

The KLC Cultures' Synergy Power, Trust, and Tacit Knowledge for Organizational Intelligence

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Abstract: This paper examines the impact of knowledge, learning, and collaboration cultures synergy (the KLC approach) on organizational adaptability. The SEM analysis method was applied to verify the critical assumption of this paper: that the KLC approach and trust support knowledge-sharing processes (tacit and explicit) and are critical for organizational intelligence activation. Specifically, the empirical evidence, based on a 640-case sample composed of Polish knowledge workers, revealed that knowledge sharing, organizational intelligence, and innovativeness are vital benefits of the KLC cultures' synergy. It also highlighted that trust among workmates is critical to sustaining tacit knowledge sharing in an organization. Tacit knowledge, which is knowledge that is difficult to transfer to another person by means of writing it down or verbalizing it, is clearly identified as a key component of change adaptability, which is viewed as a measure of organizational intelligence. Moreover, the acceptance of mistakes as a learning source - a learning culture component that supports trial-error learning, was found to be tremendous for knowledge-sharing processes, organizational intelligence (change adaptability), and innovativeness. This study proved that knowledge sharing, organizational intelligence, and innovativeness are vital benefits of the synergy that offers the KLC cultures. Trust strengthens this effect. So, to gain these benefits, knowledge-driven organizations should employ trusted managers who trust others and, in addition to their professional credentials, exhibit strong habits of respecting knowledge, learning, and collaboration.

Keywords: Knowledge culture, Learning culture, Collaborative culture, KLC cultures, Knowledge sharing, Tacit knowledge, Explicit knowledge, Collective intelligence, Trust, Change adaptability, Innovations, Knowledge workers

1. Introduction

Company culture is an intangible asset that requires design, implementation, and management to leverage the company knowledge strategy. If company culture and knowledge strategy are misaligned, there is no chance for successful knowledge management from a long-run perspective. The long-run perspective management requires organizational innovativeness and collective intelligence development. Therefore, this study aims to explore the meaning of knowledge, learning, and collaboration (KLC—cultures) synergy for the long-run perspective, which requires a focus on change adaptability and innovativeness development in more depth.

The essence of the KLC culture's synergy idea is the simultaneous implementation of functional cultures of knowledge, learning, and collaboration to grow knowledge-driven organizations (Kucharska and Bedford, 2023a). Authors claim that these cultures support and strengthen one another to develop favorable conditions for new knowledge creation and utilization, which impacts the organizational ability to adapt to externally induced changes. This organizational change adaptability is rooted in collective organizational intelligence, which simultaneously is potent to internally dedicated changes oriented to organizational efficacy improvements. The KLC culture's synergy is assumed to be extremely powerful for strengthening the tacit knowledge-sharing behaviors (Kucharska and Bedford, 2023a) that are focal for human and relational capital development, and this is also true for organizational intelligence. Since tacit knowledge cannot be shared or acquired without trust (Holste and Fields, 2009), knowledge management efforts to support organizational innovativeness and adaptability may depend on trust among co-workers. According to a study by Capestro et al. (2024), cognitive trust influences tacit knowledge sharing more than affective trust. Company culture absorption is a cognitive process (Burnes and James, 1995). If so, then company culture might be the focal management tool that can support trust-building behaviors in the company. This study aims to empirically verify whether the KLC approach dedicated to knowledge-driven organizations is efficient and, consequently, whether trust is included in the investigation.

Understanding company culture's contribution to its performance is particularly critical in today's hyperdynamic knowledge economy. Culture will always dominate strategy (Kucharska and Bedford, 2023a). However, it can play an even more significant role in the knowledge economy, where knowledge is the primary form of capital and the most critical intellectual production factor. To thrive and survive in the knowledge economy, managers must "see" their company culture's power to shape the company's course and learn to gain and sustain knowledge, learning, and collaboration cultures synergy. Nowadays, hyperdynamic business reality requires intelligent actions. When managers "see" their cultures as assets, they can shape and use them for the company's best (Kucharska and Bedford, 2023a). This study aims to empirically prove that company culture based on knowledge, learning, and collaboration matters for growth in knowledge-driven organizations and that trust among co-workers is critical for this process. Kucharska and Bedford (2023a) suggested this before based on proxy, but empirical evidence is still required. So, this study aims to deliver it.

2. Conceptual Framework

Company culture is a critical asset that determines a business's capability. The vital source of a company's competitive advantage is tacit knowledge, which is produced thanks to personal experience and social interactions (Kucharska and Erickson, 2023a-b; Olaisen and Revang, 2018; Polanyi, 1966) and stored in the human minds, so tacit knowledge can be shared only as an act of free will. So, it cannot be forced by any procedures or rules. Its sharing depends on trust among workmates and company culture that can stimulate learning, sharing knowledge, and collaboration (Koskinen, Pihlanto and Vanharanta, 2003; Kucharska and Bedford, 2023b; Olaisen and Revang, 2018; Senge, 2006). Contrary to tacit knowledge, explicit knowledge can easily be formalized, transferred, and managed (Faccin et al., 2019; Nonaka and Takeuchi, 1995; Santhos and Lawrence, 2023). Company culture is seen as a powerful asset that impacts the above policies, procedures, and rules (Bajaj, Bradley and Sun, 2024; Cegarra-Navarro, Jimenez-Jimenez and Garcia-Perez, 2021; Kotter and Heskett, 2008; Kucharska and Bedford, 2019; Yoon and Park, 2023). Culture strongly determines individuals' and entities' understanding, motivations, and full capabilities. Unsurprisingly, organizations are increasingly aware of culture's role in supporting or impeding strategies. Peter's Drucker adage – culture eats strategy for breakfast every day – indicates that even the most brilliant strategy will fail if it is not aligned with the company culture. KLC cultures' approach is dedicated to companies whose management systems are rooted in knowledge. Therefore, this study explores the assumed KLC culture's powerful impact on knowledge-driven organizations' ability to create knowledge (explicit and tacit) thanks to trust among employees, which is expected to matter for organizational intelligence and innovativeness development.

KLC cultures

The focal point to clarify the KLC culture approach to knowledge-driven organizational culture introduced by (Kucharska and Bedford, 2023a) is the clarification of the key characteristics of each of them and the exposition of their relations.

The KLC cultures approach promotes the view that the priority of knowledge-driven organizations today is to adapt to hyperdynamic reality smoothly to keep competitiveness and, therefore, to support the company's strategy; company culture must be composed of many functional types of culture supporting these organizational functions that are critical for company's sustainable development: KLC cultures. Therefore, the synergy of these critical for the particular business context functional sub-cultures finally shapes the whole culture of a specific knowledge-driven organization today. The synergy of knowledge, learning, and collaboration cultures (KLC approach) is vital for knowledge-driven companies' sustainable development. These cultures are not as influential separately as they are if united.

A culture of knowledge dominates in knowledge-oriented organizations that focus more on static knowledge exploitation (Kucharska and Bedford, 2023a; Van Wijk et al., 2012), whereas learning culture dominates in organizations that focus more on dynamic, constantly breaking 'the status quo.' Furthermore, knowledge culture is a base for learning culture. It is easy to predict that if any organization is stuck in the knowledge-orientation stage, it exists in a reality where static exploitation of knowledge and control dominates over exploration. New knowledge is usually rejected in such conditions (new knowledge is considered risky for the existing order). In such organizations, old, proven action methods are cultivated and appreciated more than new solutions sought. New methods are seen as risky and are rejected to avoid mistakes. Organizations based chiefly on proven knowledge secure their "comfort zone." Therefore, they often prefer to "keep things as they are"; this way, "safe, well-known routines" and a control-oriented organizational attitude might block these organizations' development.

In contrast, a learning culture leads to active knowledge exploration through constant, dynamic knowledge acquisition provoked by “intelligence in action” (Erickson and Rothberg, 2012). A pervasive and persistent learning culture is essential to the development and growth of learning organizations in the current economic climate of continuous change (Maes and Van Hootegem, 2019; Rass et al., 2023). An organizational learning culture can facilitate the creation and sharing of tacit knowledge and discourage hoarding or hiding it (Weinzimmer and Esken, 2017). By itself, a knowledge culture does not cause such an effect, though it is a basis for fostering curiosity and exposing knowledge gaps that lead to learning. This elaborated differentiation idea is consistent with the research of Webster and Pearce (2008), who highlighted the importance of situational learning, which is essential to active and contextual learning. Situational learning is aligned with the current context. Contextual learning is vital for tacit knowledge acquisition. Tacit knowledge is a tremendous source of innovation. So, the aim of constant learning culture implementation is especially relevant today in a dynamic and rapidly changing business environment. Acting in such a dynamic and unpredictable business environment is a kind of experimentation that might be risky and naturally bring some mistakes that, if they occur, should not be wasted. So, the culture of learning sees mistakes not as a stigma of negligence but as an unintended effect of action that can be a source of precious lessons. The essence of this component is not acceptance of negligence at work but taking the complete lesson of the mistake event and capturing the new, contextual knowledge. Therefore, the lack of mistakes acceptance component of a learning culture can block learning from mistakes at the organizational level, which can be a waste. If a mistake occurs, then make it a lesson at least. A learning culture without developed mistakes’ acceptance component is an illusion of learning culture. So, an efficient learning culture should comprise the learning climate component and the component of acceptance of mistakes as a source of potential learning (Kucharska and Bedford, 2020). It is about Based on the above elaboration, the hypotheses are given below:

H1a: Knowledge culture positively influences the learning climate component of a learning culture.

H1b: Knowledge culture negatively influences the mistakes acceptance (as a source of learning) component of a learning culture.

A culture of learning is seen as an organization’s ability to create, acquire, and exchange knowledge, modify its behaviors and choices, and integrate that new knowledge and insights into its organizational knowledge (Garvin, 1993). Learning culture facilitates all organizational learning processes that influence dynamic capabilities, innovativeness, and sustainability (Klein, 2022; Romme and van Witteloostuijn, 1999). So, company culture matters in innovativeness and development studies (Dabrowska and Savitskaya, 2013; Warrick, 2017). The KLC cultures approach is dedicated to knowledge-driven organizations’ understanding that they can achieve sustainability thanks to innovations. Innovation generation comes from knowledge, critical thinking, learning, taking risks, and collaboration – as Kucharska and Bedford (2023a) stated. According to them, learning culture contains vital learning process components such as learning climate and mistake acceptance that significantly affect organizational change adaptability and intelligence development. Moreover, contrary to knowledge-oriented organizations’ culture, which focuses more on static knowledge exploitation, the learning culture supports a dynamic, constantly breaking status quo with a shared state of mind open to constant improvement. The continuous learning culture facilitates all the learning that happens in organizations. Briefly, there is no growth without learning. So, the organizational learning climate acts as an organizational learning stimulus, thanks to which the organization takes lessons from each event, both positive and negative, including mistakes. Therefore, the hypothesis is added as below:

H1c: The learning climate component of learning culture positively influences the mistakes acceptance (as a learning source) component.

Moreover, suppose an organization is seen as a group of people coordinated to achieve the aim none of them can achieve alone. In that case, collaborative culture is the essence of any organization's existence (Kucharska and Bedford, 2023a). Organizational learning requires collaboration. Collaboration supports learning, which is a source of new knowledge (Kucharska and Bedford, 2020; Nugroho, 2018). Collaboration is then the core competency that enables knowledge organizations to create relational knowledge capital. Based on this, the hypothesis is given below:

H1d: Collaborative culture positively influences the learning climate component of a learning culture.

H1e: Collaborative culture positively influences the acceptance of the mistakes (as a source of learning) component of a learning culture.

Based on Kucharska and Bedford (2023b), it is empirically proved that knowledge culture and collaborative culture are correlated and foster knowledge sharing, especially tacit. Therefore, the hypothesis is added:

H1f: Knowledge culture and collaborative culture are correlated.

Moreover, Alavi, Kayworth and Leidner (2005); Kucharska (2017); Kucharska, Kowalczyk and Kucharski (2017); and Yang (2007) studies indicated that knowledge sharing is motivated by collaborative culture; therefore, the additional hypothesis is formulated below:

H2: Collaborative culture influences positively explicit knowledge sharing.

Knowledge sharing

Knowledge is recognized today as the most critical company resource that can provide organizations with a sustainable competitive advantage (Barney, 1991). Therefore, sharing among workmates is equally critical for creating and implementing this competitive advantage. Both forms of knowledge - tacit and explicit matter for organizational innovativeness and development (Islam and Chadee, 2023). Tacit knowledge, in contrast to explicit, is enormously personal. Tacit knowledge can be challenging to express directly in words, and often, the only ways of presenting it are through drawings, metaphors, analogies, and different methods of expression that do not require a formal use of language (Koskinen et al., 2003). Thanks to experimentation and learning through interactions and collaborations, its acquisition enables its awareness and, as a result, also sharing, which in more and more remote-work-dominated business environments is often supported by technology and IT competency of the workforce (Kucharska and Erickson, 2023a-b). The culture of learning supports knowledge dissemination (tacit and explicit) across the company (Lucas, 2006; Schmitz et al. 2014; Kucharska and Bedford, 2023a-b). Therefore, the hypotheses are formulated below:

H3a Mistakes acceptance component of learning culture influences positively explicit knowledge sharing.

H3b: Mistakes acceptance component of learning culture positively influences tacit knowledge sharing.

H3c: Learning climate component of learning culture positively influences tacit knowledge sharing.

H3d: Learning climate component of learning culture positively influences explicit knowledge sharing.

Moreover, following Islam, Jasimuddin and Hasan's (2015) statement that knowledge culture supports the flow of knowledge throughout the organization and relying on Kucharska's (2021a) empirical evidence, it is assumed that knowledge culture might motivate knowledge workers to share their newly discovered thoughts and ideas. Thus, the following hypothesis is formulated:

H4: Knowledge culture influences tacit knowledge sharing positively.

Tacit knowledge acquisition and sharing is strongly contextual. It is acquired thanks to intelligence, and intelligence is growing thanks to tacit knowledge acquisition. So, tacit knowledge is precious. It is a critical ingredient of the explicit knowledge creation (Nonaka and Takeuchi, 1995). All the knowledge is rooted in tacit knowledge, as Polanyi (1966) stated. Based on this, the hypothesis is given below:

H5: Tacit knowledge sharing fosters explicit knowledge sharing.

Organizational development

Modern markets require organizations to learn and constantly adapt to sustain their competitive advantage through systematic improvements. The KLC cultures approach promotes the view that the priority of knowledge-driven organizations today is to adapt to hyperdynamic reality smoothly to keep competitiveness. Change is a characteristic of the current economy and requires organizations to adapt constantly. Existing in a fast-changing environment requires making change a part of daily organizational routines. In the knowledge economy, organizations and individuals create and adapt to change, thanks to up-to-date knowledge, which they can acquire and transform into value propositions relevant to market needs (Rass et al., 2023). How organizations deal with the need for adaptability and respond to surrounding change determines their survival and development. To improve innovation and business performance, developing a robust knowledge management (KM) strategy is a pivotal step for many firms today (Lai et al., 2022). This strategy is focused on identifying sources of desired, new knowledge, acquiring this knowledge (tacit), transforming it into explicit form through socialization, and externalizing this knowledge through its application to new solutions and new value propositions creation. So, the essence is organizational learning and transforming tacit knowledge into explicit

knowledge to create innovative solutions needed to win the market. Based on this, the hypothesis is developed as it goes below:

H6 Explicit knowledge sharing fosters market innovations.

Knowledge is a vital asset of the current economy because it is essential to company intelligence development (Rothberg and Erickson, 2007). Feuerstein et al. (1979) defined intelligence as the ability to adapt to change. Following him, the organizational, collective capacity to adapt to change is seen as its intelligence. This collective capacity is more than the only sum of individual abilities. The essence of organizational intelligence is enhancing the ability to act and grow collectively as a community. This collective intelligence development pays back as collective, intelligent acting is needed to compete and win in any market. Tacit knowledge sharing among workmates fosters the creation of innovative ideas that drive adaptability to change (Kucharska and Rebelo, 2022). At the same time, explicit knowledge supports implementing this change procedurally. Therefore, hypotheses have been given as follows:

H7: Explicit knowledge sharing fosters organizational intelligence (change adaptability).

H8: Tacit knowledge sharing fosters organizational intelligence (change adaptability).

Organizational adaptability reflects how an organization responds to change by managing stress and uncertainty, exposing flexibility or resilience, and supporting those who tackle problems to face the change (Reupert, 2020). Martin et al. (2013, p. 1) defined adaptability as 'appropriate cognitive, behavioral and/or emotional adjustment in the face of uncertainty and novelty.' Change is a characteristic of today's economy that places companies in a permanent learning and development mode related to adjusting, gaining a market advantage, and creating value through constant innovativeness (Kucharska and Rebelo, 2022). Bearing in mind all of the above, the hypothesis is formulated below:

H9: Organizational intelligence (change adaptability) fosters market innovations.

Trust as a control variable

TRUST reflects the belief in someone's reliability. Regarding organizations, Tan and Lim (2009) see trust in coworkers as the willingness of a person to be vulnerable to coworkers whose behavior and actions that person cannot control. TRUST strongly impacts knowledge sharing willingness among co-workers (Berraies, Hamza and Chtioui, 2020; Kmiecik, 2021; Rutten, Blaas-Franken and Martin, 2016). Sharing knowledge is like sharing a power. Trust among co-workers ensures successful collaboration and vice versa, reducing barriers to collaboration and knowledge-building across different parties (Handzic, Bratianu and Bolisani, 2021; Kucharska, 2017; Samuel and Koga, 2023). Trust increases knowledge sharing, team creativity, and performance (Andersson, Moen and Brett, 2020; Kucharska et al., 2017). At the same time, knowledge sharing supports trust-building among knowledge workers (Thomas et al., 2009). Therefore, TRUST is included in this study as a control variable (CV). CV imputation enables the inclusion of extraneous variables that are not the focal point of the thorough research but remain theoretically important (Carlson and Wu, 2012; Nielsen and Raswant, 2018). Sankowska (2013) presents the role of TRUST as a mechanism facilitating the transfer and creation of tacit into explicit knowledge within the company, making the organization much more innovative. Also, the former studies by Kucharska (2017) and Kucharska et al. (2017) exposed TRUST as a critical facilitator needed for tacit knowledge sharing. Based on this, the hypothesis is added below:

H_{cv}: TRUST positively impacts tacit knowledge sharing.

Based on the above, Figure 1 below visually summarizes the conceptual framework of the planned empirical research.

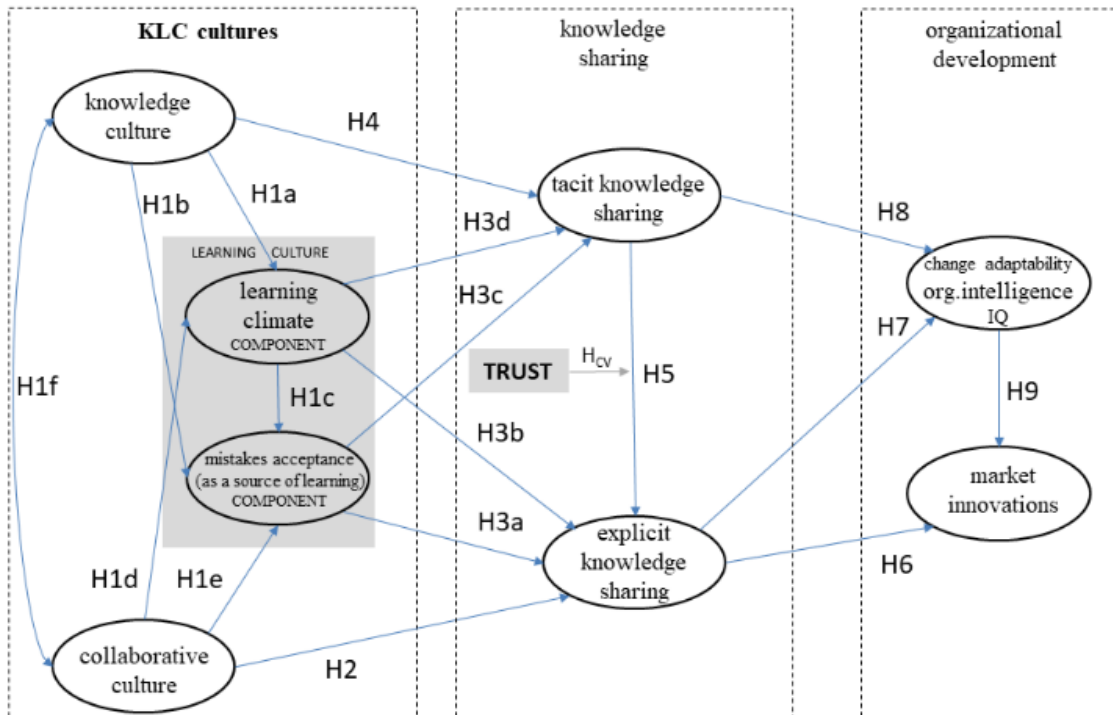


Figure 1: Conceptual framework

3. Methodology

Sampling procedure: This study targeted Polish knowledge workers; therefore, qualified respondents declared that their work's first input and output was knowledge. Moreover, to ensure the respondents' familiarity with their organizations' issues, we qualified only those who worked a minimum of one year for their current employer. The key definitions were provided to ensure the total understanding of the measured constructs. Data were collected in March 2023 by applying the CAWI method by Biostat® Poland.

Sample characteristics: The study sample was composed of 640 Polish knowledge workers: 306 specialists and 334 managers; 329 women and 311 men representing primarily private (77%) companies from different sectors to illustrate the general view on Poland (dominating sectors: production and knowledge services 19% each).

Measures: Following deVellis (2017, p. 2), "measurement is a fundamental activity of science." Social science measures focus on social constructs that are measured via scales. So, unobservable constructs are measured via observable indicators (loadings) reflected in statements. These statements align closely to a particular construct definition to reflect the meaning of a specific construct. Appendix 1 presents measured constructs scales (statements) and their sources. Respondents referred to the statements using a 7-point Likert scale. All measures reached the referenced values. The internal consistency of the constructs was assessed using Cronbach's alpha > 0.7 (Byrne, 2016; Hair et al., 2010) and average variance extracted (AVE) > 0.5 (Byrne, 2016; Hair et al., 2010). Further, composite reliability (CR) > 0.7 (Byrne, 2016; Hair et al., 2010) was used to justify the reliability of the scales. Next, discriminant validity was checked after the positively assessed statistical power of the chosen items (deVellis, 2017; Hu and Bentler, 1999). Detailed reliabilities are given in Table 1. Additionally, Appendix 2 presents the Cross-Loadings Matrix to verify if the scales used do not overlap and loadings do not supercharge one another.

Control variable (CV): TRUST was input into the model as CV; to do so, the composite variable was created based on the scale measures (Wang, 2022).

Method of analysis: Structural equation modeling (SEM) using SPSS Amos 26 software (Byrne, 2016); OLS regression using SPSS Process version 3.4.

Sample quality: Kaiser–Meyer–Olkin (KMO) test: .957, the total variance extracted: 75%, and Harman one factor test: 44% justify the good quality of the sample (Hair et al., 2010; Podsakoff and Organ, 1986).

Table 1: Basic statistics, obtained AVE root square, and correlations between constructs

	Mean	SD	AVE	CR	Cronbach alpha	T	CC	KC	LCc	LcM	TKS	EKS	IQ	InnE
T	3.59	2.01	.57	.79	.80	.753								
CC	3.68	2.09	.56	.86	.83	.677	.752							
KC	4.23	2.52	.71	.88	.88	.499	.657	.845						
LCc	3.74	2.15	.57	.79	.83	.586	.846	.693	.753					
LcM	3.12	1.7	.80	.94	.94	.437	.651	.398	.608	.894				
TKS	3.61	.07	.66	.85	.87	.637	.69	.606	.718	.543	.813			
EKS	3.56	1.98	.55	.79	.78	.668	.902	.642	.719	.692	.719	.742		
IQ	3.64	1.98	.59	.85	.85	.592	.75	.567	.708	.58	.786	.742	.765	
InnE	3.59	1.96	.54	.78	.77	.557	.738	.535	.678	.567	.697	.722	.758	.732

Note: n=640 KC-knowledge culture, LCc-learning culture climate component, LcM-Learning culture mistakes acceptance component (as a potential source of learning), CC-collaborative culture, TKS-tacit knowledge sharing, EKS-explicit knowledge sharing, T-TRUST, IQ- organizational change adaptability, InnE – market (external) innovations

After the positive assessment of the sample and applied scales reliability, the structural confirmatory factor analysis (CFA) model was developed to ensure that the scales performed appropriately. The evaluation of the model quality was initially conducted based on constructs’ measurement consistency tests such as the average of variance extracted (AVE), composite reliability (CR), and Cronbach’s alpha. AVE exceeded 0.54 for all constructs, which was acceptable (Hair et al., 2017). Cronbach’s alpha test was used to confirm the consistency of the construct measurement model. The alpha coefficient was greater than 0.77 for all constructs, which was adequate (Hair et al. 2017, pp. 112). The CR was greater than 0.78 for all loadings, which was more than the required minimum of 0.7 (Hair et al., 2017). The square root of each construct’s AVE exceeded the correlations between any pair of distinct constructs except CC-LCc and CC-EKS (bolded in Table 1). It means that there is a strong interdependency between collaborative culture, learning climate, and knowledge sharing in Poland. On the one hand, this interdependency may cause slight bias; on the other hand, it exposes how focal the collaborative culture is for knowledge spreading in Poland.

4. Results

Obtained results (Table 2a; Model A and B comparison) show that TRUST is next to the KLC culture's synergy, a focal company facilitator of knowledge-sharing processes in the knowledge-driven organization. The TRUST (CV) imputation strengthened the entire model's quality.

Moreover, results show that knowledge culture supports the learning climate component of a learning culture (H1a $\beta=.24^{***}$). Still, it is negatively related to the mistakes acceptance component (H1b $\beta=-.12^*$). The climate component supports the mistakes acceptance component (H1c $\beta=.26^{***}$) – as was indeed assumed by the KLC cultures approach by (Kucharska and Bedford, 2023a). On the contrary, collaborative cultures support both components of learning cultures (H1e $\beta=.51^{***}$; H1f $\beta=.66^{***}$). That next supports knowledge sharing except that the hat learning climate (H3b $\beta=.01(.899)$) is insufficient for explicit knowledge sharing. It might be that it is mediated by tacit knowledge sharing or by mistakes acceptance component of the learning culture. These assumptions require further profound verification.

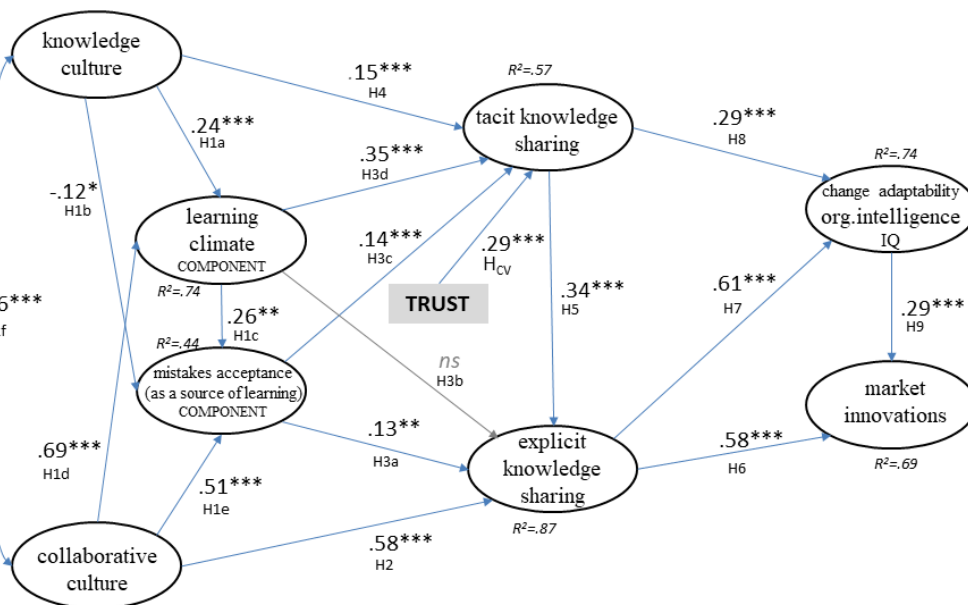
Nevertheless, it exposes why knowledge culture itself is insufficient for knowledge-driven company development. Knowledge, learning, and collaborative culture (KLC cultures) support one another and together deliver to the organization the expected benefit of smooth knowledge sharing (H2 $\beta=.58^{***}$; H3a/c/d $\beta=.13^{**}/.14^{***}/.35^{***}$; H4 $\beta=.15^{***}$; H5 $\beta=.34^{***}$). Finally, knowledge sharing fosters organizational intelligence (H7 $\beta=.61^{***}$; H8 $\beta=.29^{***}$), which matters in creating innovations (H6 $\beta=.58^{***}$), which is a potent source of the expected competitive advantage. Summing up, change adaptability skills reflecting organizational intelligence gained thanks to knowledge sharing leads to innovations (H9 $\beta=.29^{***}$). Table 2a below presents hypotheses verification details supporting this view. Table 2a compares the obtained results for two models: Model A, run with TRUST as CV, and Model B, run without it (Aguinis and Vandenberg, 2014; Becker et al., 2016). The model with TRUST fits the data better. So, it supports the theoretical justification given to input TRUST as a CV to the

study. Therefore, all the subsequent analyses and visualizations (Figure 2, Figure 3) are presented for the model with the TRUST variable as CV.

Table 2a: Hypotheses verification

Model A with TRUST CV			Model B without CV		
Hypothesis	significance	verification	Hypothesis	significance	verification
H1a	.24***	sustained	H1a	.27***	sustained
H1b	-.12*	sustained	H1b	-.17***	sustained
H1c	.26***	sustained	H1c	.30***	sustained
H1d	.69***	sustained	H1d	.68***	sustained
H1e	.51***	sustained	H1e	.44***	sustained
H1f	.66***	sustained	H1f	.67***	sustained
H2	.58***	sustained	H2	.50***	sustained
H3a	.13**	sustained	H3a	.13***	sustained
H3b	.01(.899)	rejected	H3b	.12(.15)	rejected
H3c	.14***	sustained	H3c	.11*	sustained
H3d	.35***	sustained	H3d	.61***	sustained
H4	.15***	sustained	H4	.11(.68)	rejected
H5	.34***	sustained	H5	.30***	sustained
H6	.58***	sustained	H6	.56***	sustained
H7	.61***	sustained	H7	.61***	sustained
H8	.29***	sustained	H8	.28***	sustained
H9	.29***	sustained	H9	.30***	sustained
H _{CV}	.29***	sustained			

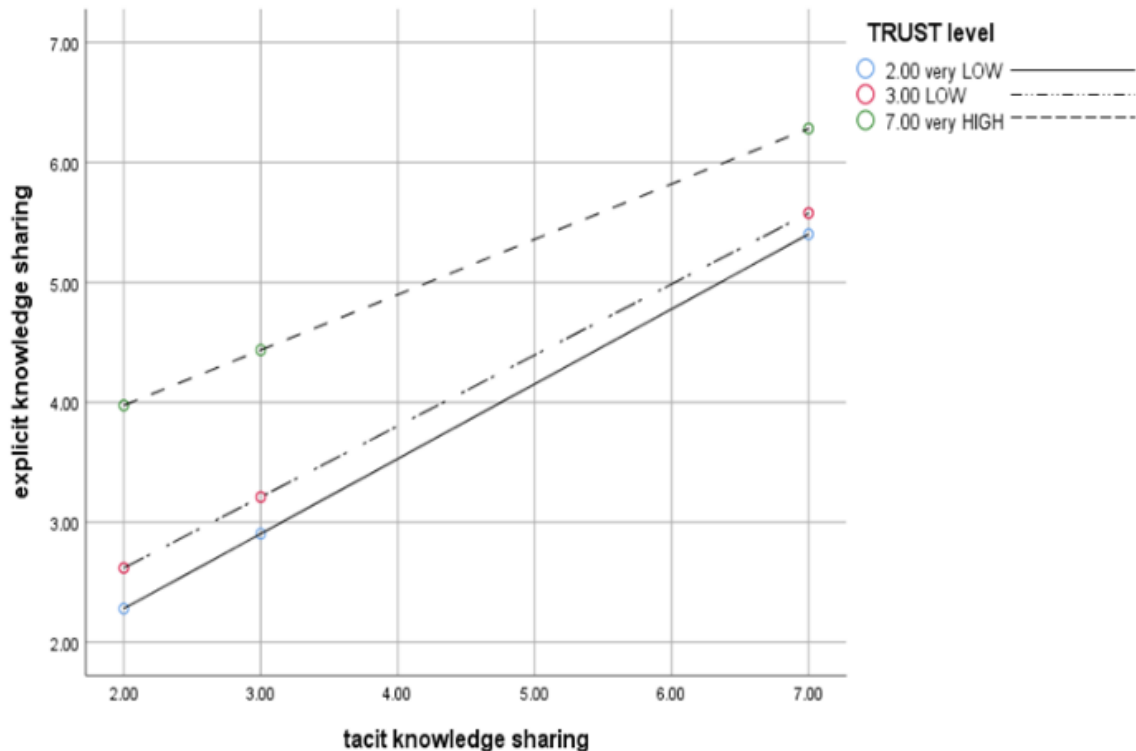
Note: MODEL A n=640, ML; $\chi^2=1043.45(331)$ CFI=.941 TLI=.933 RMSEA=.059 Cmin/df=3,15; *p<.05 **p<.01 ***p<.001. MODEL B n=640, ML; $\chi^2=1016,34(307)$ CFI=.939 TLI=.931 RMSEA=.060 Cmin/df=3,31; *p<.05 **p<.01 ***p<.001 ns-not significant result



Note: n=640, ML; $\chi^2=1043.45(331)$ CFI=.941 TLI=.933 RMSEA=.059 Cmin/df=3,15; p<.05 **p<.01 ***p<.001 ns-not significant result

Figure 2: Results

Figure 2 and Table 2a show that TRUST significantly moderates the relation between TKS and EKS. However, they do not precisely expose how. Therefore, Figure 3 visualizes TRUST's identified, moderated effect on tacit knowledge's impact on the formulation and sharing of its explicit form. Figure 3 shows that the higher the level of TRUST in the organization, the more beneficial the transformation from tacit to explicit knowledge sharing is. Appendix 3 gives details of the visualized effects.



Note: Level of confidence: 95.0000; T variable values are given for the 16th, 50th, and 84th data percentiles (details in Appendix 3)

Figure 3: Visualization of how TRUST impacts tacit knowledge transformation into explicit form

Furthermore, the entire empirical Model A, with TRUST as CV, sustained all hypotheses except H3b (Table 2). What is very interesting is that H4 ($\beta=.15^{***}$) about the positive influence of knowledge culture on tacit knowledge sharing was sustained in Model A, whereas, in Model B (without TRUST as CV), H4 has been rejected ($\beta=.11(.68)$). It suggests that in organizations without developed TRUST, the relation between knowledge culture and tacit knowledge sharing must be probably fully mediated by the learning climate component of a learning culture. In the model with TRUST, this mediation is expected to be partial. Based on these assumptions, hypothesis H1 post-hoc has been formulated below. Table 2b presents its verification details.

H1_{post-hoc}: The learning climate component of learning culture serves as a mediator between knowledge culture and tacit knowledge sharing.

Furthermore, in both Model A and Model B, the H3b about the positive influence of the learning climate component of learning culture on explicit knowledge sharing was rejected. This suggests that the relationship between learning climate and explicit knowledge sharing is probably fully mediated by the mistakes acceptance component of learning culture. Based on these assumptions, the hypothesis H2 post-hoc has been formulated below. Table 2b presents its verification details.

H2_{post-hoc}: The mistakes acceptance component of learning culture serves as a mediator between the learning climate component and explicit knowledge sharing.

Table 2b: Hypothesis post-hoc verification

Hypothesis	Model	Direct effect	Indirect effect	Total effect	Mediation type observed
$H1_{post-hoc}$ <i>KC->LCC->TKS</i>	Model A with TRUST CV	.15***	.10(.003)	.22(.001)	<i>partial mediation</i>
	Model B without CV	.11(.68)	.15(.001)	.29(.001)	<i>full mediation</i>
$H2_{post-hoc}$ <i>LCC->LCM->EKS</i>	Model A with TRUST CV	.01(.899)	.17(.001)	.27(.018)	<i>full mediation</i>
	Model B without CV	.12(.15)	.24(.001)	.40(.005)	<i>full mediation</i>

Note: n=640, ML; $p < .05$ ** $p < .01$ *** $p < .001$; ns-not significant result. This bootstrap approximation was obtained by constructing two-sided percentile-based confidence intervals.

The verification of post-hoc hypotheses showed that TRUST empowers the KLC culture synergy impact on knowledge sharing and, consequently, also for organizational intelligence (change adaptability) and innovativeness. Precisely as was expected, the learning climate component of learning culture serves as a mediator between knowledge culture and tacit knowledge sharing. For the model with imputed TRUST CV, it serves as a partial mediator, and without it—as full. So TRUST matters for organizational intelligence building through its strong impact on knowledge-sharing processes. It was also expected that the acceptance of mistakes (as a source of potential learning) in learning culture serves as a mediator between the learning climate component and explicit knowledge-sharing. This hypothesis is sustained for both models—with and without TRUST CV. The full mediation effect is observed for both cases. So, it means that the motivational atmosphere (learning climate component) itself is insufficient and that the mistakes acceptance component supporting the trial-error learning is tremendous for knowledge-sharing processes and consequently for organizational intelligence (change adaptability) and innovativeness.

5. Discussion

The presented results expanded the former studies by Kucharska and Bedford (2020; 2023a-b) and Kucharska (2021a-b) and exposed that KLC cultures and TRUST are needed to develop tacit knowledge sharing, which clearly is an essential ingredient for organizational intelligence development. Moreover, the mistakes acceptance component of learning culture supporting trial-error-learning is tremendous for knowledge-sharing processes, organizational intelligence (change adaptability), and innovativeness. Altogether, knowledge sharing, organizational intelligence, and innovativeness are vital benefits of the synergy that offers the KLC cultures' simultaneous implementation and management. TRUST strengthens this effect.

The interesting issue coming from this study that should be discussed more in-depth is the mistake acceptance component of learning culture identified in this study as a full mediator between the climate component and explicit knowledge sharing. This finding is in line with the former research, which stressed that the organizational ability to learn from mistakes must be supported by company culture to increase the ability to adapt to changes seen as organizational intelligence (Hosseini, Kucharska and Treur, 2024; Kucharska and Bedford, 2020; Rass et al., 2023) and that can be troubled in organizations by the double bias of mistakes phenomena that essence is a clash between positive attitudes and beliefs regarding learning processes and the negative attitudes and beliefs towards accompanying them mistakes (Kucharska and Kopytko, 2024). For organizations to learn from mistakes, communal reflexivity is needed (Ellis et al., 2014). Parker, Racz and Palmer (2020) noted that organizational reflexivity is not exclusively the individual's action—it is a co-created practice of the whole team within a specific organizational context. It is commonly known that there is no learning without mistakes. However, in most organizations, mistakes are perceived as an indicator of negligence and poor performance instead of as part of trial-error learning (Hull, 1930). So, this study shows clearly that implementing the KLC approach in organizations supports organizational trial-error learning and collective intelligence that matter for growth and competitiveness.

Another issue worth discussing in more depth is the identified high correlation between collaborative culture and the learning climate component of learning culture and collaborative culture and explicit knowledge sharing. On the one hand, this interdependency may cause slight bias; on the other hand, it clearly exposes how focal the collaborative culture is for knowledge spreading in Poland. Similar observations were noted by Kucharska (2021a,c) based on different samples collected among knowledge workers in Poland. It might be that is an effect of the fact that employees in Poland are suffering from TRUST in institutions, organizations, and management but, at the same time, strongly rely on relations among coworkers (Kolodziej and Kolodziej-Durnas, 2015;

Sztompka, 1996). Therefore, implementing a collaborative culture is critical in Poland to achieve organizational agency.

6. Limitations and Implications

The key limitation of this research is that it is based on data collected in only one country. Since national culture always impacts organizations. Hence, the business sample explored in this study may reflect Poland's national culture, which suffers from trust. Since Polish people experienced a couple of traumatic collective experiences (e.g., the Second World War and ZSRR occupation after being a Second World War winner because of betrayal of the allies), this trust lack is understandable. Similarly to Kucharska (2017), Kucharska et al. (2017), Kucharska and Bedford (2019; 2020; 2023a-b), and Kucharska (2022, 2021a-b), Kucharska and Rebelo (2022) this study targeted Polish knowledge workers. It gives us a comprehensive view of Poland's company culture, trust, and knowledge-sharing relations. Still, at the same time, it is a limitation inspiring further studies. Benchmarking these findings with knowledge-driven companies across industries and national cultures would be interesting. The second significant limitation is the identified strong interdependency between collaborative culture, learning climate, and knowledge sharing in Poland. This interdependency may cause a slight bias, but at the same time, it might expose how focal collaborative culture is for knowledge spreading in Poland – to be sure how to interpret it, further studies are needed. So, further studies can explore these relations more in-depth.

7. Practical Implications

Practical implications are direct; the KLC approach facilitated by TRUST drives organizational intelligence. Therefore, KLC cultures are worth to be implemented simultaneously. Moreover, there is a risk that organizations with a learning culture developed without collaboration are stuck at the individual level of learning only. Similarly, it is clear that a knowledge culture developed without a multilevel learning culture jeopardizes the organization's growth. In such a case, only old, proven knowledge exploitation is accepted. That extreme situation leads to the rejection of new knowledge that is usually rationalized by the need for business safety security - that is nothing more than a ruse for intellectual laziness or personal barriers of fixed-minded managers. Similarly, knowledge culture rejects the mistakes acceptance component of learning culture that makes learning problematic. Can we learn without mistakes? Obviously, we cannot. So, a knowledge culture without learning and collaboration also jeopardizes organizational development. There is no development without learning. Moreover, the learning climate component of learning culture is insufficient for explicit knowledge sharing, and collaboration is needed to make learning and sharing happen. So, knowledge sharing, organizational intelligence, and innovativeness are vital benefits of the synergy that offers the KLC culture simultaneous implementation and cultivation. TRUST strengthens this effect.

Many organizations assume that if they espouse and even live a knowledge culture, by definition, they have a learning culture and a collaboration culture. It is more apparent than expected. Each of the KLC- sub-cultures requires attention and some effort to be implemented. All of these functional company cultures can exist independently. The effect will be subliminal - but such existence is possible and happens. Collaboration alone creates organizations where everybody feels good, but the company needs to perform. Knowledge culture alone can create organizations that focus too much on perfectionism and control the "status quo" that blocks development. Learning culture alone can focus too much on constantly seeking new, better solutions. Such a constant state can be problematic for organizational learning and development if we omit transforming new knowledge into new organizational rules, procedures, and daily routines. So, the KLC cultures approach can be implemented by having a complete organizational understanding of how all its components affect one another.

Company culture is an asset that requires design, implementation, and management to leverage the company by supporting its strategy. If company culture and strategy misalign, there is no chance for success in the long run. So, knowledge-driven organizations that develop their intellectual capital should implement KLC cultures and take full advantage of the synergy needed for organizational innovativeness. There is no chance for innovativeness without collective intelligence.

Summing up the practical perspective of the obtained results, those managers who care about developing knowledge-driven organizations in the hyperdynamic conditions as observed today need to build collective intelligence. To do so, they must implement KLC cultures and build TRUST. Moreover, if managers working in knowledge-driven organizations do not reflect knowledge, learning, and collaboration cultures—the components of the KLC culture approach—then they should not be managers at all. Reflecting the KLC approach by managers is critical for building organizational intelligence and innovation.

Based on the above, the KLC-approach implementation best practices are:

1. Appreciate new knowledge and new understanding. Never reject new knowledge only because the old ways of acting are solid. Old solutions might not work best in new times. Intellectual laziness can cost you the market. Therefore, always keep your mind open to a deep contextual understanding of "what is going on" and what any new reality means for your internal and external clients and your business." Remember that what fitted yesterday or today might not be relevant tomorrow. Stay open-minded.
2. Learn constantly. Constant learning focus helps you keep the balance between knowledge exploitation and exploration. To do it perfectly, you must recognize context changes and their meaning for your people, clients, and business. So, constantly critically analyze the context, your actions, and their impact. So, think critically, learn, and align your actions with the context change.
3. Learn from your good and bad experiences. Remember, mistakes are harsh, sometimes costly lessons, so you cannot waste the knowledge they bring you. Therefore, be the first to admit mistakes and share the knowledge gained thanks to this harsh event; immediately implement improvements to avoid similar mistakes in the future. Be the best example of learning behaviors you want to see among your organization members.
4. Learn collectively. An organization is a group of people who want to achieve together an aim that each member cannot complete alone. So, for your organization's success, it does not matter what you or one of your employees can achieve alone. The essence of organizational success is what you can achieve together. So, collective instead of individual growth matters more. Therefore, if you want your organization to grow, then enhance the multilevel, collective growth. Organizational learning is not the sum of individual learning but a collective learning issue.
5. Trust the people you work with. If you cannot trust them, find others worth your trust. We rarely accept support from someone we do not trust and vice versa. We do not support people we cannot trust. That is why trust matters so much for learning organizations. Trust is difficult to earn and easy to lose. It is precious because it determines collective acting, especially knowledge sharing. Trust comes from positive mutual experiences. Do not be surprised if your people do not trust you and do not engage at work when you expose overcontrol and treat them like cheaters. Knowledge workers' brilliant minds to engage at work need challenges and trust. Give it to them if you want your organization to grow.
6. The collective intelligence of knowledge-driven organizations results from the smooth cooperation of brilliant minds. To achieve this, you need to implement the KLC approach. We learn about company culture from our experiences, not from formal statements. Employees mirror leaders' behaviors (Badrinarayanan et al., 2019; Hosseini et al., 2023). That is why, as a manager, you must expose it first. You need to create the KLC cultures' synergy experiences among your employees. Without the positive experience of the KLC, your employees will not absorb the KLC. The only way to successfully implement any behavior is to be the perfect example of behavior you want to see among your organization's members.

8. Conclusion

Knowledge sharing, organizational intelligence, and innovativeness are key benefits of the synergy that offers the KLC cultures' simultaneous implementation and management. TRUST strengthens this effect. So, those managers who care about developing knowledge-driven organizations in the hyperdynamic conditions observed today need to build collective intelligence; to do this efficiently, they should implement KLC cultures and build TRUST. The presented results expose that KLC cultures and TRUST are needed to develop tacit knowledge sharing, which clearly is an essential ingredient for organizational intelligence development.

Moreover, this study is another one that breaks with conventions of "exaggerated excellence" and promotes acceptance of mistakes in organizations to develop organizational intelligence. This study showed that implementing the KLC approach in organizations supports organizational trial-error learning and collective intelligence, which matter for growth and competitiveness. Collective intelligence understood as a network of knowledge workers and brilliant minds that collaborate smoothly, is a severe organizational potency that needs to be activated. KLC cultures' synergy facilitates it significantly.

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References

- Aguinis, H., and Vandenberg, R.J. (2014). An ounce of prevention is worth a pound of cure: improving research quality before data collection. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 569–595.
- Alavi, M., Kayworth, T.R., and Leidner, D.E. (2005). An empirical examination of the influence of organizational culture on knowledge management practices. *Journal of Management Information Systems*, 22(3), 191-224. <https://doi.org/10.2753/MIS0742-1222220307>
- Andersson, M., Moen, O., and Brett, P.O. (2020). The organizational climate for psychological safety: associations with SMEs' innovation capabilities and innovation performance. *Journal of Engineering and Technology Management*, 55, 101554. <https://doi.org/10.1016/j.jengtecman.2020.101554>.
- Badrinarayanan, V., Ramachandran, I., and Madhavaram, S. (2019). Mirroring the Boss: Ethical Leadership, Emulation Intentions, and Salesperson Performance. *Journal of Business Ethics*, 159, 897–912. <https://doi.org/10.1007/s10551-018-3842-1>
- Barney, J.B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700>
- Bajaj, A., Bradley, W., and Sun, L. (2024). Corporate culture and sales order backlog. *Managerial Finance*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MF-10-2023-0676>
- Becker, T.E., Atnic, G., Breaugh, J.A., Carlson, K.D., Edwards, J.R., and Spector, P.E. (2016). Statistical control in correlational studies: 10 essential recommendations for organizational researchers. *Journal of Organizational Behavior*, 37, 157–167. <https://doi.org/10.1002/job.2053>
- Berraies, S., Hamza, K.A., and Chtioui, R. (2020). Distributed leadership and exploratory and exploitative innovations: mediating roles of tacit and explicit knowledge sharing and organizational trust. *Journal of Knowledge Management*. <https://doi.org/10.1108/JKM-04-2020-0311>.
- Burnes, B., and James, H. (1995). Culture, cognitive dissonance and the management of change. *International Journal of Operations & Production Management*, 15(8), 14-33. <https://doi.org/10.1108/01443579510094062>
- Byrne, B.M. (2016). *Structural Equation Modeling with Amos*. Routledge, Abingdon.
- Capestro, M., Rizzo, C., Klietnik, T., Pelurso, A.M., and Pino, G. (2024). Enabling digital technologies adoption in industrial districts: The key role of trust and knowledge sharing. *Technological Forecasting and Social Change*, 198, 123003. <https://doi.org/10.1016/j.techfore.2023.123003>
- Carlson, K.D., and Wu, J. (2012). The illusion of statistical control: control variable practice in management research. *Organizational Research Methods*, 15(3), 413-435. <https://doi.org/10.1177/1094428111428817>
- Cegarra-Navarro, J-G., Jimenez-Jimenez, D., and Garcia-Perez, A. (2021). An integrative view of knowledge processes and a learning culture for ambidexterity: Toward improved organizational performance in the banking sector. *IEEE Transactions on Engineering Management*, 68(2) 408-417. <https://doi.org/10.1109/TEM.2019.2917430>
- Dabrowska, J., and Savitskaya, I. (2013). When culture matters: exploring the open innovation paradigm. *Business Innovation and Research*, 8(1), 94-118. <https://doi.org/10.1504/IJBIR.2014.058048>
- deVellis, R.F. (2017). *Scale Development: Theory and Applications*. Sage, Thousand Oaks.
- Ellis, S., Carrette, B., Anseel, F., and Lievens, F. (2014). Systematic reflection: Implications for learning from failures and successes. *Current Directions in Psychological Science*, 23, 67–72. <https://doi.org/10.1177/0963721413504106>
- Erickson, G.S., and Rothberg, H. (2012). *Intelligence in action: Strategically managing knowledge assets*, Springer.
- Faccin, K., Balestrin, A., Volkmer Martins, B., and Bitencourt, C.C. (2019). Knowledge-based dynamic capabilities: a joint R&D project in the French semiconductor industry. *Journal of Knowledge Management*, 23(3), 439-465. <https://doi.org/10.1108/JKM-04-2018-0233>
- Feuerstein, R., Feuerstein, S., Falik, L., and Rand, Y. (1979). *Dynamic Assessments of Cognitive Modifiability*, ICELP Press, Jerusalem, Israel.
- Garvin, D.A. (1993). Building a learning organization. *Harvard Business Review*, 71(4), 78-91.
- Hair, J.F., G.T. Hult, C.M. Ringle, and Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling*. Beverly Hills: Sage.
- Handzic, M., Bratianu, C., and Bolisani, E. (2021). Scientific Associations as communities of practice for fostering collaborative knowledge building: Case study of IAKM. *Electronic Journal of Knowledge Management*, 19(2), 91-104. <https://doi.org/10.34190/EJKM.19.2.2369>
- Holste, J.S., and Fields, D. (2010). TRUST and tacit knowledge sharing and use, *Journal of Knowledge Management*, 14(1), 128-140. <https://doi.org/10.1108/13673271011015615>
- Hosseini, M., Kucharska, W., and Treur, J. (2023). An Adaptive Network Model for a Double Bias Perspective on Learning from Mistakes within Organizations. Proceedings of the 12th International Conference on Complex Networks and their Applications, Complex Networks' 23. Springer Nature, Cham.

- Hu, L.T., and Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Hull, C.L. (1930). Simple trial and error learning: A study in psychological theory. *Psychological Review*, 37(3), 241–256. <https://doi.org/10.1037/h0073614>
- Islam, M.Z., Jasimuddin, S.M., and Hasan, I. (2015). Organizational culture, structure, technology infrastructure and knowledge sharing. *VINE Journal of Information and Knowledge Management Systems*, 45(1), 67-88, <https://doi.org/10.1108/VINE-05-2014-0037>
- Islam, M.T., and Chadee, D. (2023). Stuck at the bottom: Role of tacit and explicit knowledge on innovation of developing-country suppliers in global value chains. *International Business Review*, 32(2), 101898. <https://doi.org/10.1016/j.ibusrev.2021.101898>
- Klein, J.T. (2022). Building capacity for transformative learning: lessons from crossdisciplinary and cross-sector education and research. *Environmental Development and Sustainability*, 24, 8625–8638. <https://doi.org/10.1007/s10668-021-01802-5>
- Kmiecik, R. (2021). Trust, knowledge sharing, and innovative work behavior: empirical evidence from Poland. *European Journal of Innovation Management*, 24(5), 1832-1859. <https://doi.org/10.1108/EJIM-04-2020-0134>
- Kolodziej, A., and Kolodziej-Durnas, A. (2015). Diversity and Social Trust. *European Societies*, 17(2), 158-175. <https://doi.org/10.1080/14616696.2014.968798>
- Koskinen, K.U., Pihlanto, P., and Vanharanta, H. (2003). Tacit knowledge acquisition and sharing in a project work context. *International Journal of Project Management*, 21(4), 281-290. [https://doi.org/10.1016/S0263-7863\(02\)00030-3](https://doi.org/10.1016/S0263-7863(02)00030-3)
- Kotter, J.P., and Heskett, J.L. (2008). *Corporate culture and performance*. The Free Press.
- Kucharska, W. (2017). Relationships between trust and collaborative culture in the context of tacit knowledge sharing. *Journal of Entrepreneurship, Management and Innovation*, 13(4), 61-78. <https://doi.org/10.7341/20171344>
- Kucharska, W. (2021a). Leadership, culture, intellectual capital and knowledge processes for organizational innovativeness across industries: the case of Poland. *Journal of Intellectual Capital*, 22(7), 121-141. <https://doi.org/10.1108/JIC-02-2021-0047>
- Kucharska, W. (2021b). Do mistakes acceptance foster innovation? Polish and US cross-country study of tacit knowledge sharing in IT. *Journal of Knowledge Management*, 25(11), 105-128. <https://doi.org/10.1108/JKM-12-2020-0922>
- Kucharska, W. (2022). Tacit knowledge influence on intellectual capital and innovativeness in the healthcare sector: A cross-country study of Poland and the US. *Journal of Business Research*, 149, 869-883. <https://doi.org/10.1016/j.jbusres.2022.05.059>
- Kucharska, W., and Bedford, D.A.D. (2019). Knowledge Sharing and Organizational Culture Dimensions: Does Job Satisfaction Matter? *Electronic Journal of Knowledge Management*, 17(1), 1-18.
- Kucharska, W., and Bedford, D.A.D. (2020). Love your mistakes! – They help you adapt to change. How do knowledge, collaboration and learning cultures foster organizational intelligence? *Journal of Organizational Change Management*, 33(7), 1329–1354. <https://doi.org/10.1108/JOCM-02-2020-0052>.
- Kucharska, W., and Bedford, D.A.D. (2023a). *The Cultures of Knowledge Organizations: Knowledge, Learning, Collaboration (KLC)*. Emerald.
- Kucharska, W., and Bedford, D.A.D. (2023b). The KLC Cultures, Tacit Knowledge, and Trust Contribution to Organizational Intelligence Activation. Proceedings of the European Conference on Knowledge Management, ECKM 2023, Lisbon, September, vol.1, 749 – 759.
- Kucharska, W., and Erickson, G.S. (2023a). Tacit knowledge acquisition & sharing, and its influence on innovations: A Polish/US cross-country study. *International Journal of Information Management*, 71, 102647. <https://doi.org/10.1016/j.ijinfomgt.2023.102647>
- Kucharska, W., and Erickson, G.S. (2023b). A multi-industry and cross-country comparison of technology contribution to formal and informal knowledge sharing processes for innovativeness. *Knowledge & Process Management*. <https://doi.org/10.1002/kpm.1755>
- Kucharska, W., and Kopytko, A. (2024). Double Bias of Mistakes: Essence, Consequences, and Measurement Method. *Electronic Journal of Business Research Methods*, 22(1), 26-42. <https://doi.org/10.34190/ejbrm.22.1.3320>
- Kucharska, W., Kowalczyk, R., and Kucharski, M. (2017). Trust, Tacit Knowledge Sharing, Project Performance and their Managerial Implications. In: The Employee's Perspective. In Proceedings of the 18th European Conference on Knowledge Management, vol.1, 532-539, September, Barcelona, Spain.
- Kucharska, W., and Rebelo, T. (2022). Transformational leadership for researcher's innovativeness in the context of tacit knowledge and change adaptability. *International Journal of Leadership in Education*. <https://doi.org/10.1080/13603124.2022.2068189>.
- Lai, J.-Y., Wang, J., Ulhas, K.R., and Chang, Ch-H. (2022). Aligning strategy with knowledge management system for improving innovation and business performance. *Technology Analysis and Strategic Management*, 34(4), 474-487. <https://doi.org/10.1108/TLO-03-2022-0032>
- Lucas, L.M. (2006). The role of culture on knowledge transfer: the case of the multinational corporation. *The Learning Organization*, 13(3), 257-275. <https://doi.org/10.1108/09696470610661117>
- Maes, G., and Van Hootegem, G. (2019). A systems model of organizational change. *Journal of Organizational Change Management*, 32(7), 725-738. <https://doi.org/10.1108/JOCM-07-2017-0268>

- Martin, A.J., Nejad, H., Colmar, S., and Liem, G.A.D. (2013). Adaptability: How students' responses to uncertainty and novelty predict their academic and non-academic outcomes. *Journal of Educational Psychology*, 105(3), 728–746. <https://doi.org/10.1037/a0032794>
- Nielsen, B.B., and Raswant, A. (2018). The selection, use, and reporting of control variables in international business research: A review and recommendations. *Journal of World Business*. <https://doi.org/10.1016/j.jwb.2018.05.003>.
- Nonaka, I., and Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press.
- Nugroho, M.A. (2018). The effects of collaborative cultures and knowledge sharing on organizational learning. *Journal of Organizational Change Management*, 31(5), 1138-1152. <https://doi.org/10.1108/JOCM-10-2017-0385>
- Olaisen, J., and Revang, O. (2018). Exploring the performance of tacit knowledge: how to make ordinary people deliver extraordinary results in teams. *International Journal of Information Management*, 43, 295-304. <https://doi.org/10.1016/j.ijinfomgt.2018.08.016>
- Park, J.G., and Lee, J. (2014). Knowledge sharing in information systems development projects: Explicating the role of dependence and trust. *International Journal of Project Management*, 32(1), 153-165.
- Parker, S., Racz, M., and Palmer, P. (2020). Reflexive learning and performative failure. *Management Learning*, 51(3). <https://doi.org/10.1177/1350507620903170>
- Podsakoff, P.M., and Organ, D. (1986). Self-reports in organizational research: problems and prospects. *Journal of Management*, 12(4), 531-544. <https://doi.org/10.1177/014920638601200408>.
- Polanyi, M. (1966). *The tacit dimension*. University of Chicago Press.
- Rass, L., Treur, J., Kucharska, W., and Wiewiora, A. (2023). Adaptive dynamical systems modelling of transformational organizational change with focus on organizational culture and organizational learning. *Cognitive Systems Research*, 79, 85-108. <https://doi.org/10.1016/j.cogsys.2023.01.004>
- Reupert, A. (2020). Change and (the need for) adaptability: The new normal. *Advances in Mental Health*, 18(2), 91–93. <https://doi.org/10.1080/18387357.2020.1792633>
- Romme, A.G.L., and van Witteloostuijn, A. (1999). Circular organising and triple loop learning. *Journal of Organizational Change Management*, 12(5), 439-454. <https://doi.org/10.1108/09534819910289110>
- Rothberg, H., and Erickson, G.S. (2007). *From Knowledge to Intelligence*. Routledge
- Rutten, W., Blaas-Franken, J., and Martin, H. (2016). The impact of (low) trust on knowledge sharing. *Journal of Knowledge Management*, 20(2), 199-214. <https://doi.org/10.1108/JKM-10-2015-0391>
- Sankowska, A. (2013). Relationships between organizational trust, knowledge transfer, knowledge creation, and firm's innovativeness. *The Learning Organization*, 20(1), 85-100. <https://doi.org/10.1108/09696471311288546>
- Santhosa, S.S., and Lawrence, L.N. (2023). Understanding the implementations and limitations in knowledge management and knowledge sharing using a systematic literature review. *Current Psychology*, 42, 32427–32442. <https://doi.org/10.1007/s12144-022-04115-6>
- Samuel, M.E., and Koga, G. (2023). Team Barriers to Tacit Knowledge Sharing in Software Development Project Teams. *Electronic Journal of Knowledge Management*, 21(1), 59-72. <https://doi.org/10.34190/ejkm.21.1.2244>
- Schmitz, S., Rebelo, T., Garca, F.J., and Tomas, I. (2014). Learning culture and knowledge management processes: To what extent are they effectively related? *Journal of Work and Organizational Psychology*, 30, 113-121. <http://dx.doi.org/10.1016/j.rpto.2014.11.003>
- Senge, P.M. (2006). *The Fifth Discipline: The Art & Practice of the Learning Organization*. Crown Business, New York, NY.
- Sztompka, P. (1996). Trust and Emerging Democracy: Lessons from Poland. *International Sociology*, 11(1), 37-62. <https://doi.org/10.1177/026858096011001004>
- Tan, H.H., and Lim, A.K.H. (2009). Trust in Coworkers and Trust in Organizations. *Journal of Psychology: Interdisciplinary and Applied*, 143(1), 45-66. <https://doi.org/10.3200/JRLP.143.1.45-66>
- Thomas, D., and Brown, J.S. (2011). *A New Culture of Learning: Cultivating the Imagination for a World of Constant Change*. CreateSpace, Lexington, KY.
- Wang, H., Lu, S., and Liu, Y. (2022). Missing data imputation in PLS-SEM. *Quality & Quantity*, 56, 4777–4795. <https://doi.org/10.1007/s11135-022-01338-4>
- Warrick, D.D. (2017). What leaders need to know about organizational culture, *Business Horizons*, 60(1), 395-404. <https://doi.org/10.1016/j.bushor.2017.01.011>
- Webster, J., and Pearce, G. (2008). Crossfire: knowledge sharing should focus on learning culture, rather than the generation of knowledge. *Waterlines*, 27(2), 97-103. <https://doi.org/10.3362/1756-3488.2008.012>
- Weinzimmer, L.G., and Esken, C.A. (2017). Learning from mistakes: how mistake tolerance positively affects organizational learning and performance. *The Journal of Applied Behavioral Science*, 53(3), 322-348. <https://doi.org/10.1177/0021886316688658>
- Yang, J-T. (2007). Knowledge sharing: Investigating appropriate leadership roles and collaborative culture. *Turism Management*, 28(2), 530-543. <https://doi.org/10.1016/j.tourman.2006.08.006>
- Van Wijk, R., Jansen, J.J., Van Den Bosch, F.A., and Volberda, H.W. (2012). How firms shape knowledge to explore and exploit: a study of knowledge flows, knowledge stocks and innovative performance across units. *Technology Analysis and Strategic Management*, 24(9), 929-950. <https://doi.org/10.1080/09537325.2012.718666>
- Yoon, S.W., and Park, J.G. (2023). Employee's intention to share knowledge: the impacts of learning organization culture and learning goal orientation. *International Journal of Manpower*, 44(2), 231-246. <https://doi.org/10.1108/IJM-01-2021-0004>

Appendix 1: Scales and Their Sources

<p>Knowledge culture (Kucharska and Bedford, 2020)</p>	<p>All employees perceive knowledge as valuable resource. We have a common language to support knowledge exchange. We are encouraged to share knowledge, ideas, and thoughts. We care about the quality of knowledge that we share.</p>
<p>Learning culture (Kucharska and Bedford, 2020)</p>	<p><u>Learning climate component</u> All staff demonstrates a high learning disposition. We are encouraged to engage in personal development. We are encouraged to implement new ideas every day. We are encouraged to engage in seeking new solutions. <u>Mistakes acceptance component</u> People know that mistakes are a learning consequence and tolerate it up to a certain limit. Most people freely declare mistakes. We discuss problems openly without blaming others. Mistakes are tolerated and treated as learning opportunities.</p>
<p>Collaborative culture (Kucharska and Bedford, 2020)</p>	<p>My company supports cooperation between workers. Cooperation among the different duties, teams, and departments was encouraged. Co-workers volunteer their support even without being asked. People support each other.</p>
<p>Tacit knowledge sharing (Kucharska and Erickson, 2023)</p>	<p>I share knowledge learned from my own experience. I have the opportunity to learn from the experiences of others. Colleagues share new ideas with me. Colleagues include me in discussions about the best practices.</p>
<p>Explicit knowledge sharing (adapted from Kucharska 2021a)</p>	<p>There is a formal policy encouraging knowledge sharing at my place of work. Knowledge is shared among people in my team and division. Other teams and divisions share knowledge with us. We share our knowledge with other teams and divisions.</p>
<p>TRUST (adapted from Park and Lee, 2014 and Kucharska and Kowalczyk, 2016)</p>	<p>I TRUST people at work. People in my team TRUST one another. People in my division TRUST one another. People in my entire organization TRUST one another.</p>
<p>Change adaptability (org. intelligence - IQ) (Kucharska and Bedford, 2020)</p>	<p>We are flexible to changes. We can adjust ourselves to changes. We adapt to changes easily. We used changes.</p>
<p>External, market innovations (Kucharska and Erickson, 2023a)</p>	<p>We provide competitively superior innovations to our clients. Our innovations are perceived positively by our clients. We are better than our competitors at introducing innovations. I am proud of our innovations.</p>

Note: Adapted scales are those in which statements were reformulated based on the preliminary study to improve their understanding and, thus, measurement quality.

Appendix 2: Cross-Loadings Matrix

	1	2	3	4	5	6	7	8	9
KC1			.917						
KC2			.925						.103
KC3			.705				.152		
LCc4			.135		.245		.403		-.143
LCc3					-.150	.277	.548		.119
LCc2							.820		
LCc1					.174		.694		
LCm3	.831								
LCm4	.895								
LCm2	.947								
LCm1	.903								
C2				.128	.292	.537	-.127	-.113	-.140
C3					-.244	.897			.124
C1						.686			
C4						.487		.115	
EKS1				.172	.143	.121		.451	-.152
EKS2						.180		.435	
EKS3								.898	
TKS3				.667	.315				
TKS2				.864					.111
TKS1				.931	-.124				
TKS3			-.111	.639		-.122		.135	
IQ1					.899	-.241		-.132	.213
IQ2					.597	.115			.495
IQ3				.106	.632				.303
IQ4					.673				.235
InnE1	.118			-.156	.172	.566			
InnE2					.213	.418	.104		.184
InnE3					.173	.444	.121	.122	
T1		.899							
T2		.556	.123		.155				-.102
T3		.878			-.148				
T4		.785				.116			

Loadings extraction method - Maximum Reliability. Rotation method - Promax with Kaiser normalization.

Appendix 3: SPSS PROCESS Output

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***** PROCESS Procedure for SPSS Version 3.4 *****
      Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
      Documentation available in Hayes (2018). www.guilford.com/p/hayes3
*****

Model : 1   Y : eks   X : tks   W : T   Sample Size: 640
*****

OUTCOME VARIABLE: eks

Model Summary

      R   R-sq   MSE   F   df1   df2   p
      .6595   .4349   2.8256   163.1537   3.0000   636.0000   .0000

Model

      coeff   se   t   p   LLCI   ULCI
constant   .2237   .2802   .7985   .4249   -.3265   .7739
tks         .6893   .0712   9.6767   .0000   .5494   .8292
T           .4040   .0789   5.1231   .0000   .2491   .5588
Int_1       -.0326   .0157   -2.0758   .0383   -.0634   -.0018

Product terms key:
Int_1 :   tks   x   T

Test(s) of highest order unconditional interaction(s):

      R2-chng   F   df1   df2   p
X*W   .0038   4.3090   1.0000   636.0000   .0383
-----

      Focal predict: tks   (X)   Mod var: T   (W)

Conditional effects of the focal predictor at values of the moderator(s):

      Z4   Effect   se   t   p   LLCI   ULCI
2.0000   .6242   .0471   13.2434   .0000   .5317   .7168
3.0000   .5917   .0392   15.1112   .0000   .5148   .6686
7.0000   .4615   .0608   7.5887   .0000   .3420   .5809

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output: 95.0000 W values in conditional tables are the
16th, 50th, and 84th percentiles. NOTE: Standardized coefficients not available for models with
moderators.

----- END MATRIX -----

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