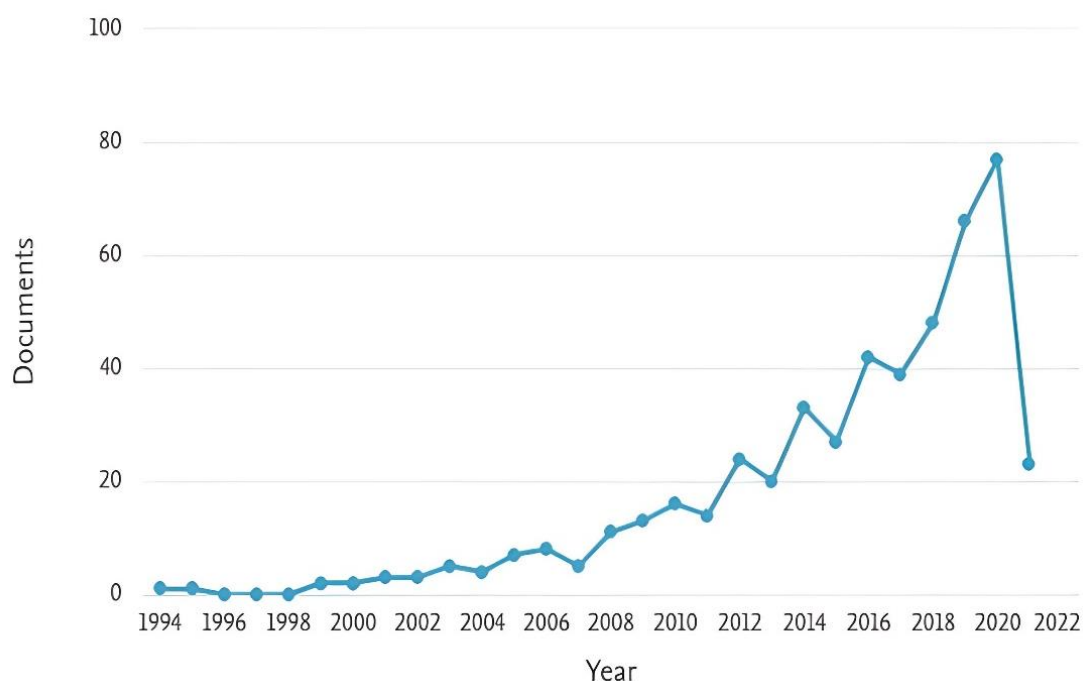
major theory behind the importance of resources for organizations. RBV develops into a dynamic capability, emphasizing the organization's ability to manage resources to respond to a dynamic organizational environment. The dynamic development of IT requires agility. So organizational agility from an IT perspective is more likely related to dynamic capability (Li, 2022). The scope of organizational agility is widening, not just limited to IT-related fields. However, various previous studies on organizational agility outside the IT context exist, such as Cegarra-Navarro & Martelo-Landroguez (2020) and Shahzad et al. (2020).

To the author's knowledge, no research comprehensively discusses what theories underlie research on organizational agility. A systematic literature review is one way to systematically and comprehensively examine previous research (Lim et al., 2022). It is important because a systematic literature review that discusses what theories underlie research on organizational agility has the potential to become the basis for future research on organizational agility. It can be seen what theories might be related to organizational agility that is rarely and or has never been studied in various contexts, characteristics, and even with various methods so that they can complete the body of knowledge about organizational agility.

## 2. THEORETICAL FRAMEWORK AND HYPOTHESES

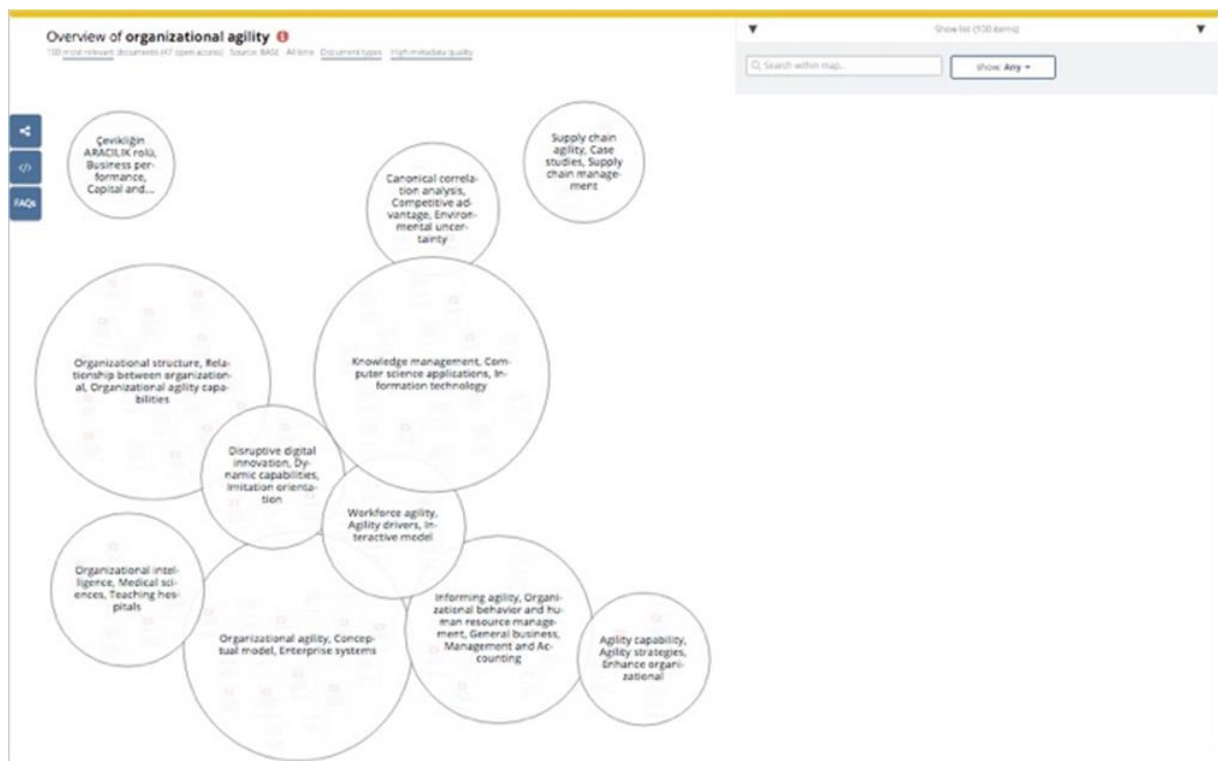
Observed from the results of the initial search based on Scopus indexed research publication database (as one of the research publication databases that, to the author's best knowledge, has an international reputation), the keyword "organizational agility" produced 494 documents until May 2021 (Figure 1) (Pangarso, Sisilia, Setyorini, et al., 2022). It indicates a general increase in research publications on organizational agility from 1994 to 2021, encouraging the authors to study this topic specifically. Consequent to an overview of research publications from the Scopus database on organizational agility, the authors conducted a bibliometric analysis using Open Knowledge Maps (*Open Knowledge Maps - A Visual Interface to the World's Scientific Knowledge*) and VOSviewer software (van Eck & Waltman, 2010) to discover an overview of constructs and/or topics related to organizational agility.

Figure 2 shows several groupings of the constructs in circles. A larger circle means more research publications with the constructs written in the circle and vice versa. Generally, there are 11 circles: four large circles and seven small ones. Furthermore, nine circles are related to each other, whereas two are separated from others. Table 1 describes the topics of each circle in Figure 2.



**Figure 1.** Documents by year from the Scopus database

Source: Scopus - Document Search | Signed In (2020)



**Figure 2.** Results of open knowledge maps on “organizational agility” Source: (*Overview of Research on Organizational Agility - Open Knowledge Maps, 2020*)

**Table 1.** Description of topics of each circle in Figure 2

Cir- cle	Topic	Related circle	Total re- search publica- tions	The as- sumed size of the circle
1	Organizational structure, organizational agility capability, organizational relationship.	3	18	Large
2	Knowledge management, IT, computer science application.	3, 4, 9	18	Large
3	Disruptive digital innovation, dynamic capability, imitation orientation.	1, 2, 4, 5	6	Small
4	Workforce agility, agility drivers, interactive model.	2, 3, 5, 7	6	Small
5	Organizational intelligence, medical science, teaching hospital.	6	7	Small
6	Characteristic model, enterprise system.	3, 4, 5, 7	17	Large
7	Informing agility, organizational behavior, human resource management, general business, management & accounting.	4, 6	11	Large
8	Agility capability, agility strategies.	7	5	Small
9	Canonical correlation analysis, competitive advantage, environmental uncertainty.	2	5	Small
10	Supply chain agility, case study, supply chain management.	-	3	Small
11	Business performance, the capital.	-	4	Small

The VOSviewer processing on the 494 publications used co-occurrences, with a minimum number of occurrences of a keyword being 10. The authors chose co-occurrences because they can show constructs and/or



**Table 2.** Description of topics related to organizational agility in Figure 3

No.	Cluster of color	Assumed size of the cluster	Topic
1	Blue	Large	Competitive advantage
2			Organizational agility
3			Organizational
4			Competition
5			Information management
6	Green	Small	Commerce
7			Industrial management
8			Dynamic capability
9			Societies & institution
10	Turquoise	Small	Large data
11			Organizational performance
12			Information use
13	Red	Large	Business environment
14			Business process
15			Investment
16			Organizational agility
17			Information services
18			Research
19			Information technology
20			Industry
21			IT capability
22			Purple
23	Agile manufacturing system		
24	Human resource management		
25	Yellow	Large	Agility
26			Organizational culture
27			Organizational learning
28			Structural equation modeling
29			Decision making
30			Innovation

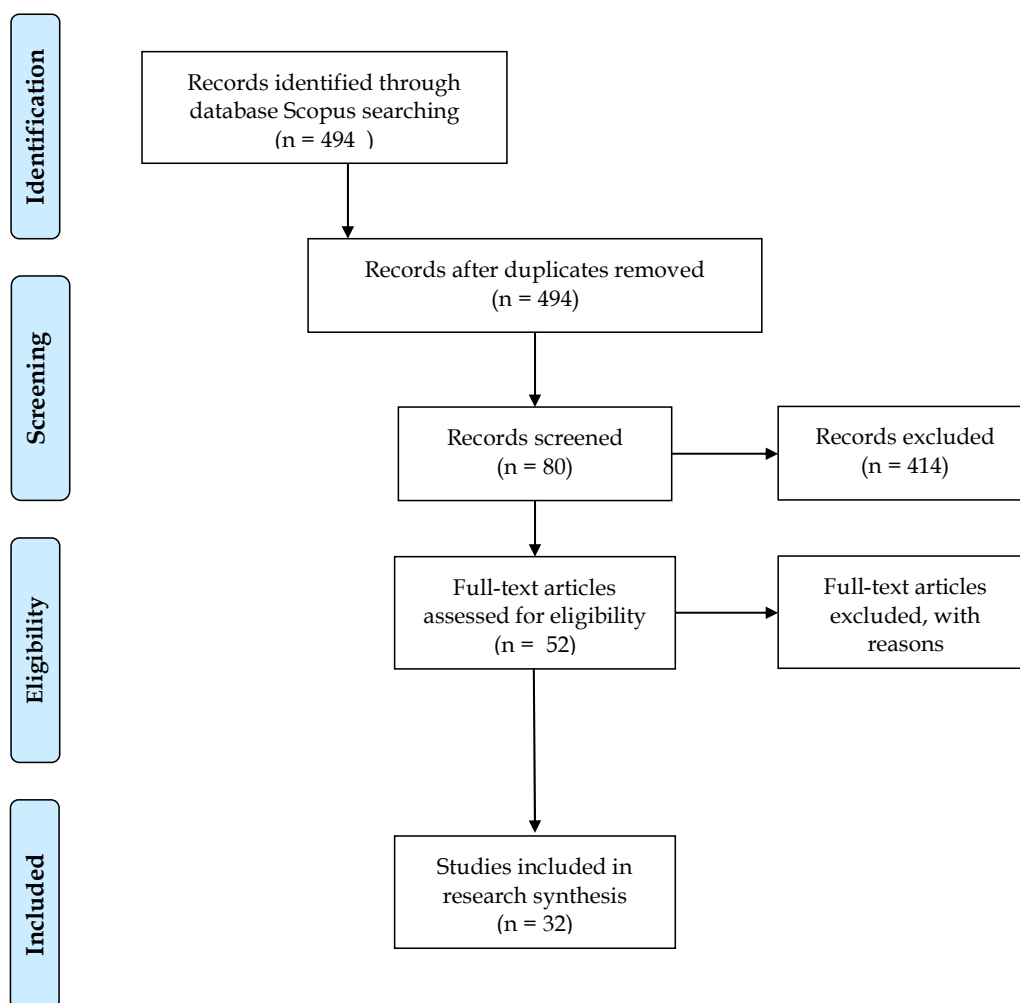
### 3. RESEARCH METHOD

This conceptual study applies the PRISMA protocol's SLR method (Liberati et al., 2009; Moher et al., 2009). PRISMA is a stand-alone literature review protocol that transparently demonstrates how to obtain data sources from previous research publications as raw materials for in-depth review (Lim et al., 2022). In addition, PRISMA also acts as a filter so that, finally, the previous research publication data belongs to the category of quality 'raw material' (Pangarso et al., 2022; Pangarso, 2021). SLR is the proper method to uncover research gaps. The documents used in SLR were research publications from the Scopus-indexed database. They are reputable publications like the Web of Science (WoS) (Franceschini et al., 2016). The Scopus database was used instead because of the limited access to the WoS database. Scopus is assumed to possess sufficient quality materials for SLR.

Research publications obtained from SLR were sufficient for further analysis. Associated with the seven topics, research gaps in previous publications related to these topics were discovered. The analysis of the documents obtained from SLR applied Theory, Context, Characteristic, and Methodology (TCCM) framework (Paul & Rosado-Serrano, 2019). TCCM is a framework used to find research gaps and suggests future research

### 4. DATA ANALYSIS AND DISCUSSION

Figure 4 presents the SLR process. The research publications indexed by Scopus that are suitable to be included in SLR identification under "organizational agility" and passing duplication check amount to 494 documents. However, only 80 documents pass the screening. The initial screening is based on research publications with specific methods, namely, the quantitative method and SEM. Referring to Table 2, the only method applied to process data in research publications indexed by Scopus is SEM, making it one of the categories for document screening.



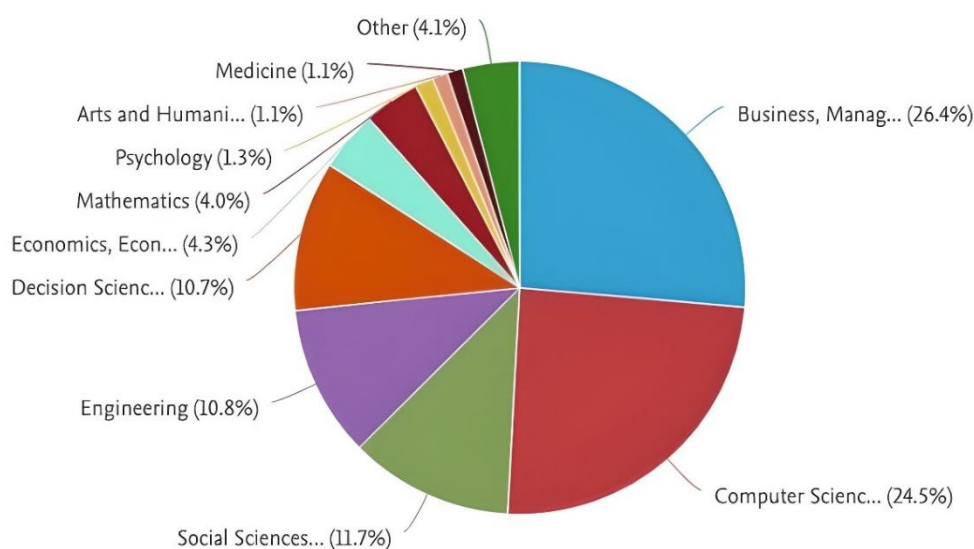
Source: [www.prisma-statement.org](http://www.prisma-statement.org)

**Figure 4.** Prisma flow diagram

Furthermore, of the 80 documents screened, 52 are eligible. Eligibility is based on research subject areas (see Figure 5). In Figure 5, business, management & accounting, and computer science dominate the topic of organizational agility. Considering the authors' scientific background in business, this study focuses on the subject area of business alongside management and accounting, allowing more reliable literature analysis.

The second and third conditions for eligibility are as follows: be published in journals and be written in English. Journals are publications that have undergone rigorous peer review compared with conference proceedings. Meanwhile, English is the most common language in research publications. Finally, of the 52 documents, only 32 are suitable to be further analyzed and synthesized since they can be officially downloaded. These 32 documents are journals published until May 2021, indexed by Scopus and WoS, and passed the relevance test on abstract and keywords. Table 3 lists the documents. These 32 publications originate from international research journals.

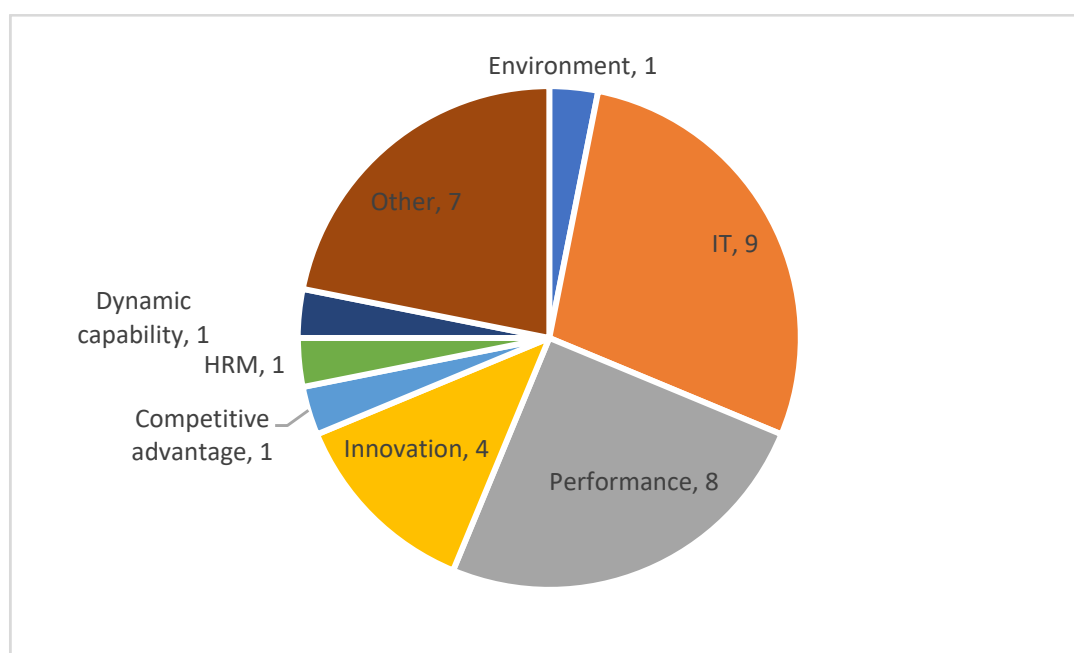
Additionally, Table 3 describes the suitability of the topics of research publications obtained from SLR with the seven topics related to organizational agility. There are 25 related documents and seven unrelated documents to the seven topics. The unrelated documents still participate in the analysis and synthesis process because they are from reputable journals. Figure 6 shows that the topics predominantly related to organizational agility from Table 3 are related to IT, innovation, and performance.



**Figure 5.** Documents by subject area from the Scopus database  
 Source: *Scopus - Document Search | Signed In (2020)*

**Table 3.** Publication Documents Obtained from SLR

No.	Research publications	Scopus	WoS	Compliance with seven
1	Ahmadi & Ershadi (2021)	Q2	ESCI	Dynamic business environment
2	Wanasida et al., (2021)	Q2	ESCI	IT capability
3	Rafi et al., (2021)	Q2	ESCI	Performance
4	Felipe et al., (2020)	Q1	SSCI	Performance
5	Atkinson et al., (2020)	Q1	SSCI	Innovation
6	Cegarra-Navarro & Martelo-Landroguez (2020)	Q1	SSCI	-
7	Gao et al. (2020)	Q1	SCIE	IT capability
8	Wikaningrum et al., (2020)	Q3	ESCI	-
9	Khayer et al. (2020)	Q2	ESCI	Performance
10	Li et al. (2020)	Q1	SCIE	Performance
11	Liu & Yang (2020)	Q1	SSCI	Competitive advantage
12	Martínez-Caro et al., (2020)	Q1	SCIE	Performance
13	Melián-Alzola et al. (2020)	Q2	SSCI	HRM
14	Nouri & Mousavi (2020)	Q3	ESCI	-
15	Shahzad et al. (2020)	Q1	SSCI	Innovation
16	Zaini et al. (2020)	Q2	ESCI	-
17	Irfan et al. (2019)	Q2	SSCI	IT capability
18	Mihardjo et al. (2019)	Q3	ESCI	Innovation
19	Govuzela & Mafini (2019)	Q4	SSCI	Performance
20	Panda & Rath (2018a)	Q2	ESCI	Information Technology
21	Baloch et al. (2018)	Q3	ESCI	IT capability
22	Panda & Rath (2018b)	Q2	ESCI	Information Technology
23	Tsou & Cheng (2018)	Q1	SSCI	Innovation
24	Mikalef & Pateli (2017)	Q1	SSCI	Dynamic capability
25	Panda & Rath (2017)	Q2	ESCI	IT capability
26	Felipe et al. (2016)	Q1	SSCI	-
27	Cegarra-Navarro et al. (2016)	Q1	SSCI	Performance
28	Panda & Rath (2016)	Q2	SSCI	IT capability
29	Teimouri et al. (2016)	Q3	ESCI	-
30	Bi et al. (2013)	Q3	SSCI	Information Technology
31	Khalifa et al. (2008)	Q1	SSCI	Performance
32	Zain et al. (2005)	Q1	SSCI	-



**Figure 6.** Documents by subject area from the Scopus database  
Source: (Scopus - Document Search | Signed In, 2020)

## Theory

Table 4 presents several theories underlying research publications obtained from SLR. In Table 4, RBV is the most widely used theory in 14 research publications on organizational agility. It indicates that resources and capabilities are two important aspects of organizational agility (Barney, 1991; Wernerfelt, 1984). Alongside RBV, another widely used theory is dynamic capability theory (Teece et al., 1997), with ten documents applying it.

Dynamic capability theory is related to RBV or an improvement of it. It emphasizes the capability of an organization to be superior in a dynamic environment. Therefore, RBV and dynamic capability simultaneously become theories underlying five documents. Particularly, the dynamic capability is important to respond to uncertainty through innovation and encourage organizational agility (Teece et al., 2016). To the authors' best knowledge, eight documents do not explicitly describe their theories. Alongside RBV and dynamic capability, other underlying theories in the publications concerning organizational agility, among others, are transformational leadership (1 document); UTAUT & TOE (one document); social exchange (one document); sociotechnical systems, social cognitive, and integrated system theory (IST) (one document); KBV (three documents, combined with RBV); the alignment (one document, combined with RBV); contingency (one document, combined with RBV & KBV); and the technology acceptance model (one document). There is still a research gap from the theoretical side that underlies research on organizational agility other than RBV and dynamic capability.

Elaboration of current research (especially in 2022), which the SLR does not cover in this study, can complement the discussion of how organizational agility can be related to various theories other than those in Table 4. Dynamic capability theory is highly relevant to organizational agility (Ciampi et al., 2022; Arsawan et al., 2022). Ciampi's research is quite interesting because it combines the dynamic capability theory and the theory of organizational inertia (Ciampi et al., 2022). Wamba's research also examines the contribution of artificial intelligence (AI) to organizational agility (Fosso Wamba, 2022). At the same time, Hajizadeh's research combines several theories related to organizational agility, including Performance Related Pay (PRP) theory, sports psychology theory, organizational citizenship theory, and HRM-related theories (Hajizadeh et al., 2022). Lastly, Panda links organizational agility with strategic alignment theory (Panda, 2022).



**Table 4.** Theories in research publications obtained from SLR

No.	Research publication	Theory
1	Ahmadi & Ershadi (2021)	-
2	Wanasida et al. (2021)	Transformational leadership
3	Rafi et al. (2021)	Dynamic capability
4	Felipe et al. (2020)	RBV & dynamic capability
5	Atkinson et al. (2020)	Dynamic capability
6	Cegarra-Navarro & Martelo-Landroguez (2020)	-
7	Gao et al. (2020)	CRBV
8	Wikaningrum et al. (2020)	-
9	Khayer et al. (2020)	UTAUT & TOE
10	Li et al. (2020)	Dynamic capability
11	Liu & Yang (2020)	RBV
12	Martínez-Caro et al. (2020)	RBV & absorptive capacity
13	Melián-Alzola et al. (2020)	Social exchange
14	Nouri & Mousavi (2020)	-
15	Shahzad et al. (2020)	RBV & KBV
16	Zaini et al. (2020)	Sociotechnical systems; social cognitive; integrated system theory (IST) & RBV
17	Irfan et al. (2019)	RBV & dynamic capability
18	Mihardjo et al. (2019)	-
19	Govuzela & Mafini (2019)	-
20	Panda & Rath (2018a)	Dynamic capability
21	Baloch et al. (2018)	RBV & dynamic capability
22	Panda & Rath (2018b)	RBV & KBV, the alignment
23	Tsou & Chen (2018)	Dynamic capability
24	Mikalef & Pateli (2017)	RBV & dynamic capability
25	Panda & Rath (2017)	Dynamic capability
26	Felipe et al., (2016)	RBV & dynamic capability
27	Cegarra-Navarro et al., (2016)	-
28	Panda & Rath (2016)	RBV
29	Teimouri et al., (2016)	-
30	Bi et al. (2013)	RBV
31	Khalifa et al., (2008)	RBV, KBV & contingency
32	Zain et al. (2005)	The technology acceptance model (TAM)

### Context

As observed from Table 5, there are generally two types of country conditions: developed and developing. Here, 13 documents examine developed countries, and 17 examine developing countries. Thus, the research context for developed and developing countries tends to be balanced. One publication does not explicitly state the location of its research, and another publication examines the whole world. Research locations are dominated by Asia (21 documents), followed by Europe (five documents), the Middle East (two documents), Africa (one document), and Australia (one document). Meanwhile, the sectors/industries are generally divided into: SME (five documents), general companies/combination of various sectors/industries (10 documents), unknown sectors/industries (one document), fishery business (one document), insurance (one document), agriculture (one document), public hospital (one document), transportation/bus (one document), manufacturing (three documents), multimedia & ICT (three documents), and public bank (one document). Regarding context, based on the locations with only one document, potential research gaps for organizational agility research are open for the Middle East, Africa, Australia, and the world. Meanwhile, based on the document numbers, research gaps for organizational agility exist in fishery, insurance, agriculture, hospital, transportation, and banking.

**Table 5.** Context of research publications obtained from SLR

No.	Research publication	Context (location &/sector)	Country area	Country condition
1	Ahmadi & Ershadi (2021)	-	-	-
2	Wanasida et al., (2021)	Indonesian fishery businesses	Asia	Developing
3	Rafi et al. (2021)	Pakistan	Asia	Developing
4	Felipe et al., (2020)	Spain	Europe	Developed
5	(Atkinson et al. (2020) Cegarra-Navarro &	Insurance companies in Iran	Middle East	Developing
6	Martelo-Landroguez (2020)	Spain	Europe	Developed
7	Gao et al. (2020)	France and China	Europe & Asia	Developed
8	Wikaningrum et al., (2020)	Indonesian Batik SME	Asia	Developing
9	Khayer et al. (2020)	Bangladesh SME	Asia	Developing
10	Li et al. (2020)	China agricultural firms	Asia	Developed
11	Liu & Yang (2020)	Taiwan SME	Asia	Developed
12	Martínez-Caro et al. (2020)	Spanish public hospital	Europe	Developed
13	Melián-Alzola et al. (2020)	Iran bus company	Middle east	Developing
14	Nouri & Mousavi (2020)	Multinational manufacturing corporations in Pakistan	Asia	Developing
15	Shahzad et al. (2020)	Certified manufacturing MNCs of Pakistan	Asia	Developing
16	Zaini et al. (2020)	Multimedia Super Corridor (MSC)-status companies of Malaysia	Asia	Developing
17	Irfan et al. (2019)	Pakistan	Asia	Developing
18	Mihardjo et al. (2019)	ICT firm in Indonesia	Asia	Developing
19	Govuzela & Mafini (2019)	South Africa SME	Africa	Developed
20	Panda & Rath (2018a)	Public sector bank of India	Asia	Developing
21	Baloch et al. (2018)	Innovative firm in China	Asia	Developed
22	Panda & Rath (2018b)	Privately owned financial units of India	Asia	Developing
23	Tsou & Cheng (2018)	IT B2B service firm in China	Asia	Developed
24	Mikalef & Pateli (2017)	International firm	World	-
25	Panda & Rath (2017)	Public sector bank of India	Asia	Developing
26	Felipe et al. (2016)	High and medium-high technology indus- tries of Spain	Europe	Developed
27	Cegarra-Navarro et al. (2016)	Spain	Europe	Developed
28	Panda & Rath (2016)	Privately owned financial enterprise of In- dia	Asia	Developing
29	Teimouri et al. (2016)	Bank Melli in Isfahan Province, Iran	Asia	Developing
30	Bi et al. (2013)	Australia SME	Australia	Developed
31	Khalifa et al. (2008)	China	Asia	Developed
32	Zain et al. (2005)	Manufacturing firm in Malaysia	Asia	Developing

### Characteristic

Table 6 shows the constructs becoming antecedents, moderators, consequences, and potentials of research gaps. There are 16 research publications showing constructs that become consequences of organizational agility and 31 documents showing constructs that become antecedents. Hence, researches on organizational agility are still dominated by antecedents. The dominant antecedents of organizational agility tend to be related to IT/technology/network and information systems (20 documents). Table 6 also allows for compiling an overview of the research framework based on research gaps for insignificant inter-construct influences. The insignificant effect is one of the interesting research gaps that could be reexamined in future research with different units of analysis and several research samples and/or respondents. There are ten studies with research gaps related to insignificant inter-construct influences for organizational agility.

**Table 6.** Characteristics of Research Publications Obtained from SLR

No.	Research publications	Construct		Potential research gap (insignificant empirical findings related to organizational agility)
		Antecedent	Consequence	
1	Ahmadi & Ershadi (2021)	Quality of service; diversification of service; cost of implementing technology; speed of service	-	-
2	Wanasida et al., (2021)	Millennial transformational leadership; IT capability	Organizational performance	-
3	Rafi et al. (2021)	Knowledge of infrastructure capability; knowledge of process capability	Business performance	-
4	Felipe et al., (2020)	IS capability	Firm performance	-
5	Atkinson et al. (2020)	Competitive intelligence, strategic flexibility, organizational innovation	-	Organizational innovation has an insignificant effect on organizational agility
6	Cegarra-Navarro & Martelo-Landroguez (2020)	Organizational memory; knowledge application; counter-knowledge	-	Organizational memory has an insignificant effect on organizational agility
7	Gao et al. (2020)	IT flexibility; IT integration; IT business planning capability (moderator)	-	-
8	Wikaningrum et al., (2020)	Strategic partnership; professional knowledge	Organizational reputation	A strategic partnership has an insignificant effect on organizational agility
9	Khayer et al. (2020)	Cloud Services Adoption	Cloud Supported Firm Performance	-
10	Li et al. (2020)	E-commerce capability	Agricultural firm performance gains	E-commerce capability has an insignificant effect on organizational agility
11	Liu & Yang (2020)	Network resources	Firm performance	-
12	Martínez-Caro et al. (2020)	Absorptive capacity	Organizational performance	-
13	Melián-Alzola et al. (2020)	HR practices; leadership	Employee satisfaction	-
14	Nouri & Mousavi (2020)	Cooperative management; employee empowerment	-	-
15	Shahzad et al., (2020)	Knowledge management process	Green innovation; corporate's sustainable performance	Organizational agility moderates the influence of the knowledge management process on green performance and corporate's sustainable performance insignificantly
16	Zaini et al. (2020)	Information security management	-	Information security management has an insignificant effect on organizational agility

Table 6. (continued)

No.	Research publications	Construct		Potential research gap (insignificant empirical findings related to organizational agility)
		Antecedent	Consequence	
17	Irfan et al. (2019)	IT infrastructure; IT assimilation; information integration; operational coordination	-	-
18	Mihardjo et al., (2019)	-	Transformational performance; business model innovation	-
19	Govuzela & Mafini (2019)	Technology capability; collaborative innovation; organizational learning; internal alignment	SME business performance	-
20	Panda & Rath (2018a)	Agile Human IT Infrastructure	-	-
21	Baloch et al. (2018)	IT capability; dynamic operational capability	-	-
22	Panda & Rath (2018b)	Strategic IT business alignment; environmental uncertainty (moderator)	-	Strategic IT business alignment has a negligible impact on organizational agility, and environmental uncertainty has a negligible moderating effect on the effect of strategic IT business alignment.
23	Tsou & Cheng (2018)	IT capability; organizational learning;	Radical service innovation; incremental service innovation	-
24	Mikalef & Pateli (2017)	IT enabled dynamic capability	Competitive performance	-
25	Panda & Rath (2017)	Human IT capability; IT spending (moderator)	-	IT spending insignificantly moderates the effect of human IT capability on organizational agility
26	Felipe et al. (2016)	Information system capability; absorptive capacity; hierarchy culture	-	-
27	Cegarra-Navarro et al. (2016)	Knowledge application process	Firm performance	-
28	Panda & Rath (2016)	IT capability; IT spending (moderator)	-	IT spending insignificantly moderates the effect of IT capability on organizational agility
29	Teimouri et al. (2016)	Cultural intelligence	-	-
30	Bi et al. (2013)	Supply chain capability	-	Information sharing has an insignificant effect on organizational agility
31	Khalifa et al. (2008)	Knowledge management system	Organizational performance	-
32	Zain et al. (2005)	IT adoption; information quality	-	-

Figure 7 has a collection of research gaps from previous research publications incorporated into a research framework. Organizational agility acts as a consequence and moderator. Eight direct antecedents are interesting for future research, including organizational innovation, organizational memory; strategic partnership; e-commerce capability; information security management; strategic business-IT alignment; information sharing; and human IT capability. Alongside direct antecedents, there are antecedents and moderators,

namely, strategic IT business alignment moderated by environmental uncertainty and human IT capability moderated by IT spending. Organizational agility also has the potential to be a moderator for the influence of the knowledge management process on green innovation and corporate's sustainable performance.

Based on Table 6 and Figure 7, there is potential future research in the form of 14 proposed propositions to be empirically and partially retested. These 14 proposed propositions need to be retested to contribute to the literature development on the role of organizational agility as a consequence and moderator. These 14 proposed propositions broadly consist of 10 direct effects between two constructs and four direct effects with moderation between three constructs.



Figure 7. Proposed research framework

The 14 propositions are:

- P1: Information sharing directly influence organizational agility.  
 P2: Organizational innovation directly influences organizational agility.  
 P3: Organizational memory directly influences organizational agility.  
 P4: Strategic partnership directly influences organizational agility.  
 P5: E-commerce capability directly influences organizational agility.  
 P6: Information security management directly influences organizational agility.  
 P7: Strategic business IT alignment directly influences organizational agility.  
 P8: Human IT capability directly influences organizational agility.  
 P9: Knowledge management process directly influences green innovation.  
 P10: Knowledge management process directly influence sustainable corporate performance.  
 P11: Strategic business IT alignment directly influences organizational agility moderated by environmental uncertainty.  
 P12: Human IT capability directly influences organizational agility moderated by IT spending.  
 P13: Knowledge management process directly influence green innovation moderated by organizational agility.  
 P14: Knowledge management process directly influence corporate's sustainable performance moderated by organizational agility.

These fourteen propositions are suggested to be tested in different research frameworks involving various other constructs. For example, propositions 1 to 10, 13, and 14 can be tested separately or combined with other constructs and or potentially mixed and matched according to the background of the research problem and the context of the empirical research to be carried out. Furthermore, propositions 9, 10, 13 & 14 can be one research framework to be tested empirically. In this research framework, organizational agility is associated with organizational outputs such as green innovation and sustained corporate performance.

## Methodology

Table 7 presents the types of SEM, covariance- and variance-based, for research publications on organizational agility. Thirteen publications are applying covariance-based SEM using Amos and Lisrel software. Meanwhile, variance-based SEM is dominantly used in research publications related to organizational agility (29 documents) with SmartPLS. However, one document uses Adanco instead. The most dominant unit of analysis is organizations (28 documents) rather than individuals (four documents). Mplus is a covariant SEM software that can be a data processor for future quantitative empirical research besides Amos and Lisrel. Additionally, it has the potential for future research with team analysis units because there has not been any quantitative empirical research examining organizational agility from the team level. Four documents still use key informants for the organizational analysis unit, thus opening the door for future research for multiple respondents (Balloun et al., 2011).

**Table 7.** Methodology of Research Publications Obtained from SLR

No.	Research Publication	Methodology
1	Ahmadi & Ershadi (2021)	Covariance-based SEM (Amos); individual unit of analysis
2	Wanasida et al., (2021)	Variance-based SEM (SmartPLS); business organizational unit of analysis
3	Rafi et al. (2021)	Variance-based SEM (WarpPLS); organizational unit of analysis; multistage cluster sampling technique
4	Felipe et al., (2020)	Variance-based SEM (SmartPLS & Adanco); (selected) organizational unit of analysis
5	Atkinson et al. (2020)	Variance-based SEM (SmartPLS); organizational unit analysis; simple random sampling
6	Cegarra-Navarro & Martelo-Landroguez (2020)	Variance-based SEM (SmartPLS); organizational unit of analysis; key informant
7	Gao et al. (2020)	Variance-based SEM (SmartPLS); organizational unit of analysis
8	Wikaningrum et al., (2020)	Covariance-based SEM (Amos); organizational unit of analysis
9	Khayer et al. (2020)	Variance-based SEM (SmartPLS); organizational unit of analysis; a non-probabilistic convenience sampling technique

**Table 7.** (continued)

No.	Research Publication	Methodology
10	Li et al. (2020)	Variance-based SEM (Lisrel); organizational unit of analysis; key informant
11	Liu & Yang (2020)	Covariance-based SEM (Amos); an organizational unit of analysis
12	Martínez-Caro et al., (2020)	Variance-based SEM (SmartPLS); organizational unit of analysis
13	Melián-Alzola et al., (2020)	Covariance-based SEM; individual unit of analysis
14	Nouri & Mousavi (2020)	Variance-based SEM; individual unit of analysis
15	Shahzad et al., (2020)	Variance-based SEM (SmartPLS); organizational unit of analysis; non-probability convenience sampling
16	Zaini et al. (2020)	Variance-based SEM (SmartPLS); organizational unit of analysis; purposive sampling
17	Irfan et al. (2019)	Covariance-based SEM (Amos); organizational unit of analysis; key informant
18	Mihardjo et al., (2019)	Variance-based SEM (SmartPLS); organizational unit of analysis
19	Govuzela & Mafini (2019)	Covariance-based SEM (Amos); organizational unit of analysis
20	Panda & Rath (2018a)	Covariance-based SEM (Amos); organizational unit of analysis; simple random technique
21	Baloch et al. (2018)	Variance-based SEM (SmartPLS); organizational unit of analysis
22	Panda & Rath (2018b)	Covariance-based SEM (Amos); organizational unit of analysis
23	Tsou & Cheng (2018)	Variance-based SEM (PLS); organizational unit of analysis
24	Mikalef & Pateli (2017)	Variance-based SEM (SmartPLS); organizational unit of analysis; key informant
25	Panda & Rath (2017)	Covariance-based SEM (Amos); organizational unit of analysis
26	Felipe et al. (2016)	Variance-based SEM (SmartPLS); organizational unit of analysis
27	Cegarra-Navarro et al. (2016)	Variance-based SEM (PLS); organizational unit of analysis
28	Panda & Rath (2016)	Covariance-based SEM (Amos); organizational unit of analysis
29	Teimouri et al. (2016)	Covariance-based SEM (Lisrel); individual unit of analysis; cluster random sampling
30	Bi et al. (2013)	Covariance-based SEM (Amos); organizational unit of analysis
31	Khalifa et al. (2008)	Variance-based SEM (PLS); organizational unit of analysis
32	Zain et al. (2005)	Covariance-based SEM (Amos); organizational unit of analysis

## 5. CONCLUSION, IMPLICATION, SUGGESTIONS AND LIMITATIONS

The results of the TCCM analysis for the SLR documents show several research gaps, which in detail are contained in 14 proposed propositions. Exploring research gaps from a theoretical perspective that underlies research on organizational agility other than RBV and dynamic capability. Empirical research is still open for the Middle East, Africa, Australia, and the world for fishery, insurance, agriculture, hospital, transportation, and banking. Moreover, from the gap research based on the characteristics, a proposed research framework is compiled in Figure 7, which has the potential to be used for future empirical research. And lastly, it opens a methodological research gap to process data using covariant SEM outside Amos and Lisrel and for the team's unit analysis. For the organizational analysis unit, there is still an opportunity for future research to use multiple respondent sampling (Balloun et al., 2011).

The theoretical implications of this research are related to the research questions and objectives using the systematic literature review method. This research reveals the research gap of previous research that has the potential to serve as a foundation for future research agendas. The research voids in published studies of organizational agility specifically using data processing with SEM and others are as follows: Atkinson et al. (2020), Cegarra-Navarro & Martelo-Landroguez (2020), Wikaningrum et al. (2020), Li et al. (2020), Shahzad et al. (2020), Zaini et al. (2020), Panda & Rath (2018b), Panda & Rath (2017), Panda & Rath (2016) and Bi et al. (2013). Dynamic capability, RBV, and KBV are the theories underlying the research void in the aforementioned studies, so the empirical testing of the research framework developed in future studies will contribute to these theories. In addition, this study has practical implications for researchers to continue empirical research related to several relationships/influences related to the proposed research framework based on research results that show insignificant results.

The limitations of this research include using only a Scopus-indexed research publication database, despite the existence of WoS. Additionally, this study does not compile a proposition that underlies the influence between the constructs in the research framework in Figure 7. It shows the potential for SLR to apply the WoS database and SEM meta-analysis (metaSEM) in future research to further complement the results of SLR.

## ACKNOWLEDGEMENT

We would like to thank LPPM Telkom University for funding this research.

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