

# The Competency Niche: An Exploratory Study

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**Abstract:** In the era of a turbulent and less-predictable business environment, as confirmed by the COVID-19 pandemic, the ability to efficiently use human resources has become particularly important. There is a need to reduce employees' competency niche, and competency mismatches have become noticeable in the European Union. We performed qualitative interviews (n = 282) to determine the competency niche of employees from private firms in Poland. Results show that employees were passive in identifying their competence needs. Moreover, firms did not use the weak signals methodology to eliminate the competency niche. This novel study found that firms should be more active in identifying employee competency niches by analyzing early signs to be ready for any changes without delays. The findings create a basis for proposing preventive measures, and we point out avenues for future research.

**Keywords:** competencies; weak signals; foresight; agile; business and management

**JEL Classification:** L2; O3; P5; M10



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## 1. Introduction

Despite the many domestic and international programs implemented in recent years, business failures have increased in different countries, particularly during the crisis in 2008. Firms need to be ready for different obstacles, and they have to match the best management practices with their business operations. Continuing business efforts towards an “open mind” strategy, which the authors of this article define as the ongoing process of identifying a competency niche, require multifaceted organizational processes.

The COVID-19 pandemic has exposed the utter unpreparedness of many governments and companies to operate under conditions of uncertainty. In trying to adapt to the new requirements due to the COVID-19 pandemic, many companies worldwide have made extensive changes, which entail the need to verify the existing approach to human capital management. The Internet of Things and big data generate business risk (Dobrowolski 2021a). Companies must ensure accountability, which is a requirement of the modern capital market, and some companies may additionally perform public tasks (Dobrowolski 2021b; Dobrowolski and Sułkowski 2020; Sułkowski and Dobrowolski 2021). Therefore, there is a need for business agility, which refers to the ability of an organization to rapidly adapt to changing conditions in the modern environment (Armstrong 2013; Delcourt et al. 2013; Bal and Lange 2015). Business agility is not the only Agile Manifesto to be initially defined for the IT environment. It is necessary to take advantage of weak signals in order to use an agile approach under conditions of uncertainty (Karabasevic et al. 2018; Dobrowolski 2020a, 2020b, 2021c).

Despite the many studies on competencies (see e.g., Woodruffe 1993; Martin and Rubin 1995; Hoffmann 1999; Athey and Orth 1999; Rothwell and Lindholm 1999; Chung-Herrera et al. 2003; Shavelson 2010; Taborsky and Oliveira 2012; Yin 2019; Dobrowolski 2020c;

Dobrowolski et al. 2021a; Drozdowski et al. 2021; Brundiens et al. 2021; Ferreras-Garcia et al. 2021; González-López et al. 2021; Kipper et al. 2021), there remains a need to deepen the research on the effective identification of employees' competencies under conditions of uncertainty. We understand the expression "effective" to mean the degree of achievement of assumed goals and the speed at which the necessary competencies are identified and the changes in firms are introduced. We define 'competency niche' as the gap between the expected and required competencies and the competencies possessed by employees. Moreover, the term 'employee' refers to all persons employed in companies that do not own them.

We believe that the lack of employees' competencies necessary to achieving a competitive advantage generates risk for any business. We are not alone in this belief. Research from the European perspective has revealed a serious problem. Around half of the European population is affected by a competency mismatch ([European Working Conditions Survey 2020](#)). Therefore, this study aimed to determine the competence gap of employees and whether firms use the weak signals methodology to identify the future competencies necessary to achieve a competitive advantage. We formulated the following research hypothesis: the increasing complexity of the environment and the growth dynamics of the changes require agile competencies. This means the rapid and systematic modification of behavior in changing situations characteristic of current and future changes in the business environment. During a literature review, we found little information about Poland's competency niche from such a perspective as proposed in this study. The empirical study of employees' competencies involved 282 persons from firms located in western Poland. We conducted the study in 2019–2020. The findings show that employees of the analyzed companies were not ready to apply the agile approach and were not familiar with the weak signals methodology.

## 2. Literature Review

The analysis of competencies through the prism of employees' behaviour has led researchers and practitioners to determine the reasons for the failure to adapt employees' competencies to the environment's needs. It was found that around half of the European population is affected by the mismatch, and that the extent of this mismatch is growing ([European Working Conditions Survey 2020](#)). There is no need to convince anyone that the competencies gap is a severe organizational problem in an ageing European society that maintains a relatively high standard of living and is accustomed to the welfare state. Globalization has intensified the competition and those organizations that are good at identifying and closing competency gaps will win. Therefore, among other things, competencies have become the subject of scholars' particular attention (see e.g., [Martin and Staines 1994](#); [Nordhaug and Grønhaug 1994](#); [Hager and Gonczi 1996](#); [Greene et al. 1989](#); [Denzin 2009](#); [Evetts 2011](#); [Mills et al. 2003](#); [Casper and Whitley 2004](#); [Le Deist and Winter-ton 2005](#); [Wittmann et al. 2009](#); [Hays 2020](#); [Foss et al. 2021](#)). Many firms want to increase their strategic position, which many scholars have pointed out (see e.g., [Olhager 2003](#); [Skaggs and Youndt 2004](#); [Thite 2004](#); [Drozdowski 2017](#); [Berber and Lekovic 2018](#); [Chen and Hu 2021](#)). However, without competent people, any company may have difficulty with achieving properly defined goals and carrying out planned tasks, or firms may pursue the wrong targets ([Scholes and Endacott 2003](#); [Kuk et al. 2007](#); [Ten Cate and Scheele 2007](#); [Kaur and Kumar 2013](#); [Chuang et al. 2020](#)).

Many researchers present the notion of foresight and underline the fact that the essence of foresight might be summarized as the process that looks into the future but simultaneously enables the usage of solutions for present activities ([Martin 1995](#); [Barker and Smith 1995](#); [Cuhls 2003, 2019](#); [Iden et al. 2017](#)). This concept is linked to weak signals, which can be understood as early signs of future events ([Hiltunen 2008](#); [Saritas and Smith 2011](#); [Hauptman et al. 2015](#); [Dobrowolski 2020a, 2020b, 2021](#)). The weak signals methodology can identify future needs, including desired competencies, and enable firms to gain a competitive advantage in the business environment. The use of the weak signals

methodology is linked to the concept of agility as presented in the literature (see e.g., Boehm 2002; Hodgson and Briand 2013; Wells 2014; Moe et al. 2009; Wells 2014; Potdar et al. 2017; Dobrowolski et al. 2021b, 2021c). The concept of agility implies minimizing formal requirements for processes, and flexibility manifests in the ability to respond to environmental needs immediately (Cockburn and Highsmith 2001; Williams and Cockburn 2003; Agarwal et al. 2006; Lyytinen and Rose 2006; Conboy 2009). The internal need to prioritize the flexibility of competencies among employees shapes the right way of thinking about foresight. The readiness of human capital to changes is a condition of the high degree of flexibility of pro-development behaviors (Jones 2017; Hines et al. 2017; Way et al. 2018; Sabuhari et al. 2020; Foss et al. 2021). The limited flexibility of competencies under conditions of permanent variability, complexity, and turbulence in the environment is a condition that threatens a business's stability. From this perspective, employees' competence capital must be regularly updated according to the needs imposed by a rapidly changing environment. Each employee should build sensitivity to a high degree of flexibility individually and use it as an essential element of their competitive potential and the effort to ensure workplace development. The competence niche model describes this phenomenon, which is a component of a broader problem, namely the adjustment gap at the enterprise level expressed by the difference between the desired and the existing state. The adjustment gap arises due to dynamic changes in the business environment. This research model was created based on an analysis of the literature on the subject and our own research.

The competence assessment of human capital, which is the basis for flexible adaptation to changing operating conditions, is based on the existing relationship between employees and external conditions. The relationship between employees' behavior and the environment is dynamic and bilateral. Human capital adapts its activities to its environment. At the same time, employees influence individual components of the environment through their competence potential.

Although the characteristics of the labor market have been presented in many studies (see e.g., Prahalad and Hamel 1997; Mills et al. 2003; Alniacik et al. 2013; Kaur and Kumar 2013; Apriana et al. 2019; Drozdowski 2020), there remains a need to explore the competency niche problem among employees, particularly after the publication of the European Working Conditions [European Working Conditions Survey \(2020\)](#), which revealed the severe problem with competencies versus business needs.

### 3. Materials and Methods

This study aims to determine the competence gap of the examined employees and their efforts to eliminate this gap. Therefore, firstly, the factors determining the competence of employees were identified. Secondly, a self-assessment of competencies was conducted, making it possible to present employees' participation in shifts. Thirdly, a range of competencies was defined to establish employees' degree of determination expressed by the need to supplement their competence potential by adapting to the existing requirements and using the weak signals methodology to determine future needs. The following research assumption was formulated: the increasing complexity of the environment and the growth dynamics of the changes require agile competencies. The empirical study of employees' competencies involved 282 persons from firms located in western Poland (see Table 1). A purposive sample was used in the study, which means that it is not a statistical sample. We chose Poland because one of the members of our research team started their research in this country, and we could explore our topic on the competency niche in Polish firms based on an earlier analysis of the problem of employees' competency gap in a European context. The research was carried out in 2019–2020 (the research was conducted in the period between late 2019 and early 2020). Surveys were mailed to subjects during November and December 2019. Participants in the study included individuals with a college degree (74%) and a high school education (26%). The surveys were returned to the researchers in February–March 2020.

**Table 1.** Organizational profiles of participants.

Industry	Number of Employees	Number of Respondents
Accounting company	94	34
Power engineering	>250	88
Food manufacturing	>250	54
Transport company	68	17
Food wholesaler	58	12
Industrial wholesaler	96	16
Delivery company	81	42
Consulting company	<50	19

Source: Own study.

The results were prepared for the whole set of surveyed persons without division into subsets (for example, women and men, younger and older). Questionnaires and a literature study were used for the research. As the people participating in the study asked to remain anonymous, we have not provided the names of companies or other data that could identify the respondents. We also compared research results from different sources, which may reduce the interpretive uncertainty (Greene et al. 1989; Martin and Staines 1994).

During the analyses of the obtained research results, it was assumed that the probability of answering the given questions is equal for each of the options. Adopting an arbitrary value for the number of expected answers made it possible to verify the hypothesis of the significance of the obtained results. The results obtained were subjected to a Chi-square test for observed versus expected values using TIBCO software 2017 and Statistica version 13 (<http://statistica.io>, accessed on 1 June 2021).

The chi-square test was performed to examine the relationship between two nominal variables. The test involves comparing observed values (obtained in the survey) and theoretical values (calculated under the assumption that there is no relationship between the variables). Significant differences indicate the existence of a relationship between the variables.

Tables 2–5 present the values of the Chi-square test together with the number of degrees of freedom (df) and the significance level. In all tested cases, the probability of making a mistake of the first kind was very low—much less than  $p = 0.0001$ . The tests carried out indicate significant differences between the tested population groups. Thus, it can be concluded that the assumptions made for the study are correct.

**Table 2.** Determinants affecting employees' competencies.

Which Factors Most Influence Employees' Competencies?	Respondents	
	N	%
indoor environment	51	18%
outdoor environment	231	82%
Total	282	100%
Test	Chi square = 1,148,936; df = 1; $p = 0.000000$ .	

The outdoor environment is an external organizational environment that includes legal, political, economic, and demographic elements (Hatch 2018). The indoor environment refers to the workplace's conditions. The respondents were informed in the questionnaire about the components of the internal and external environment. We followed Hatch to distinguish elements of the organizational environment.

**Table 3.** The influence of the environment on the shaping of employees' competencies.

How Does the Environment Affect Employees' Competencies?	Respondents	
	N	%
exacts change	180	64%
supports change	79	28%
hinders change	23	8%
Total	282	100%
Test	Chi square = 1,347,021; df = 2; p = 0.000000.	

**Table 4.** Involvement of employees in changes to competencies.

How Do Employees Engage in Changes to Their Competencies?	Respondents	
	N	%
active counteracting of changes	9	3%
lack of involvement	39	14%
supporting changes	161	57%
Inspiration	73	26%
Total	282	100%
Test	Chi square = 1,839,858; df = 3; p = 0.000000.	

**Table 5.** Employees' competencies in the context of the requirements of the environment.

How Are Competencies Assessed with respect to the Requirements of the Environment?	Respondents	
	N	%
Very high	68	24%
Appropriate	163	58%
Insufficient	51	18%
Total	282	100%
Test	Chi square = 7,751,064; df = 2; p = 0.000000.	

It was assumed that our research, which was focused on employees' competencies, did not have to be reflected in the formalized language of mathematical logic and did not have lead to the construction of unchanging theories, but would only result in socially and historically limited generalizations. However, regardless of the formulated generalizations, the created concepts must be based on commonly shared cognitive assumptions referred to as the paradigm. We used the Burrell and Morgan classification of paradigms to consider which paradigm fit our study best (Burrell and Morgan 1979). We decided to choose the strategy of epistemological pluralism, which allows for the combination of approaches drawn from different paradigms to obtain precise cognitive results. Therefore, one may use functionalist concepts (verification and falsification) and interpretative concepts (meaning and interpretation). Thus, we chose different methods to obtain a broader view of the studied issues (Campbell and Fiske 1959; Greene et al. 1989).

#### 4. Results and Discussion

The results show (see also the Chi-square test) that the external environment is the main factor determining employees' competence (82 per cent) given the identified competence determinants. The results indicate that the importance of factors having their source in the company's internal area is minor (Table 2).

These findings support those of Nonaka (1994), Prahalad and Hamel (1997), Clarke and Clegg (2000), Mintzberg et al. (2009), Ansoff (2019), and Ganguly et al. (2019). The outdoor environment significantly impacts the formation of employees' competencies, as it provides guidelines for the development of their potential (Drozdowski 2020). One may state that the dynamically changing outdoor environment requires employees to adapt their competencies to respond appropriately to external signals.



The problem is the following. Do employees actively fit their competencies to new outdoor requirements or discover them when they occur and then change their competencies? We believe that the latter is worse because it creates a dual risk. First, the gap between required and achieved competencies may not be eliminated due to bounded rationality and incomplete information. Secondly, it may create a competency gap that exists for a long time before employees identify and eliminate it. Our study found that the external environment forces changes in employees' competencies (64 per cent). Considering the situation that has arisen, it can be concluded that the employees during the period considered were faced with the need to take adjustment measures (Table 3).

Table 3 refers to the external environment that the respondents considered most relevant from the point of view of competence. The research results (including those of the Chi-square test) allow us to state that the signals that reached the surveyed employees from the external environment took the form of impulses that forced changes in competence. Given the situation that has arisen, it can be concluded that the employees were faced with the need to take adaptation measures. They should therefore demonstrate a high degree of competence flexibility. Similar conclusions were reached in [Kalleberg \(2001\)](#), [Rönmmar \(2004\)](#), and [Knox and Walsh \(2005\)](#).

In sum, we found that employees were not interested in participating in change until their environment forced them to do so. Meanwhile, the readiness of employees to adapt to change is a condition of a high degree of flexibility of pro-development behaviors (see e.g., [Jones 2017](#); [Hines et al. 2017](#); [Way et al. 2018](#); [Sabuhari et al. 2020](#); [Foss et al. 2021](#)). Our findings support those of other researchers ([Swales 2004](#); [Foster 2010](#); [Kalleberg 2001](#); [Berger and Berger 2004](#); [Alniacik et al. 2013](#); [Schad et al. 2016](#); [Apriana et al. 2019](#)). Our findings are presented in Table 4. One may state that inspiring changes was an important, although not dominant, type of employee action (26 per cent of respondents). Only a small number of respondents stated that they were actively counteracting changes (3 per cent), which means they were trying to identify competencies that fit the new requirements of the external environment. The Chi-square test results obtained confirm the high significance of the differences in the respondents' answers.

The analysis (including that of the Chi-square test results) confirmed a dysfunction of competence that reflects the mismatch between human capital's fundamental competencies and new competence patterns formulated by the environment. Most employees rated their competencies as appropriate (58 per cent) or very high (24 per cent) with respect to the requirements of their environment (Table 5). It can be concluded that the surveyed employees considered the state of their competence to be at a level appropriate for the requirements directed by the environment. This manifests a positive self-assessment of one's competencies and testifies to an excessively optimistic image of one's competence profile. This picture is a manifestation of the subjective assessment that testifies to the low strength of the internal motivation for raising competencies in the direction of developmental activity, which allows one to adapt to the increasing demands of the changing environment. Thus, if staff perceive their competencies to be at a satisfactory level, they may not perceive or appreciate the new situational demands created by the external environment. Such behavior contributes to the phenomenon of a disjunction (a competence gap) between the needs of the environment and one's competence potential. Hence, the lack of a critical view of the need to flexibly adapt one's competencies in the face of situational conditions resulting from rapid and unexpected changes may manifest in the form of behaviors that determine unfavorable phenomena in enterprise management.

To sum up, the value of self-assessment of competencies was very positive, which in the case of radical changes in a turbulent environment may be a factor that disturbs the process of employees' perception of signals sent to them by the environment containing new competence requirements, which at the same time indicates the direction of appropriate development activity. A similar view is held by [Pralhad and Hamel \(1997\)](#) and [Drucker \(2007\)](#), who pointed out that successful employees are aware of their limitations and know which areas of their competence they need to develop. One may argue that employees who

were unable to learn from their mistakes and failures were much less likely to admit their faults and were unable to do anything to change.

Most of the surveyed employees stated that human resource development in their firms is formalized, and that often their training needs were not promptly realized by employers. They believed (82%) that their firms were not ready to immediately respond to environmental signals. Their belief in adequate competencies (58%) leads to the following generalisation. The employees' positive opinion, expressing the compatibility of their possessed competencies with the environment's requirements and uncritical confidence in their abilities, suggests a negative phenomenon showing a lack of a need for changes in the structure of the possessed competencies that would correspond to the situational demand. Based on the analysis of the employees' responses, one may state that none of the examined employees was familiar with the weak signals methodology. The surveyed employees indicated that their firms had never used such methods to identify competency niches.

## 5. Conclusions

As one may rightly point out, there is much research on competencies, but in our opinion the research topic of this article remains little studied both theoretically and practically. Our study allowed us to identify the factors determining the competencies of the surveyed employees. Moreover, the research allowed us to establish the relationship between the environment and competencies. Furthermore, we have identified how the surveyed personnel evaluated their competencies against the requirements of the environment. Employees who are focused on practical problem solving are aware of their limitations, so they know what areas of their competence they need to develop. Employees who have not learned from their mistakes and failures are much less likely to admit their faults and cannot do much to change. We found that many employees lacked an understanding of their limitations.

The empirical material collected during the study allowed us to draw the following conclusions:

- the most crucial factor determining the competence of employees is the company's environment, which at the same time sets specific requirements;
- employees showed no interest in participating in changes until external factors force them to do so; and
- employees were not familiar with the weak signal methodology. However, identification of early signs of upcoming events is crucial to the rapid elimination of competency niches. Rapid identification of upcoming threats or opportunities enables a company to move ahead of other companies, adapt to new requirements, and gain a competitive advantage. It is also crucial to the well-known (to theorists and practitioners) agile approach. Employees must, therefore, actively participate in the process of identifying weak signals in their companies. We found that firms knew little about how to use the weak signals methodology to reduce the competency niche both in theory and practice.

Therefore, we may state that the study confirmed that firms should be more active in identifying employee competency niches by analyzing early signs if they want to be ready for changes without delays.

These results are preliminary, and, therefore, we did not develop a detailed model of competencies. The obtained results form the basis for preparing the next stage of our research, which aims to formulate theses on models of changes in employees' competencies and estimate the statistical sensitivity of the obtained results. In the case of a comprehensive database, we believe that it will be necessary to use more advanced statistical tools, which allow for a deeper analysis of the dependency structure. We believe that there is a need for continuous attempts to establish the reasons for the failure to adapt employees' competencies to the environment's needs. From a broader perspective and considering that around half of the European population is affected by the competency mismatch

([European Working Conditions Survey 2020](#)), one may argue that this study is a starting point for further analysis of competency niches in other countries.

Traditional theories of human resource management, including studies on motivation methods, are based on predictable environments. In other words, one may evaluate the risk of occurrence of different factors that affect employees. Under conditions of uncertainty, the situation is different. Uncertainty is not the same as risk. Therefore, for example, the weak signals methodology is helpful. The COVID-19 pandemic produced a completely different situation than existed before. It is the first such pandemic to occur in so many countries and the European Union. It is commonly known that firms and governments were not ready for the COVID-19 pandemic.

We believe that future research should aim to determine: (1) whether firms use the weak signals methodology to identify competency niches; (2) whether firms respond promptly to employee's training needs; (3) how firms distinguish their actual training needs from the training needs of employees, as the needs do not always coincide; and (4) how the elimination of competency niches affects risk management in companies.

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