
Individual-level impediments to digital transformation: A bibliometric literature review

Special Track: Disclosing the Impact of Digitalization at the Individual, Organizational and Ecosystem Levels

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Abstract

Digital transformation creates opportunities through new digital technologies, but it also pressures organizations to change the working environment. Research from the last few decades has empirically documented resistance by individuals when organizations are changed. Surprisingly, far less has been reported about individuals resisting change in the context of digital transformation.

Using the Web of Science database, we conducted a structured literature review and identified that there is indeed a staggering amount of published research addressing digital transformation and resistance to change, separately. However, research that addresses these issues in combination is very limited. Therefore, this study aimed to provide a foundation

for both future research and for practice concerning individual-level impediments within digital transformation processes and how these processes can be managed.

Our search method found 365 articles, which were further analysed using bibliographic methods. Subsequently, 20 relevant articles were identified, and a content analysis was performed. The meticulous analysis of extant literature revealed a strong emphasis on managerial issues within the transformation process. Remarkably, very few articles explicitly focus on employees and rather address the influence of management over the employees when attempting to pursue digital transformation processes.

This study identified six managerial factors that link the individual level to the organizational level in digital transformation processes: beliefs and mindsets, preparedness and strategy framework, culture, competencies, communication, and management. The core articles explain how all these factors affect the resistance to change by individuals. Additionally, we offer a conceptual model providing a foundation for further theory development and guidance for practitioners aiming for a more agile digital transformation.

Keywords – Digital Transformation, Resistance to Change, Digitalization, Change Management, Structured Literature Review

Paper type – Academic Research Paper

1 Introduction

Digital transformation is a hot topic for researchers and practitioners alike (Sainger, 2018). A quick search on Google Scholar with the search text “digital transformation” yields a staggering 3.5 million hits. Since 2020, more than 60,000 articles have been published, thus indicating an overwhelming interest in the topic.

However, despite huge interest and the provision of new strategic opportunities through digital technologies, McKinsey (2016) has found that 70% of organizations going through a digital transformation process fail. Extant research also highlights the complexity of comprehensive digital transformation processes as they involve the transformation of many organizational dimensions, client interactions and business model innovations (Svadberg, Holand, & Breunig, 2019). Moreover, there are several overlapping terms in use (e.g., digitization, digitalization and digital transformation). Digital transformation is the most overarching term used, and digital transformation processes pressure organizations and

leaders to change the organizational structure as well as the working environment in organizations to yield benefits from the adaptation of these technologies (Frick, Mirbabaie, Stieglitz, & Salomon, 2021). Furthermore, the transformation has both positive and negative impacts, thus making it more challenging to predict outcomes from the change process (Smith, 2018).

Change processes involve individuals in the organization (Coch & French Jr, 1994). However, little has been empirically documented to demonstrate how individuals react to a digital transformation process in particular. This is puzzling, since a fundamental theme within the change management literature emphasizes an individual's resistance to change. Theories on resistance to change have developed over many years, and early sources document the resistance of Luddites to the technological adaptations of the early industrial age (Brynjolfsson & McAfee, 2016). The body of literature encompassing resistance to change related to technology adaptation amounts to an overwhelming 131,000 contributions. Nevertheless, to date, the relationship between an individual's resistance explicitly towards digital transformation processes has been less empirically documented.

Therefore, this study aimed to provide a foundation upon which a link between extant research on digital transformation and resistance to change can be established. In particular, we sought to identify extant research related to the individual level, as changes in the working practices of employees are a consequence of digital transformation endeavours. To provide this foundation, a structured literature review aided by bibliometric analysis was conducted to identify core articles upon which a content analysis could be performed in order to explore the following research question: *How can a structured literature review utilizing bibliometric analysis of current published scientific research contribute to identify and reduce individual-level impediments to digital transformation?*

Our structured literature review revealed that individual-level impediments to digital transformation are documented to a limited extent in extant research. Still, our search yielded 365 articles, which were subsequently reduced to a core canon of 20 articles providing a foundation for the improved understanding of an individual's reaction to digital transformation processes. Additionally, a structured overview of the existing literature addressing individual-level impediments to digital transformation processes is presented. Our analysis demonstrates that digital transformation affects individuals in the organization, including both managers and employees. Moreover, this study identified six managerial factors affecting an employee's response to digital transformation processes,

and these factors function as a foundation upon which further theorization and guidelines for practitioners can be built. Furthermore, the relationships between the identified factors relating individual-level resistance to change and digital transformation processes are illustrated.

2 Theory

Since the literature addressing digital transformation and resistance to change is less integrated than anticipated, we will address these two topics by emphasizing how they have been treated at the individual level.

2.1 Digital transformation

Digital transformation concerns people and their adoption of digital technologies brought to an organization's business model, offerings, organizational structure and processes (Bloomberg, 2018). Vial (2019) has defined digital transformation as "*a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies*" (p. 121). This involves transformation of their key business operations, organizational structures, products and processes. The effects of the intended transformation can be observed at both the organizational level (Gregory, Keil, Muntermann, & Mähring, 2015) and the individual level (Lee, Sambamurthy, Lim, & Wei, 2015).

These types of complex transformations need strong management practices in order for them to be implemented in the organizations (Abdelaal, Khater, & Zaki, 2019). Therefore, management has to find ways to innovate with the new and emerging digital technologies, and strategies that embrace the use of digital transformation will have an increased likelihood of better operational performance (Hess, Matt, Benlian, & Wiesböck, 2016). In order for digital transformation to be successful, organizations have to take into consideration all factors that can set back or delay implementation of the process. By doing this, organizations can remain competitive, have operational efficiency and obtain improved organizational performance (Vial, 2019). Thus, it is assumed that a successful digital transformation process is linked to the organization's strategy, which shapes how the process is coordinated and prioritizes when digital technology is implemented through an integrated process (Hess, Matt, Benlian, & Wiesböck, 2016).

McAfee and Brynjolfsson (2016) have emphasized the importance of individuals within these strategic transformation processes. Moreover, they have highlighted that organizations should have employees with special competence in their field, acquired understanding and the ability to solve problems with high complexity (Hernaes, 2020). When routine tasks are automated, there is a greater need for creativity and problem-solving competence, especially among managers (Schwarz Müller, Brosi, Duman, & Welppe, 2018). New skills in analytics, design and technology as well as the identification of new roles that are more diverse and adaptive have been suggested as vital for success with digital transformation (Bughin, Catlin, Hirt, & Willmott, 2018). Kompasso (2010) has stated that employees with high commitment will work passionately and provide maximum creativity so that they can ensure good performance of the organization. The importance of teamwork is also increased in such a transformation, since “*knowledge as a resource can only be developed and advanced together*” (p. 126); thus, these two elements are a prerequisite for digital transformation for individuals (Schwarz Müller, Brosi, Duman, & Welppe, 2018). Additionally, research has documented how structural changes affect individuals, particularly related to new job descriptions or changed roles, and that the new role might have higher competence requirements (Schwarz Müller, Brosi, Duman, & Welppe, 2018).

2.2 Resistance to change

It is well documented that many attempts to implement technology, thereby changing organizations, fail as people naturally prefer to keep to what they know and feel familiar with, rather than to accept the unknown and therefore to accept innovation (Laumer, 2011). Thus, a determining factor often identified when organizations fail in their change efforts is the lack of employee commitment or individual-level resistance to change (Coch & French Jr, 1994). Resistance to change is a negative expression of stress or cynicism by employees caused by conflicting emotions and cognitions about the transformation (McKay, Kuntz, & Näswall, 2013).

2.2.1 Change management

Change management seeks optimal adaptation primarily directed inward, toward the members of the organization implementing the change (Lauer, 2021). A radical shift in the norms of the organization requires active support of the employees by managers, as these norms are embedded in social structures and involve individual needs, ideas, experiences,

emotions and characters (Armenakis, Harris, & Mossholder, 1993). Lewin (1995) has stated that organizations persist in a steady state until external forces, such as new disruptive technologies or stronger competition, push them to change. In response to this, the organization pursues adaptation and change (Quoted in Swanson, Jin, Fawcett, & Fawcett (2017). If managers and their team have enough commitment to change, then they can influence both the change process and the outcomes of it. Furthermore, it is important that they encourage collaborative change (Swanson, Jin, Fawcett, & Fawcett, 2017).

McKay, Kuntz and Näswall (2013) have found that resistance to change comes from an experience of personal loss and that the loss is especially prevalent when it involves familiar routines that make the employees feel safe. Therefore, changes can trigger individual anxiety and subsequently affect further job stability and growth (Erwin, 2009). Resistance is also much more likely to happen when agreements and trust are broken (Ford, Ford, & D'Amelio, 2008; Kreitner, 1992). The lack of information, e.g., when managers are unable to express the need for change or be honest about the consequences of change, can lead to fear and uncertainty for the individuals involved (Bateh, Castaneda, & Farah, 2013). Moreover, Ford (2008) have emphasized the importance of relationships between individuals and communication within the organization as valued mechanisms to handle resistance to change.

Consequently, the extant literature highlights the importance of individual commitment, competence and trust, and it further emphasizes the managerial role of facilitation of information that fosters trust and a feeling of safety among the employees to succeed with the change process.

3 Methodology

To address individual-level impediments to digital transformation, we decided to explore the extant published research through a structured literature review aided by a bibliometric analysis.

Initially, we experimented with different structured search term combinations. In order to identify research addressing both “digital transformation” and “resistance to change”, we used the following search string in the Web of Science database on February, 15, 2021: “digital transformation” OR “digitalization” OR “digitization” OR “digi* transformation” AND “change resistance” OR “resistance to change” OR “cognitive inertia” OR “change readiness” OR “change capacity” OR “change barriers” OR “resistance” OR “readiness”

OR “barriers”. This search identified 427 potential articles, which were subsequently reduced to 365 papers by only including full-text articles published in English prior to 2021.

Thereafter, all 365 articles were downloaded, and a database was created that could be analysed using VOSviewer bibliometric analysis software, with the aim of identifying articles that explicitly address the individual level. Different co-occurrence analyses were conducted using “all keywords” and “author keywords”. Keywords can create clusters that show how different terms are related and connected to other terms. Our search was then combined with the topic “individual”, and 72 potential articles were identified within the categories business and management. Subsequently, the abstracts of all 72 articles were read to assess the relevance of our sample to our ambition of identifying extant research addressing individual-level impediments to digital transformation.

Through this meticulous process, 20 core articles with the potential to inform our research ambition were identified, and a content analysis of this sample of articles was conducted. The core articles were read and analysed by two researchers independently. The articles were categorized and coded in Excel to ensure that the same variables were recorded in all articles and to enable a consistent format for article comparison. Finally, the results were compared; any discrepancies were discussed between two researchers to attain a higher objectivity in the selection procedure.

4 Findings

4.1 Descriptive analysis

Extant research relating the two topics “digital transformation” and “change resistance” only account for 365 English full-text articles up until 2021; however, the number is increasing exponentially, indicating an increased interest and awareness of the relevance of the topic (Figure 1).

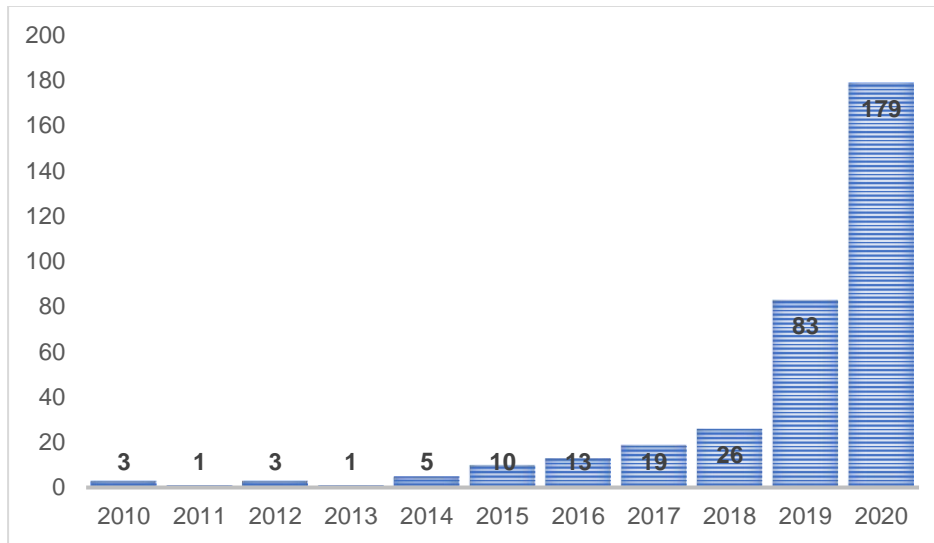


Figure 1: Bar-graph representation of publications per year (sample of 365)

Moreover, the core 20 articles were all published between 2018 and 2020, of which 75% of the articles were published in 2020. This corresponds with the exponential development we observed regarding the articles for our main search as well, and it also shows that there is a growing interest in this field. At the same time, this finding demonstrates that digital transformation in connection with resistance to change at the individual level has not been researched much but is beginning to receive more attention. However, 515,347 articles were identified by using the term “digi*”. This finding indicates that our 20 core articles only account for 0.0039% of all articles published on “digi”-related topics and that there is a huge potential for further research addressing the individual-level impediments to digital transformation. In general, the literature on digital transformation and resistance to change appears complicated and unstructured, and the number of empirical contributions is limited. Even though we first assumed that there was an astonishing amount of publications addressing these two topics, our structured search revealed that this was not the case for their combination.

4.2 Bibliometric analysis

We conducted several different bibliometric analyses, such as co-occurrence analysis (Figure 2) using the VOSviewer software tool, to identify articles within our database of 365 articles addressing the individual level.

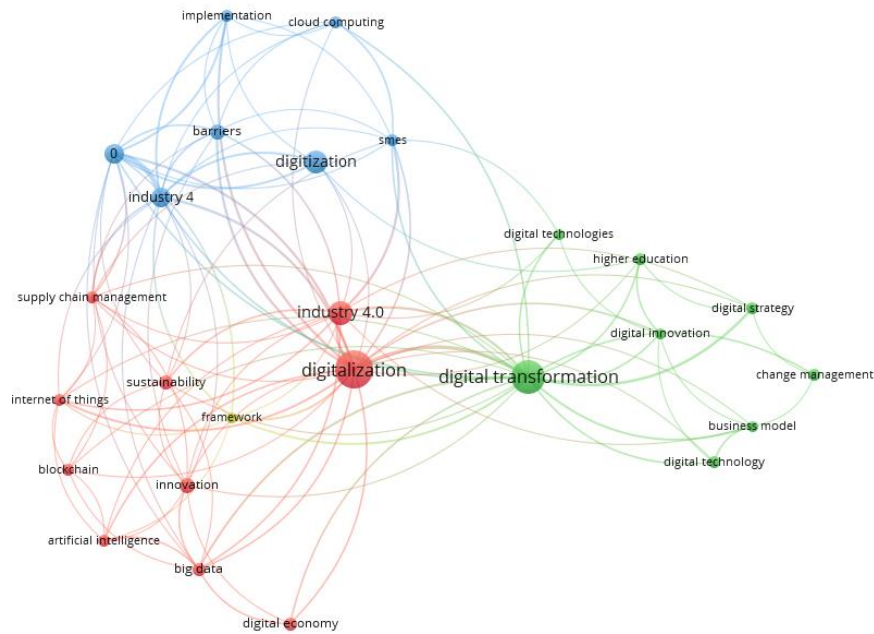


Figure 2: VOSviewer illustration of co-occurrence analysis with author keywords (5)

Our aim was to identify a cluster with connections between digital transformation and resistance to change at the individual level, but there were almost no keywords related to resistance to change in any of the clusters. The only keyword we found was “barriers” in the blue cluster, but nothing indicated whether this was a general barrier towards digital transformation or it was at an individual level. The other two clusters showed a clear technological focus rather than a change management perspective.

Consequently, our bibliometric analysis confirmed that there is only limited research that combines the two topics of digital transformation and resistance to change at an individual level. In total, only 1.44% of the research articles focused on digi*-related fields (Figure 3). Furthermore, it was unspecified for industry; thus, many articles that were irrelevant for our research aim were included.

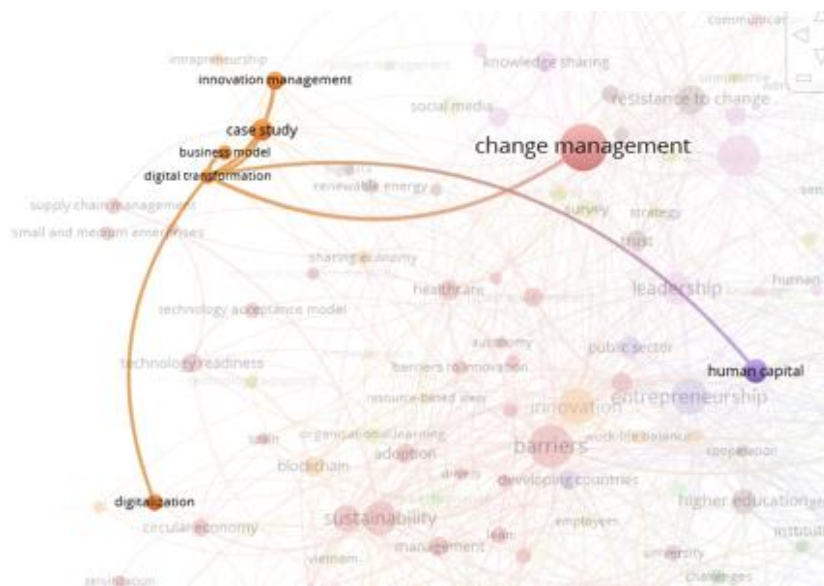


Figure 3: Close up of clusters in connection with digi*-related fields using author keywords (15 occurrences) from the VOSviewer illustration of co-occurrence analysis

The analysis identified a very limited intersection between the two topics. Subsequently, the relevance of 72 of our initial 365 articles was assessed. After a classification assessment, 20 articles were identified as relevant for further content analysis.

4.3 Content analysis

Through content analysis, four articles were found to be irrelevant to our research question. Of the remaining 16 relevant articles, 9 of the articles used the term “digital transformation”, 5 of the articles used “digitalization”, 1 article used “digital innovations” and 1 article used “digital strategy”. After analysing the use of these terms, it was clear that “digital transformation” and “digitalization” are used interchangeably.

A pattern of factors emerged from this analysis. These were factors that specifically related individuals to the digital transformation process of the organizations. The topic addressed by all articles was related to management. Beyond that, 11 articles focused on preparedness and strategy framework, 8 articles addressed beliefs and mindsets, and 7, 6 and 5 articles referred to culture, communication and competencies, respectively. Table 1 shows an overview of which factors are addressed in the various articles. The factors presented were addressed by a minimum of five articles, and all other factors addressed by

fewer than five articles were left out, since they do not provide enough basis for comparison. Also excluded were general change process factors discussed in change resistance theory. The table additionally presents how these factors are related to individual-level impediments in connection with change resistance experienced due to digital transformation. Addressing individual-level impediments is important to improve the likelihood of an organization's success with digital transformation.

Table 1: Six factors relating digital transformation and individual-level impediments

Factor	Relationship to digital transformation (DT)	Individual-level impediments	References
Management	<ul style="list-style-type: none"> - Allow employees to take risks - Management needs to adopt DT in order for employees to adopt DT - Identify additional opportunities offered by new technology - Assess their own beliefs about the changes they are leading - Job rotation - No hierarchy 	<ul style="list-style-type: none"> - Affect employee's sense of security and trust - More encouraged - Affect employee's beliefs - Experience more digital readiness 	(Gfrerer, 2020; Trivedi, 2020; Schneider, 2020; El-Haddadeh, 2019; Solberg, 2020; Črešnar, 2020; Blštáková, 2020; Nasution, 2020; Meske, 2020; Peter, Kraft, & Lindeque, 2020; Bagrationi & Thurner, 2020; Christ-Brendemühl & Schaarschmidt, 2019; Tekic & Koroteev, 2019; Horváth & Szabó, 2019; Birkel, Veile, Müller, Hartmann, & Voigt, 2019; Hirte, 2018)
Communication	<ul style="list-style-type: none"> - Communicate how DT will change their role both now and in the future - Let employees participate actively in the transformation - Platforms like online communication blogs, allowing free-flowing information, employees pose direct questions and suggestions to the management 	<ul style="list-style-type: none"> - Feel valued - Being heard and included - Less uncertainty and role ambiguity - Know more about what's expected - Less resistance 	(Gfrerer, 2020; Schneider, 2020; Meske, 2020; Bagrationi & Thurner, 2020; Birkel, Veile, Müller, Hartmann, & Voigt, 2019; Hirte, 2018)
Culture	<ul style="list-style-type: none"> - Develop a culture that constructively analyses, does not conceal errors and where failure is not viewed negatively - Design thinking workshops or innovation sprints 	<ul style="list-style-type: none"> - Give more courage - More innovativeness - Individuals are more likely to adapt and implement new technology - More creativeness - Feel less likely to be replaced 	(Gfrerer, 2020; El-Haddadeh, 2019; Črešnar, 2020; Nasution, 2020; Bagrationi & Thurner, 2020; Horváth & Szabó, 2019; Birkel, Veile, Müller, Hartmann, & Voigt, 2019)
Competencies	<ul style="list-style-type: none"> - Environment that appreciates the adoption and use of new technology - Bring in new important competencies or create a workforce with digital fluency 	<ul style="list-style-type: none"> - Less overload and strain - Enhance performance and facilitate innovation - Interpersonal skills for collaboration - Strengthen the competence - Digital fluency 	(Gfrerer, 2020; El-Haddadeh, 2019; Nasution, 2020; Peter, Kraft, & Lindeque, 2020; Birkel, Veile, Müller, Hartmann, & Voigt, 2019)
Beliefs and mindsets	<ul style="list-style-type: none"> - Create a digital mindset - Create shared thinking by collaboration and cross-hierarchical communication - Workshops that boost their self-image and confidence 	<ul style="list-style-type: none"> - Believe in their personal abilities and become more confident - Personal growth and resources for personal growth 	(Trivedi, 2020; Schneider, 2020; Solberg, 2020; Blštáková, 2020; Nasution, 2020; Meske, 2020; Bagrationi & Thurner, 2020;

		<ul style="list-style-type: none"> - Lack of it can cause individuals to disengage and withdraw from DT initiatives - Feel less threatened and scared and more enthusiastic and curious - Less role ambiguity - More committed 	Christ-Brendemühl & Schaarschmidt, 2019)
Preparedness & strategy framework	<ul style="list-style-type: none"> - Form a common understanding of DT - Expertise centre equipped with technological knowledge - Provide a strategy for new problems due to DT - Assess employee's current abilities and not limit them to their current or previous jobs 	<ul style="list-style-type: none"> - Feel like they are a part of the change - Sense of ownership - New technologies will be perceived as sustainable and be utilized successfully 	(Gfrerer, 2020; El-Haddadeh, 2019; Solberg, 2020; Črešnar, 2020; Blštáková, 2020; Meske, 2020; Peter, Kraft, & Lindeque, 2020; Bagrationi & Thurner, 2020; Christ-Brendemühl & Schaarschmidt, 2019; Tekic & Koroteev, 2019; Hirte, 2018)

5 Discussion

Below we will discuss the six identified factors and explain how the individual-level impediments are linked to the organizational-level digital transformation process.

5.1 Management

The content analysis identified literature addressing how managers play an essential role in the digital transformation of an organization (Nasution, 2020; Bagrationi & Thurner, 2020) because they act as role models for digital readiness among the employees (Gfrerer, 2020). Managers possess a strong understanding of the organization and have a lot of expertise; therefore, they can influence systems, processes and their employees. Their attitude and initiative impact and encourage change by allowing their employees to take risks (Hirte, 2018). Managers themselves are also individuals; therefore, the change process will also affect them and, like their employees, they can also be resistant towards change (Birkel, Veile, Müller, Hartmann, & Voigt, 2019; Peter, Kraft, & Lindeque, 2020).

Managers often adopt the concept of digital transformation, but they do not always support it wholeheartedly. The reasons for this might vary, but explanations offered include feeling an intense pressure to change (Tekic & Koroteev, 2019), fear of the unknown (Horváth & Szabó, 2019) and having enough knowledge (Hirte, 2018). They then tend to underestimate the sense of urgency of the digital transformation (Hirte, 2018), are more reluctant to change and show more resistance.

Digital transformation encompasses processes that can lead to role ambiguity and stress, causing resistance in the employees if not handled well by the managers (Christ-

Brendemühl & Schaarschmidt, 2019). The digital transformation results in changed requirements for employees as well as the need for new competences (Birkel, Veile, Müller, Hartmann, & Voigt, 2019). These changes potentially result in fears in the employees like losing their jobs (Horváth & Szabó, 2019; Birkel, Veile, Müller, Hartmann, & Voigt, 2019). Knowing employees' perceptions and addressing their readiness becomes even more important for managers in a world where new digital technologies are used more frequently (Gfrerer, 2020). Managers need to have the necessary skills, experience and knowledge to control and support implementation of a digital transformation (Horváth & Szabó, 2019; Birkel, Veile, Müller, Hartmann, & Voigt, 2019).

5.2 Communication

Resistance is connected to shortcomings in the interactions between individuals and the firm (Bagrationi & Thurner, 2020), and internal resistance will be the result of unclear or dishonest communication from the management to the employees (Birkel, Veile, Müller, Hartmann, & Voigt, 2019). Resistance is much more likely to occur when agreements and trust are broken; in addition, the lack of good communication leads to more fear and uncertainty (Bagrationi & Thurner, 2020; Christ-Brendemühl & Schaarschmidt, 2019).

The most crucial step for managers is to communicate decisions of symbolic importance that emphasize the organization's roots and preserve employees' identities, thereby addressing employees' emotions and feelings (Schneider, 2020). While actively interacting with their employees, the management will establish a feeling of security, and the changes will not be seen as occurring too rapidly (Hirte, 2018).

5.3 Culture

With new technology, it is also important that the organization has a strong culture that supports change (Birkel, Veile, Müller, Hartmann, & Voigt, 2019). Since the organizational culture is so rooted in the daily practices, it can hinder employees from innovating and using new digital technologies effectively. This is because the culture can prevent the free flow of information across departments; therefore, it can become a significant barrier to form collaborations and creativity among employees in an organization undergoing a transformation.

An inadequate corporate culture contributes to a rise of additional risks in a transformation process (Birkel, Veile, Müller, Hartmann, & Voigt, 2019). A culture that

constructively analyses and does not conceal errors should be developed within the organization, where failure is not viewed as wrong, so employees will not be afraid to contribute and adapt to new ideas.

5.4 Competencies

Dynamic capabilities allow organizations to create, extend and modify their resource base to gain competitive advantages; in addition, they are essential for organizations to integrate and take advantage of digital technologies (Peter, Kraft, & Lindeque, 2020).

Nasution (2020) has found that an organization can either bring in new important competencies to the workplace or can create a workforce with digital fluency, where employees would be able to build their interpersonal skills for collaborating in ways that provide significance for organizations. Strong leadership promotes dynamic capabilities and is an important component of digital transformation processes that increase the performance of businesses in the digital age (Peter, Kraft, & Lindeque, 2020). With a focus on creating a strong workforce, the organization will be able to strengthen the competence they already have in many of their employees. With this workforce that has digital fluency, the employees will have a strong combination of skills, knowledge and resources to invest in a strong digital future (Nasution, 2020).

5.5 Beliefs and mindsets

Bagrioni and Thurner (2020) have stated that the beliefs and mindsets the employees hold towards organizational change affect how successful the change process will be. The importance of changing the general mindset it to a “digital” mindset, looking at new technologies with optimism and fully supporting the digital transformation are highlighted (Solberg, 2020; Trivedi, 2020; Tekic & Koroteev, 2019).

Solberg (2020) has discussed shared thinking and how it is an important tool for adapting the behaviour of employees with the vision and goals of the organization regarding digital transformation. It is important to have a change-oriented mindset and collaboration skills (Nasution, 2020). Lack of these characteristics can lead to poor and uncoordinated digital transformation, which in turn affects business performance.

A positive attitude is highlighted as a positive reinforcement of the digital mindset, while a negative attitude is related to employees feeling threatened and scared (Schneider, 2020; Blišťáková, 2020; Bagrioni & Thurner, 2020; Christ-Brendemühl & Schaarschmidt,

2019). A positive view of the future will make it more likely that employees will embrace change and find a new role for themselves in the new environment (Bagrationi & Thurner, 2020).

5.6 Preparedness and strategy framework

Raising awareness of a common understanding and collaborating to create a framework can be crucial for the potential application of digital transformation that organizations can achieve. The digital transformation is expected to have a significant impact on both the private and professional lives of individuals. Having a strategy that takes this into consideration is therefore crucial (Meske, 2020).

Introducing technologies alone will not be enough, and employees must be introduced to the new technologies and solutions so that they can be perceived as sustainable and utilized successfully (El-Haddadeh, 2019). The lack of a strategic focus in the digital transformation can result in a poorer transformation, implicating that there can be resistance to change, and the employees not understanding the scope of the digital transformation (Črešnar, 2020).

Therefore, it is crucial that managers assess both the current and potential abilities of their employees as they are related to the digital transformation; moreover, they should not limit these assessments to the current or previous jobs of their employees (Blštáková, 2020).

6 Conceptualization

Through our analysis, we identified articles that have made it possible to distinguish between different factors that affect individuals and their resistance to the digital transformation process. These six identified factors include management, communication, culture, competencies, beliefs and mindsets, and preparedness and strategy framework. Figure 4 depicts the relationships between the six identified factors linking individual-level resistance to change and digital transformation processes.

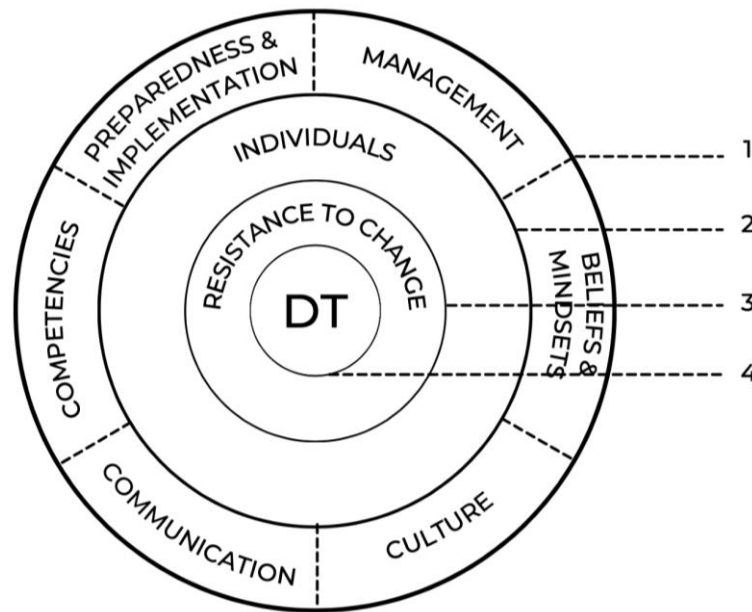


Figure 4: Relationships between the six identified factors connecting individuals and their resistance to the digital transformation process

The six factors (1 on Fig. 4) will affect the individual and influence how individuals perceive change (2 on Fig. 4) when going through a digital transformation process. How these factors are handled will affect the perception of the individuals and help to determine how much resistance individuals might have in regard to the changes of the transformation process (3 on Fig. 4). The degree of resistance to change will consequently determine how agile and successful a digital transformation process is (4 on Fig. 4). Ultimately, these six factors will affect the likelihood that the digital transformation is successful. Of note, the focus is not on how resistance to change occurs but rather how to reduce and minimize resistance in individuals with respect to digital transformation. Organizations should create their own independent strategy customized to their employees and organization. It should focus solely on digital transformation and the factors presented. This will help managers navigate through the transformation process and create a common understanding, while reducing and preventing resistance. Therefore, the objective of Figure 4 is to provide an overview of the six factors and how they are related to an individual's resistance to change stemming from participation in digital transformation processes, thereby providing practitioners with an understanding of how these six factors can be handled to improve the

likelihood of success with the digital transformation endeavour by minimizing the potential for evoking resistance of individuals to change.

7 Conclusion

This study conducted a structured literature review of extant published research to address the question: *How can a structured literature review utilizing bibliometric analysis of current published scientific research contribute to identify and reduce individual-level impediments to digital transformation.* The aim of the study was to provide a foundation for future research as well as practical implications that would guide organizations and leaders on individual-level impediments to digital transformation.

This study revealed that surprisingly little empirical research has addressed individual-level impediments to digital transformation. In order to provide a foundation for more research, we identified six factors that link the individual-level resistance to change to the organizational-level digital transformation process. These six factors can improve the understanding of potential causes for individual-level resistance and provide practitioners with knowledge regarding how to strengthen the success of digital transformation processes through increased awareness of individual-level impediments. The results of this study will be of great practical value as a large percentage of digital transformation processes fail and these comprehensive changes affect all individuals within the organization, including both managers and employees.

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