

# Factors and Barriers to Change Implementation in Micro, Small, and Medium-Sized Enterprises

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**Abstract:** The current dynamic times force companies to observe their surroundings and accept changes constantly. Several circumstances and barriers affect the successful implementation of changes. In addition to eliminating these barriers and positively influencing other related factors, businesses need to address several other change-related issues. This paper discusses change management and the factors preventing successful implementation of change. The main aim is to evaluate the interdependence between the selected barriers, defined based on a questionnaire survey. The survey involved 141 micro, small, and medium-sized enterprises in the Czech Republic. Five main barriers and problems businesses face in implementing the change have been identified. These include "poor communication, ineffective strategic management and planning, financial constraints, dysfunctional teamwork, and inadequate leadership." The secondary objective of the paper is to identify other related areas and concepts associated with change management barriers at a general level. The PRISMA 2020 process and the VOSviewer program were used for this analysis. It was found that the most frequently discussed issues in connection with the implementation of changes are the organization's performance, the impact of the change, its management, and knowledge related to the change.

**Keywords:** change; change management; barrier; SMEs; implementation

**JEL Classification:** L20; M10; M20

## 1. Introduction

The dynamic environment of the present time affects all areas of organizational management. All levels and functions of management are concerned. A critical site for successful change implementation is strategic management. Without an adequate strategy or plan for change in general, it is possible that it will not be able to enforce the change, or the company will not be able to identify when it has been successfully adopted (Predișcan & Roiban, 2014).

The fact that strategy, or strategic management, is closely linked to change management is further pointed out by Errida and Lotfi (2021). The concept of "strategy" can be found in many models for implementing change. In one of the most well-known models, the 8-phase Kotter model, these words occur in step three (Kotter, 2015). In addition, it is essential to communicate this vision and strategy, so the assumption of its existence is necessary in this model. Another frequently used change model – McKinsey 7S – also includes the term

strategy (Kocaoglu & Demir, 2019). In this model, strategy is considered the so-called hard element of change. However, it is also essential to calculate the size of the change. In the case of small, incremental changes, it is not necessarily necessary to change the strategy. However, it is necessary to remember that the situation after the change must align with this strategy. Longaray et al. (2017) then characterize the PDCA model – plan, do, check, act. These models or procedures often consider the role of strategic management or planning and count on its significant support.

A distinctive feature of the current environment is the process management of organizations – after all, change itself is a process, as Kaes and Rinderle-Ma (2017) point out. Other authors then directly mention the individual factors that affect the organizational change process – for example, sufficient acceptance and communication of the considered change, adequate involvement of the change leader, or sufficient adaptation of the organizational structure and control processes. This case of change – organizational – therefore also interferes with another area of managerial duties – control – through the interconnection through the processes themselves. Nowadays, process management is an essential part of and especially the basis for effective change management in a dynamic environment (Whelan-Berry & Somerville, 2010).

Another very crucial area for the successful implementation of change is human resources management. People are the most critical factor in the successful implementation of any change. Many models of change work with employee resistance as the most significant factor influencing the entire process. Perhaps the most typical example of such a model is Maurer's model of resistance, which evaluates the whole process of change from the point of view of employees and their resistance to change the stereotype (Maurer, 2010). As an example of another model, we can use the Kübler-Ross model, which also defines the attitude of employees to the change process in five stages, or the typical Lewin model, which also evaluates the perspective of employees in detail (González et al., 2022).

Leadership is a very often mentioned term in HR in this context. Its importance in implementing changes is gaining in importance, as pointed out by e.g., Ford et al. (2021). However, it is essential to note that the leadership style (whether by the manager or the leader) is not the factor influencing successful change. As Policarpo et al. (2018) mention, combining multiple elements is essential. It is always important to look at the bigger picture and evaluate leadership as a whole, not as a style alone (Ignatieva et al., 2023). Maali et al. (2020) also point to the relationship between human resource management (or people leadership) and the successful implementation of change (although it focuses only on changes of a technical and technological nature). As an example of necessary effective practices, he mentions (in the field of HR) sufficient involvement of a change agent, leadership involvement, or enough resources for employee training.

In the context of Industry 4.0, other barriers can also be observed. These include the financial demands of implementing technologies related to this concept (Kamble et al., 2018), the increasing level of risk (Buer et al., 2018), the insufficient technological infrastructure of the organization (Xu et al., 2018), the low level of digital skills of employees (Petrillo et al., 2018) and, of course, employee resistance and ineffective change management (Müller et al.,

2018). Insufficient support from the government and its entities (Leng et al., 2020) or an insufficient business model (Chiappetta Jabbour et al., 2020) can also be considered a significant barrier.

### *1.1. Models of Change*

When characterizing models of change, the Lewin model must be noticed. It is one of the oldest models of change management, dating back to the late 1940s. The basis of the model lies in Lewin's Field Theory, originally developed not to manage organizational change but to resolve social conflicts (Burnes, 2020). As Cummings et al. (2016) point out, the emergence of this model can be considered the beginning of modern change management. The steps are described as "unfreezing; organizational change; freezing" (Hussain et al., 2018).

Another proven model is Kotter's 8-phase model of change. Despite its high popularity, there needs to be more scientific discussion about its use in business practice (Pollack & Pollack, 2015). However, Caulfield and Brenner (2020) empirically point to the possibility of using the model outside the traditional business practice – in the non-profit sector. Moreover, the model's applicability in the 21st century is still high, as evidenced by Appelbaum et al. (2012), as no significant errors were found, and it continues to be recommended as a high-quality supporting methodological tool for implementing changes.

The ADKAR model is a model of the change process that can be targeted at the individual level. However, it is also applicable to larger groups of people or even to the entire organization. Its primary strength lies in identifying the weak point of the change process and finding the place where the change process fails, including the cause (Jaaron et al., 2022). The model itself is hidden behind the initial letters of its name. These are "Awareness, Desire, Knowledge, Ability, Reinforcement".

However, the literature offers a range of other models for managing organizational change, both at the enterprise and corporate levels. These models include the PDCA (Longaray, 2017), the Nudge model (Mullholand, 2023), the Kübler-Ross theory (Bregman, 2019), and the Satir model of growth (Leung et al., 2019).

## 2. Methodology

The main aim of the article is to evaluate the interdependence between barriers to implementing changes in micro, small, and medium-sized organizations in the Czech Republic. The secondary aim is to obtain a general overview of the currently addressed topics and concepts in connection with barriers and the implementation of changes in the categories of micro, small, and medium-sized enterprises, as well as to determine the geographical places where research on this issue is carried out.

The results of the questionnaire survey were used to meet the main aim. This survey was conducted online between September 2023 and November 2023 and addressed owners/executives/directors of micro, small, and medium-sized enterprises in the Czech Republic. The resulting sample includes 141 subjects. The outreach was done randomly and without a focus on a specific industry. The questionnaire consisted of 16 questions, 3 identifying (number of employees, age of the organization, subject of business) and the

remaining 13 addressing the implementation and management of company changes. Four questions were open-ended, ten were closed-ended, and two were half-open. The survey identified "poor communication (37)", "ineffective strategic management and planning (25)", "financial constraints (22)", "dysfunctional teamwork (20)" and insufficient leadership (17) as the most significant barriers to change adoption. Moreover, the barriers identified are consistent with the literature (Kocaoglu & Demir, 2019; Longaray et al., 2017; Ford et al., 2021; Maali et al., 2020; Kamble et al., 2018). Pearson's correlation coefficient was used to evaluate the interconnectedness of the observed barriers. This coefficient lies between -1 and 1, where -1 means negative correlation, 0 means no correlation, and 1 means positive correlation. The relevant formula for the calculation is offered by Mrkvička and Petrášová (2006); see below. MS Excel software was used for the analysis itself.

$$r = \frac{\sum X_i Y_i - n \bar{X} \bar{Y}}{\sqrt{(\sum X_i^2 - n \bar{X}^2)(\sum Y_i^2 - n \bar{Y}^2)}} \quad (1)$$

The second aim is to identify other related areas and concepts associated with change management barriers in general, and keyword analysis based on the topics discussed in the contributions of the Web of Science scientific database was used for its fulfillment. To identify the corresponding scientific contributions, the PRISMA 2020 methodology was followed (PRISMA, 2021). The research took place on December 10, 2023. The whole process is shown in Figure 1.

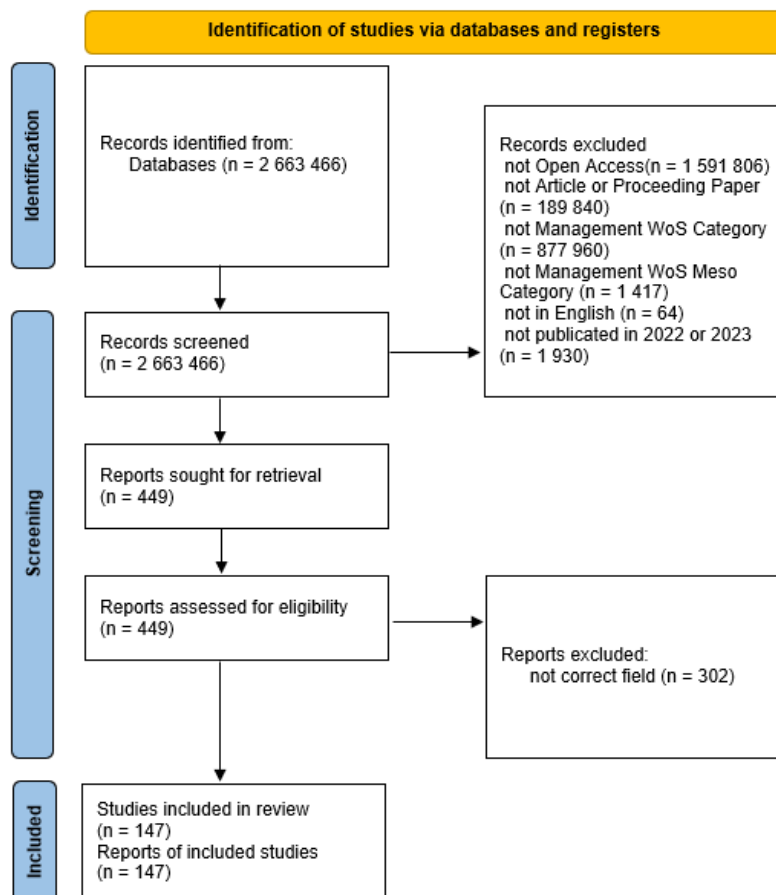


Figure 1. PRISMA 2020 diagram (PRISMA, 2021)

The main criterium is "Topic" defined by the sentence "Barrier" OR "resistance" OR "reason" AND "change" OR "change management" AND "success" OR "implementation" AND "SME" OR "SMEs". Other restrictive criteria were then applied. The first was the availability of Open Access. This was followed by a restriction in terms of the type of contribution to "Article" or "Proceeding Paper". After that, contributions were limited to the "Management" area only, and the "Citation Topics Meso" field was also defined as "Management". In a disproportionate series, there was a restriction in terms of language, with English being the only language chosen. In the end, the time aspect was defined, where only contributions from 2022 and 2023 are worked with to ensure the topics' highest possible level of topicality. Based on the study of the titles and abstracts of the remaining papers, 147 of them were selected for visualization. The condition was that there must be a link with change or change management.

### 3. Results

#### 3.1. *Main Aim of the Paper*

Selected barriers to implementing changes in SMEs are described in more detail in Chapter 2 – Methodology. To give you a better idea of the examined sample, the authors present essential descriptive characteristics, such as the division of the sample according to size, the age of the company, and the most frequently mentioned fields of business.

The category of micro-enterprises employing not more than 10 employees is the most represented – precisely 79 enterprises. The class of small enterprises with a maximum of 50 employees is represented by 38 organizations and medium-sized enterprises by 24 companies.

Organizations that have been on the market for more than 15 years have the highest representation in the sample observed (88). The second most represented group has been on the market for 10-15 years (22). As a result, it can be assumed that businesses have enough experience with change. On the other hand, enterprises that have not been active on the market for even a full year are not represented at all.

Construction has the most frequent representation in terms of business sector (13), followed by manufacturing and metalworking enterprises (12) and retail trade (10). Services (accounting and economic consulting – 11), web content, and website creators (10) are also strongly represented. At the same time, the companies in the examined sample most often implement operational changes (46.1%), followed by medium-term changes (21.3%) and strategic changes (12.1%). The rest of the companies cannot determine the changes' nature or have practically not encountered them. However, 59.5% of businesses say that changes are successfully completed and adopted, and only 8.1% say they are not. The remaining share (32.4%) cannot determine the prevailing end of the change process.

The Pearson correlation coefficient method was chosen to observe the selected barriers' interdependence to implement changes successfully. These barriers are "poor communication (PC); ineffective strategic management and planning (SMP); financial constraints (FC); dysfunctional teamwork (TW); insufficient leadership (IL)". The result of the correlation analysis is shown in Table 1.

Table 1. Correlation analysis

	PC	IL	TW	FC	SMP
PC	1.00	-0.04	0.22	0.17	0.13
IL	-0.04	1.00	0.19	-0.09	-0.04
TW	0.22	0.19	1.00	0.12	-0.04
FC	0.17	-0.09	0.12	1.00	0.17
SMP	0.13	-0.04	-0.04	0.17	1.00

There is almost no correlation (-0.04) between communication and leadership factors, suggesting that these factors are not strongly related. On the other hand, a moderately strong correlation (0.22) is observed between the factors of communication and teamwork, based on which it can be inferred that by improving communication, we can achieve a synergistic effect and simultaneously remove the barrier of non-functioning teamwork. The communication factor is also positively correlated with the financial resources factor (0.17), so it is possible to assume that the improvement of one aspect will affect the other. The question of the link between planning, strategic management, and communication is also expressed by a positive correlation coefficient (0.14). The leadership factor is positively correlated only with improved teamwork (0.19) and negatively correlated with all others. Notably, the team collaboration factor is positively correlated with an organization's budget (0.12). On the other hand, an expected correlation was found between the strategic management and planning factor and the budget/financial resources of the enterprise (0.17).

However, the communication factor is the strongest. It can, therefore, be assumed to be the main barrier to successfully implementing changes. At the same time, by eliminating deficiencies in communication, a synergistic effect can be achieved, and other barriers can be eliminated. We can also describe the factor of teamwork and financial resources as vital (both have only one negative correlation). However, the basis for removing even these two barriers is communication in the first place. Strategic management and planning are not very important barriers. Leadership is even positively correlated with only one factor – teamwork – but this is where this discipline finds its use, so it cannot be said that it does not have its place in the processes of change based on negative correlations and that it is not a significant barrier in the event of its deficiency.

### 3.2. Secondary Focus of the Paper

The PRISMA 2020 process was used to meet the secondary aim, and 147 contributions from the Web of Science scientific database are being processed. The primary tool for achieving this goal is keyword analysis with visualization using the VOSviewer tool. The result of the study is shown in Figure 2. Two keywords – change and change management – were excluded from this analysis, as their connection to this topic is de facto determinative. At the same time, only keywords with a higher frequency of occurrence than 5 were used for a better graphic interpretation.



organization itself, and the effects on this management, and last but not most minor; it is also necessary to consider knowledge. These topics can be described as the most frequently discussed about change management at the moment. Notably, neither new technologies nor Industry 4.0 are among these topics. In general, companies are more focused on impact assessments and their performance than on the substantive content of the change itself.

For the sake of completeness, Figure 3 is offered, which shows the geographical layout of the monitored posts.

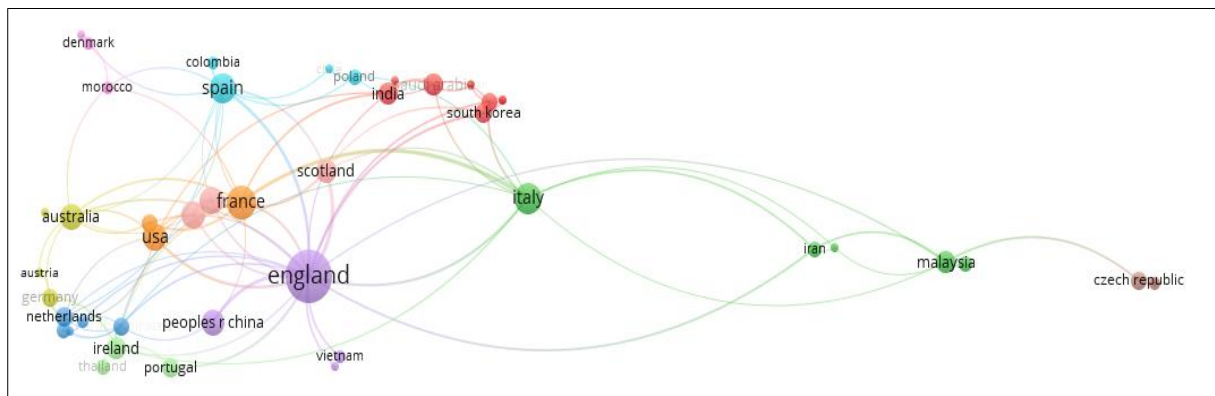


Figure 3. Observed countries (VOSviewer)

Among the monitored contributions related to the topic, it can be observed that most of them (34) come from England. France (14 contributions), Italy (12 contributions), Spain and Indonesia (both 11 contributions), Finland, Sweden, and the United States (9 contributions) are in second place. Indonesia, in particular, can be seen as a minor surprise. On this basis, European countries are addressing the issue of change in high-level enterprises and trying to address the issue of successful implementation and change management.

Based on this observation, it can be reasonably assumed that most of the institutions the authors work in will be located in the British Isles (as Scotland and Ireland are among the most frequently observed countries) or in France or Italy. A specific list of the most represented institutions is provided in Table 3.

Table 3. Observed institutions

Institution	Absolute frequency	Citations	Country
Paris school of business	3	61	France
Neoma business school	3	38	France
University Vaasa	3	20	Finland
University of Essex	3	15	Great Britain (England)
Queen Mary University London	3	11	Great Britain (England)

Based on the analysis, the most frequently cited organizations come from France and Great Britain, specifically from England. It cannot be said that this is an unexpected fact. However, these entities most likely offer a significant background and support for analyses of change management, its impacts, and its impact on the functioning of companies. Their outputs receive much attention in the scientific sphere.



#### 4. Discussion

The biggest change companies are introducing, not only at the micro, small, and medium-sized level, is Industry 4.0. Due to the dynamic environment, it is desirable to introduce modern technologies as quickly as possible. In addition, businesses across various industries can adopt selected ones, e.g., Clouds, digitalization, or cyber-related technologies (Vimal et al., 2023). Moreover, new technologies do not necessarily apply only to micro, small, and medium-sized organizations but also to large enterprises.

Barriers related to introducing new technologies are more specific than classic barriers to change. In the research, poor communication is considered the main barrier; after that, ineffective strategic management and planning, financial constraints, dysfunctional teamwork, and insufficient leadership. Govindan and Arampatzis (2023) define barriers related to Industry 4.0 and heavily address the issue of leadership, vision and strategy, and financial resources. On the contrary, in contrast to the classic approach to change, where employee resistance at the individual level is not one of the most significant barriers according to research, this barrier is at the forefront here. Attiany et al. (2023) further emphasize the importance of strategy and the role of strategic management. They also cite employee resistance as another critical factor. Erena et al. (2022) also state that management support and leadership are essential factors for implementing change and innovation. In addition, they mention the role of knowledge.

The issue of communication of change is an essential factor, or barrier, for businesses in the Czech Republic. Mortimer and Laurie (2017) also point out the importance of removing this barrier on a specific case of companies from the UK when implementing marketing changes. Maurer et al. (2023) also point out that communication is an essential factor during change while drawing attention to the fact that change can affect communication flows. It is, therefore, important to pay maximum attention to this barrier even during organizational change. Hubbart (2023) even considers the communication itself and the setting up of communication flows to be the first step that should be set up. At the same time, communication should permeate all phases of the change process, thus eliminating this barrier. The author also notes that leadership can be an excellent tool for effective communication, as Gray et al. (2023) also points out.

May (2023) reminds us of the importance of leadership but also mentions corporate culture as one of the main determinants of change and innovation. As part of corporate culture, the author understands teamwork, the last of the barriers identified by this research.

From the above, it is clear that micro, small, and medium-sized enterprises in the Czech Republic face the same barriers as companies in other countries. The role of communication in the process of change is indisputable, and leadership is a very effective procedure for its effectiveness. The further observed barriers are addressed; their place in the change process still needs to be more cohesive. In addition, the literature highlights other essential factors, such as corporate culture or knowledge. The question is whether companies in the Czech Republic do not consider these factors important or whether addressing a more extensive sample of respondents would be necessary to observe them.

## 5. Conclusions

The main aim of the article was to evaluate the interdependence between barriers to implementing changes in micro, small, and medium-sized organizations in the Czech Republic. The secondary aim was to obtain a general overview of the currently addressed topics and concepts in connection with barriers and the implementation of changes in the categories of micro, small, and medium-sized enterprises, as well as to determine the geographical places where research on this issue is carried out.

Pearson's correlation coefficient was used to meet the first aim. The analysis found that communication is the most critical barrier to effective implementation of change, as it was negatively correlated with only one other barrier – teamwork. However, two other barriers were negatively correlated with only one other, namely teamwork and financial resources. However, it is clear that communication is the basis for successful change management, and by incorporating it, other significant barriers can be removed. On the other hand, it was found that leadership is positively correlated with only one factor and, therefore, cannot be given as much weight.

The second aim of the paper was fulfilled mainly thanks to the analysis of keywords from the contributions of the Web of Science scientific database using the PRISMA 2020 diagram. The study found that performance, impact, or knowledge are the most frequently inflected terms in connection with change. In addition, most research on this topic occurs in Great Britain and France. In addition, the analysis shows that the issues of the impact of the change on the company and its performance are more often raised, not on the factual content of the change itself.

Finally, an overview of this research's limitations and possible future research directions is offered. The research was limited in terms of time (September 2023 – November 2023), and the search for posts in the database took place for only one day. Also, the research was limited in location – to the Czech Republic and the online environment. Future research may move toward observing other possible barriers to implementing changes in the Czech Republic as an extension of this research and their other influences or the level of power themselves.

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