

Knowledge Sharing in Teams Making Strategic Decisions in Companies – The Results of Research Carried Out in the Furniture Industry in Poland

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Abstract

Purpose: The aim of this article is to present the phenomenon of knowledge sharing in decision-making teams in companies representing the furniture industry in Poland. The analysis of the phenomenon included the following five aspects: assessment of the propensity to share knowledge within decision-making teams, assessment of the significance of knowledge to be shared from the perspective of the decisions taken, identification of the main motivations for sharing knowledge by members of the decision-making team, identification of dominant attitudes towards knowledge sharing, and identification of dominant forms of knowledge sharing.

Design/methodology/approach: The survey was conducted in the time period March 2018 – September 2019, with the use of the CATI method. The research sample included members of decision-making teams responsible for making strategic decisions in medium-sized and large companies representing the furniture industry in Poland.

Findings: The analysis of responses delivered by 123 respondents shows that decision-makers in the furniture industry in Poland display an average propensity to share knowledge, with a slightly higher propensity declared by men than women; they highly value the significance of the knowledge transferred

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to other team members; the main motivations prompting them to share knowledge are non-monetary motivations; the majority of them declare an attitude towards knowledge sharing labeled as 'a knowledge transformer' and prefer direct contact between team members as a form of knowledge sharing.

Originality/value: The study contributes to the understanding of processes related to knowledge sharing, specifically in terms of sector and market specificity.

Keywords: knowledge management, knowledge sharing, furniture industry.

JEL: L2, M12

Dzielenie się wiedzą w zespołach podejmujących decyzje strategiczne w przedsiębiorstwie – wyniki badań przeprowadzonych w branży meblarskiej w Polsce

Streszczenie

Cel: prezentacja zjawiska dzielenia się wiedzą w zespołach decyzyjnych w przedsiębiorstwach z branży meblarskiej w Polsce. Analiza zjawiska dzielenia się wiedzą w zespołach decyzyjnych obejmowała pięć składowych: ocenę skłonności do dzielenia się wiedzą w ramach zespołów decyzyjnych, ocenę znaczenia wiedzy z perspektywy podejmowanych decyzji, która podlega dzieleniu w ramach zespołu decyzyjnego, identyfikację głównych motywów dzielenia się wiedzą przez członków zespołu decyzyjnego, identyfikację dominujących postaw wobec dzielenia się wiedzą oraz identyfikację dominujących form dzielenia się wiedzą.

Metodyka/podejście badawcze: badania przeprowadzono w okresie marzec 2018 – wrzesień 2019, z zastosowaniem metody CATI. Respondentami byli członkowie zespołów decyzyjnych, odpowiedzialni za podejmowanie decyzji strategicznych w średnich i dużych przedsiębiorstwach branży meblarskiej na rynku polskim.

Wyniki: analiza odpowiedzi udzielonych przez 123 respondentów pozwala stwierdzić, iż decydenci z branży meblarskiej w Polsce wykazują przeciętną skłonność do dzielenia się wiedzą, przy czym nieco wyższą skłonność mężczyźni niż kobiety; wysoko oceniają znaczenie wiedzy przekazywanej przez siebie innym członkom zespołu; głównymi motywatorami skłaniającymi ich do dzielenia się wiedzą są motywatory pozapieniężne; w większości deklarują postawę wobec dzielenia się wiedzą określaną mianem „transformatora wiedzy” oraz preferują bezpośredni kontakt członków zespołu jako formę dzielenia się wiedzą.

Wartość: badanie przyczynia się do zrozumienia procesów związanych z dzieleniem się wiedzą, w szczególności w zakresie specyfiki sektora i rynku.

Słowa kluczowe: zarządzane wiedzą, dzielenie się wiedzą, branża meblarska.

1. Introduction

Compared to other resources at the disposal of the organization, knowledge is characterized by specific features, which allows it to be considered a strategic resource (Sopińska, 2010). This means that knowledge should be subject to appropriate management processes. In terms of the process of knowledge management in an enterprise, one of its key stages is knowledge sharing (Sopińska & Dziurski, 2018; Gudkova, 2007; Kisielnicki, 2007). The phenomenon of sharing knowledge is particularly important in creating open innovations (Scuotto et al., 2020). Knowledge sharing takes place at all levels of management, including decision-making teams

responsible for strategic decision-making. Knowledge sharing within the team increases the creativity of employees (Dong et al., 2017).

The aim of this article is to present the phenomenon of knowledge sharing in decision-making teams in furniture companies in Poland. The diagnosis of this phenomenon was a part of larger research on team strategic decision-making in furniture companies in Poland (project financed by the National Science Centre no. 2016/23/B/HS4/00861). The analysis of the knowledge sharing phenomenon included the following five components: assessment of the propensity to share knowledge, assessment of the significance of knowledge being shared, identification of the main motivations for knowledge sharing, identification of the dominant attitudes towards knowledge sharing and identification of the dominant forms of knowledge sharing.

The basis for the conclusion are the results of a questionnaire survey of 123 respondents – members of decision-making teams responsible for making strategic decisions in medium-sized and large companies in the furniture industry operating in Poland.

2. The Phenomenon of Knowledge Sharing in Decision-Making Teams

Knowledge sharing is the mutual transfer and exchange of knowledge, understood as a set of information, abilities, skills and experience relevant to the organization (Krok, 2011). The basis of this process is communication and mutual cooperation (Bieniek & Pliszka, 2014; Mikuła, 2011). In organizations, it can take a centralized form with the aim of disseminating knowledge within a group of employees; it can also involve the informal transfer of knowledge between individual employees or their teams within an organization (Probst, Raub, & Romhardt, 2002). Some researchers equate the process of knowledge sharing with knowledge transfer, using these terms interchangeably (Davenport & Prusak, 1998). At the same time, there is a view that knowledge sharing is one of the sub-processes of a broader process, which is knowledge transfer (Mikuła, 2006; Potocki, 2011; Bieniek & Pliszka, 2014). According to the second approach, knowledge transfer is understood as a process involving the acquisition of knowledge from a specific source and, subsequently, its transfer, acceptance and adaptation for subsequent use. Knowledge transfer understood in this way is described by means of sequential phases including knowledge acquisition, knowledge donation, knowledge dissemination, and knowledge sharing (Tuan, 2012).

Regardless of the approach taken, the phenomenon of knowledge sharing is one of the fundamental organizational processes in which knowledge is involved. G. Probst, S. Raub and K. Romhardt (Probst et al., 2002) identify the sharing and dissemination of knowledge as a major factor in making effective use of individual and group experiences for the benefit of the

whole organization. Additionally, they believe that the knowledge sharing process serves to improve daily operations and work culture.

The phenomenon of knowledge sharing plays an important role in all theories of knowledge management; however, it becomes particularly significant in the concept of organizational knowledge creation by I. Nonaka and H. Takeuchi (Nonaka & Takeuchi, 2000). This concept refers to the classification of knowledge into explicit and tacit (Nonaka, Toyama, & Konno, 2001; Polanyi, 1962). Explicit knowledge is knowledge that is specified, systematized or formalized, e.g., in the form of documents, specifications, instructions, databases, patents. Tacit knowledge ('sometimes we know a lot more than we know that we know') results from shared experiences, routines and a weave of individual skills, enriched by energy, passion, mutual trust, sense of security, etc. According to Nonaka and Takeuchi's concept, at each stage of the knowledge conversion between explicit and tacit knowledge, the basic way and tool to create innovation at the level of the individual, the work team and the whole organization is the mutual sharing of knowledge. It is due to the phenomenon of knowledge sharing that it is possible to achieve the so-called knowledge spiral that consists in modifying the original content, concept, or idea originating from the hidden knowledge of an individual employee into a ready innovation.

Both explicit and tacit (implicit) knowledge are therefore subject to the sharing process. It has been pointed out also by A. Sopińska and P. Wachowiak (Sopińska & Wachowiak, 2005), who propose two separate processes within the knowledge management model: one referring to the creation and sharing of explicit knowledge and the other referring to the creation and sharing of tacit knowledge. The effect of combining the two processes, and at the same time the final stage of the knowledge management model, is the use of knowledge, consisting in making decisions on the basis of both types of knowledge.

Readiness to share knowledge, understood as an individual attitude and behavior manifesting itself in the propensity to exchange knowledge with one another, is gradual (Glińska-Noweś, 2007). Most knowledge management theories are based on the assumption that employees are ready to share their knowledge unlimitedly and unconditionally, that it is even an instinctive action for them, to which they are intrinsically motivated. This is a mistaken assumption, since unconditional sharing of knowledge (a strategic resource in the modern world) is not in human nature (Swift, Balkin, & Matusik 2010). The willingness to share knowledge may be limited by a number of barriers (Skrzypek, 2018), often sector specific (Bloice & Burnett, 2016) or market specific (Akgün, Keskin, Ayar, & Okunakol, 2017). There is also the question of who to share knowledge with. The recipient's willingness to learn and personal relationships can foster readiness to share knowledge (Zhang & Jiang, 2015).

Knowledge resources subject to exchange (sharing) between employees are not homogeneous. It is worth quoting here several classifications of knowledge, important from the point of view of sharing it within work teams. Thus, due to the level of knowledge abstraction and its complexity, knowledge resources are divided into concrete knowledge, assigned to specific applications in time and place, and abstract knowledge, applicable in many more situations than concrete knowledge (Boisot, 1999). With regard to the source of acquiring knowledge resources, we can speak about knowledge resources originating from scientific cognition of reality, intellectual perception and evaluation processes, conscious application of existing algorithms and originating from creative solving of new problems (Glińska-Neweś, 2007). Other examples of categorization of knowledge resources useful in describing the phenomenon of knowledge sharing in decision-making teams are classification of resources due to strategic evaluation in relation to the competitor (distinguishing innovative knowledge, advanced knowledge, basic knowledge) (Zack, 1999); typology by substance and use (knowledge – what; knowledge – why; knowledge – how; knowledge – who) (Lundvall & Johnson, 1994); or typology according to the form of knowledge (shared and personal knowledge; physical and mental knowledge; static and dynamic knowledge; verbal and encrypted knowledge) (Blackler, 1995).

According to A. Sopińska, knowledge resources subject to exchange within employee teams, including decision-making teams in companies, can be classified according to similar criteria as knowledge resources in network organizations. The employee team can be compared to a specific network, where each employee is a link in the network. The use of the above analogy allows us to adapt the classification of knowledge in network organizations, proposed by A. Sopińska, to the field of decision-making teams (Sopińska, 2012). As a result of the above, as in the case of a network organization, so in the case of knowledge sharing within decision-making teams we can speak of four categories of knowledge: unique (niche) knowledge; key knowledge; universal knowledge; and irrelevant knowledge (Figure 1).

Innovative character of knowledge	Significant	Unique, niche resources	Key resources
	Insignificant	Irrelevant resources	Universal resources

Fig. 1. Categorization of knowledge resources to be exchanged in decision-making teams in terms of their level of innovativeness and exploitability. Source: Sopińska, 2012.

The propensity of members of an organization to share knowledge is determined by many factors that make up one of the elements of the conceptual model of knowledge sharing (Farooq, 2018). The determinants influencing the willingness to share knowledge can be classified in various ways (Islam & Jasimu, 2018). For example, W. Walczak proposes a division of factors conditioning employees' propensity to share knowledge into two groups (Walczak, 2012): organizational conditions (comprising eleven categories of factors) and their own value judgments and feelings (nine categories of factors). At the same time, the level of employees' propensity to share knowledge is an effect of the synergic interaction of factors representing both groups, creating a kind of multidimensional space of variables.

A more extensive categorization of factors that may determine the level of employees' propensity to share knowledge is proposed by E. Krok (2011). She distinguishes four groups of factors:

1. organizational factors, including integration of knowledge sharing into business strategy; organizational culture; support for teamwork; direct support from management and example from 'the top'; providing time and opportunity for knowledge sharing; atmosphere; work environment; lack of employee anxiety about career development or loss of position; valuing and rewarding knowledge sharing behavior; efficiency of the communication system; availability and quality of information technology; company size; industry and organizational structure;
2. interpersonal factors, including interpersonal relationships; reciprocity; commitment; trust in the appropriate use of knowledge; identification with a particular behavior; avoidance of embarrassment; sense of belonging to a group or team; striving for community and cooperation;
3. individual factors, including greed; desire for profit; fear of punishment; self-esteem; personality traits such as optimism, self-confidence, altruism, openness to experience; cost and time of acquiring knowledge; age; gender; education; family status; length of service; position;
4. knowledge-dependent factors, including the type of knowledge determining the possibility and timing of its transfer.

According to W.-T. Wang and Y.-P. Hou (2015), sharing knowledge is fostered by rewards (soft – reputation, relationships and hard – monetary rewards, reciprocity, career advancement and other benefits) and altruistic attitudes.

As can be seen, employees' propensity to share knowledge is determined by many factors, both organizational and individual (Akhavan, Hosseini, Abbasi, & Manteghi, 2015). Some factors are specific to a given organization, others are universal. Universal determinants may include, for instance, factors originating from cultural assumptions, binding norms and values supporting openness. The cultural determinants of employees' propensity to share knowledge, related to organizational culture, have been pointed out, among others, by S. Jamshed and N. Majeed (2019). A. Sopińska and

P. Wachowiak (Sopińska & Wachowiak, 2015) indicate that organizational cultures of the ‘clan’ type (where cooperation and interpersonal relations are the most important) and the ‘adhocracy’ type (dynamic and creative work environment, where risk taking is promoted) are more conducive to knowledge sharing than the ‘market’ type of organizational cultures (the focus is on performance and employee rivalry) and ‘hierarchy’ type cultures (formalization and structuring of activities is most important).

When analyzing the behavior of work team members in this process, it is useful to look at them as links in a network, each of which may play a different role and adopt a different attitude towards knowledge sharing. This kind of view makes it possible to adapt for the purposes of analyzing work teams following A. Sopińska’s concept concerning the roles that networked companies play in the knowledge sharing process (Sopińska, 2012). Taking into account the following two criteria: the way of using knowledge (internal or external) and the source of acquiring knowledge (internal or external), analogically to network participants, a given member of an employee team can be (see Figure 2):

1. a knowledge absorber – who binds and absorbs knowledge acquired from outside (i.e., from other team members or from outside the team) in order to use it internally (independently);
2. a knowledge transformer – who processes and transfers knowledge acquired externally (i.e., from other team members or from outside the team) also externally (i.e., to other team members);
3. a knowledge creator – who creates knowledge independently for use by other team members (externally);
4. a knowledge accumulator – who accumulates the knowledge that he/she has created in order to use it internally (independently).

Use of knowledge	External	Knowledge creator attitude	Knowledge transformer attitude
	Internal	Knowledge accumulator attitude	Knowledge absorber attitude
		Internal	External
Source of knowledge			

Fig. 2. Possible attitudes towards knowledge sharing within the decision-making team adopted by team members. Source: Sopińska, 2012.

The process of knowledge sharing can take place through various routes: through formal networking, through informal networking, through instruction, through documents, through training, through sharing experiences in meetings (Brooking, 1999). The preference and dominance of a particular form of knowledge sharing depends on the knowledge management strategy adopted by a given organization (Hansen & Nohria, 1999). When opting for a codification strategy, the process of sharing knowledge takes place primarily via information technology rather than personal contact. Individual employees first contribute to the creation of specific databases, which they can then use repeatedly, within a defined scope of course. However, when an organization places more emphasis on a personalization strategy, knowledge exchange takes place during mutual, direct contacts between employees with knowledge in a given area. Therefore, it can be said that knowledge exchange in the case of domination of the codification strategy is indirect, using information technology, and in the case of domination of the personalization strategy it is direct.

Knowledge sharing is a key element of knowledge management in organizations, it is also a fundamental element of group dynamics for strategic decision-making teams in companies (MacCurtain et al., 2010). Research on these types of teams, usually identified in the literature as Top Management Teams (TMTs) (Amason, 1996), indicates that the individual characteristics of their members and the group processes between them have a significant impact on the functioning of the whole organization (Hambrick & Mason, 1984; Sperber & Linder, 2018). At the same time, the state of research on knowledge sharing among strategic decision-making team members is small, indicating that there is a significant research gap in this regard (MacCurtain et al., 2010). The empirical study presented in the next section of this chapter aimed to at least partially fill this gap.

3. Research Methodology

The study of the phenomenon of knowledge sharing in decision-making teams was a part of broader research on team-based strategic decision-making in furniture companies (NCN 2016/23/B/HS4/00861). The above research was conducted using the method of standardized questionnaire interviews, computer-assisted (the CATI method), in the period March 2018–September 2019. The interview questionnaire used in the study covered four main issues: internal mental mechanisms of team members, the phenomenon of knowledge sharing in the team, interpersonal relations, and trust in the team. Knowledge sharing was operationalized in terms of its following aspects:

- assessment of the overall individual propensity to share knowledge using a five-point Likert scale,

- assessment of the significance of knowledge from the perspective of strategic decision-making using a five-point Likert scale,
- motivations for knowledge sharing, as a nominal variable, with multiple choice by the respondent, operationalized based on Walczak (2012) and Krok (2011),
- attitudes towards knowledge sharing, as a nominal variable, with a single choice, operationalized based on Sopińska (2012),
- forms of knowledge sharing, as a nominal variable, with multiple choice by the respondent, operationalized based on Brooking (1999).

Selected statistical methods were used in the analysis of the study results. The significance of differences in the distribution of scores between the two groups was checked using the Mann-Whitney U test, while the significance of differences between qualitative (nominal) variables was checked using the chi-square independence test. The following formula was used to calculate the chi-square statistic:

$$\chi^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i}$$

where:

O – observed value

E – expected value

Formula for expected value:

$$E_{\text{expected value}} = \frac{(\text{row total}) (\text{column total})}{(\text{grand total})}$$

Correlations between variables were checked using Spearman's rank correlation coefficient. This coefficient takes values from +1 (strong positive correlation, when one variable increases, the other variable increases, too), through 0 (no correlation) to -1 (strong negative correlation, the increase of one variable was related to the decrease of the other variable). In statistical analyses, the significance level of $p = 0.05$ was assumed. The analyses were performed with the SPSS software.

This paper focuses on describing the phenomenon of knowledge sharing in decision-making teams responsible for making strategic decisions in furniture companies on the Polish market. The choice of the furniture industry was dictated, on the one hand, by its role in the Polish economy and, on the other hand, by the great diversity of development strategies pursued by the companies operating in this industry (*Condition and prospects of the Polish furniture market*, 2017; *Polish furniture industry invests in expansion and modernization of production*, 2018; *Record year for Polish furniture industry*, 2017).

When determining the initial research population, only medium and large companies operating in the furniture industry were taken into account,

because of researchers' assumption that they are more predisposed to team-based strategic decision-making than small companies. Based on available studies relating to the Polish furniture industry, the total number of entities operating in 2017–2018 on the Polish market was estimated to be approximately 25,000–27,000 companies (different sources provided slightly different data in this regard), of which approximately 300 were medium-sized companies and only approximately 100 were large entities (*Polish furniture industry invests in expansion and modernization of production*, 2018; *Record year for Polish furniture industry*, 2017). The initial population accepted for the study included approximately 400 entities (large and medium-sized companies). The researchers managed to reach 123 respondents from such companies, which constituted approximately 30% of the study population defined.

The research sample therefore comprised 123 respondents, with non-random, convenience sampling. The respondents were members of decision-making teams, responsible for strategic decision-making in their companies. The sample was clearly dominated by men (60.2%), aged 31–39 (48.8%), with non-economic education (68.3%), including mainly technical industry education (35.8%), definitely having some experience in a team making strategic decisions (from one to three years or more than three years). Detailed characteristics of the research sample can be found in Table 1.

Criterion	Number of indications	Share %	Criterion	Number of indications	Share %
Gender			Education		
Males	49	39.8	Economic	39	31.7
Females	74	60.2	Non-economic including:	84	68.3
			– industrial technical	44	35.8
			– extra-industry technical	17	13.8
			– humanities	22	17.9
			– other	1	0.8
Age			Time period spent on working in a team making strategic decisions		
up to 30 years	25	20.3	up to 1 year	25	20.3
31 to 39 years	60	48.8	1 to 3 years	52	42.3
40 to 49 years	26	21.1	more than 3 years	45	36.6
50 to 59 years	10	8.1	no answer	1	0.8
60 years and over	2	1.6			

Tab. 1. Characteristics of respondents (N = 123). Source: Own study.

4. Research Findings

4.1. Propensity to Share Knowledge in Decision-Making Teams

The first component of diagnosing the phenomenon of knowledge sharing in decision-making teams responsible for making strategic decisions in furniture companies in Poland was to assess their individual propensity to share knowledge within the team. Taking into account the potential lack of propensity to share knowledge, in the presented research, the propensity to share knowledge by team members was assessed on a five-point scale, where 1 meant no propensity to share knowledge and 5 meant very high propensity to do so.

The mean score of respondents in this area was 3.4 with a standard deviation of 1.14. Both the median and the dominant were 3.0 (see Table 2).

Variable	<i>M</i>	<i>SD</i>	<i>Me</i>	<i>D</i>	<i>Min.</i>	<i>Max.</i>
Propensity	3.4	1.14	3.0	3.0	1.0	5.0

M – mean, *SD* – standard deviation, *Me* – median, *D* – dominant, *Min.* – minimum value, *Max.* – maximum value

Tab. 2. Measures of central tendency and dispersion. Propensity to share knowledge with other team members making strategic decisions. Source: Own study.

The respondents most frequently indicated a medium-level propensity to share knowledge (rating 3 was indicated by 30.1% of respondents). A very high propensity to share knowledge (rating 5) was indicated by 20.3% of respondents, and a complete lack of propensity to transfer knowledge (rating 1) was admitted by 4.9% of respondents. Correspondingly, their low propensity to share knowledge (rating 2) was indicated by 17.9% of respondents and their high propensity to share knowledge (rating 4) was indicated by 26.8% of respondents.

Men were much more willing to share knowledge (the mean score = 3.6), while women were less willing to do so (the mean score = 3.1). It is worth noting that the differences in question were statistically significant ($p = 0.039$) (Table 3).

Variable	Characteristic	<i>M</i>	<i>SD</i>
Gender	Females	3.1	1.24
	Males	3.6	1.05
Mann-Whitney U test		$Z = -2.07; p = 0.039$	

M – mean, *SD* – standard deviation

Tab. 3. Propensity to share knowledge with other team members making strategic decisions by gender. Source: Own study.

A statistical analysis did not show that the propensity to share knowledge with other team members was related to the respondent's type of education ($p = 0.497$) (Table 4).

Variable	Characteristic	<i>M</i>	<i>SD</i>
Education	Economic	3.5	1.21
	Technical industry	3.4	1.02
	Technical extra-industry	3.1	1.20
	Humanities	3.4	1.26
Kruskal-Wallis test		$\chi^2 = 2.38; p = 0.497$	

M – mean, *SD* – standard deviation

Tab. 4. Propensity to share knowledge with other team members making strategic decisions by education level. Source: Own study.

A correlational analysis showed no statistically significant relationship between age ($p = 0.200$), seniority in the team ($p = 0.688$), and the propensity to share knowledge (Table 5).

Variable		Propensity to share knowledge
Age	Correlation coefficient	-0.120
	Significance (two-sided)	-0.200
Seniority in the team	Correlation coefficient	-0.040
	Significance (two-sided)	-0.688

Tab. 5. Relationship between age, seniority in the team and the propensity to share knowledge. Source: Own study.

4.2. Assessing the Significance of Knowledge Being Shared Within Decision-Making Teams

The second element describing the phenomenon of knowledge sharing in strategic decision-making teams in furniture companies was the subjective assessment of the significance of knowledge from the perspective of strategic decisions, which the respondents share with other team members. Due to the limited research opportunities (the phenomenon of knowledge sharing was only a fragment of a broader research model), the study used the division of knowledge resources subject to exchange within decision-making teams only due to this single criterion. It was assumed that the assessment of the significance of knowledge may take values from 1 to 5, where 1 – means no significance, and 5 – very high significance for strategic decisions.

The mean score for the significance of the knowledge from the perspective of strategic decisions was 3.8, with a standard deviation of 1.17. More than half of the respondents (57.7%) gave a score of 4 or 5, thus recognizing that the knowledge provided by them is of high or very high significance for strategic decisions. The highest percentage (37.4%) of respondents believed that the knowledge was very significant (score 5), only 4.1% of respondents indicated no significance, and 9.8% of respondents indicated low significance (score 2) (Table 6).

Variable	<i>M</i>	<i>SD</i>	<i>Me</i>	<i>D</i>	<i>Min.</i>	<i>Max.</i>
Knowledge significance	3.8	1.17	4.0	5.0	1.0	5.0

M – mean, *SD* – standard deviation, *Me* – median, *D* – dominant, *Min.* – minimum value, *Max.* – maximum value

Tab. 6. Measures of central tendency and dispersion. Significance of knowledge from the perspective of strategic decisions that the respondent shares with other team members. Source: Own study.

The statistical analysis showed no significant differences in the distribution of scores between males and females ($p = 0.152$) (Table 7).

Variable	Characteristic	<i>M</i>	<i>SD</i>
Gender	Females	3.6	1.26
	Males	3.9	1.10
Mann-Whitney U test		$Z = -1.43; p = 0.152$	

M – mean, *SD* – standard deviation

Tab. 7. Significance of knowledge from the perspective of strategic decisions by gender. Source: Own study.

The statistical analysis also showed no significant differences in the distribution of scores between groups distinguished by their education ($p = 0.410$) (Table 8).

		<i>M</i>	<i>SD</i>
Education	Economic	3.6	1.29
	Technical industry	4.0	1.11
	Technical extra-industry	3.9	0.99
	Humanities	3.6	1.18
Kruskal-Wallis test		$\chi^2 = 2.88; p = 0.410$	

M – mean, *SD* – standard deviation

Tab. 8. Significance of knowledge from the perspective of strategic decisions by education. Source: Own study.

The same was the case with other potential determinants: age and seniority in the team. Again, the correlation analysis showed no statistically significant relationship between age ($p = 0.123$), seniority in the team ($p = 0.348$), and the assessment of the significance of knowledge from the perspective of strategic decisions (Table 9).

Variable		Knowledge significance
Age	Correlation coefficient	-0.140
	Significance (two-sided)	0.123
Seniority in the team	Correlation coefficient	0.090
	Significance (two-sided)	0.348

Tab. 9. Relationship between age, seniority in the team and the assessment of the significance of knowledge from the perspective of strategic decisions. Source: Own study.

Despite the lack of dependence at the statistical level, an in-depth analysis of the distribution of responses as regards the assessment of the significance of the knowledge provided, in terms of the respondent's education, seniority in the decision-making team and age, allowed interesting conclusions to be drawn. Firstly, among the respondents who gave the highest ratings to the knowledge they provided, those with a technical industry background predominated (they accounted for as much as 45.5% of this group) and those with more than three years of seniority in the decision-making team (they accounted for 44.4%). Secondly, the highest percentage of indications of low evaluation of the significance of the transferred knowledge (at level 1 – no significance or 2 – low significance of knowledge) was among people with economic education (20.5%) and among people aged over 40 (total 23.7%).

4.3. Key Motivations for Sharing Knowledge Within Decision-Making Teams

The study adopted the following breakdown of motivations for team members to share knowledge and respondents were asked to indicate three most important ones:

1. the internal need, character, own nature;
2. a formal requirement, procedure binding in the company;
3. an opportunity to increase prestige, recognition and position in the team;
4. counting on reciprocity from other team members;
5. the possibility to obtain a material reward for sharing knowledge;
6. climate, atmosphere, organizational culture conducive to knowledge sharing.

In the light of the results obtained, it can be stated that the most important motivations that induce knowledge sharing with other members

of the decision-making team are two: an opportunity to increase prestige, recognition and position in the team (69% of the indications) and counting on reciprocity from other team members (65% of the indications). The following motivations turned out to be much less important: climate, atmosphere, organizational culture conducive to knowledge sharing (47%), a formal requirement, procedure binding in the company (37%), the internal need, character, own nature (33%). The least frequently indicated motive was the possibility to obtain a material reward for sharing knowledge (24%). It is also worth mentioning that 5.7% of respondents indicated other motivations, without specifying which ones they were referring to, and 0.8% did not give an answer.

The statistical analysis showed no significant differences in the distribution of responses between women and men. The frequency of indications of individual motivations for sharing knowledge with other members of the decision-making team by gender and the results of the chi-square test are summarized in Table 10.

Categories of motivations:	Gender		Chi-square test	
	Women	Men	χ^2	p
The internal need, character, own nature	32.7%	33.8%	0.70	0.704
A formal requirement, procedure binding in the company	42.9%	33.8%	1.60	0.450
An opportunity to increase prestige, recognition and position in the team	69.4%	68.9%	0.67	0.715
Counting on reciprocity from other team members	59.2%	68.9%	2.15	0.341
The possibility to obtain a material reward for sharing knowledge	32.7%	18.9%	3.55	0.170
Climate, atmosphere, organizational culture conducive to knowledge sharing	44.9%	48.6%	0.90	0.638

Tab. 10. Percentage of indications of individual motivations inducing knowledge sharing by gender. Source: Own study.

Although there is no statistically significant relationship between gender and the indicated motivations for knowledge sharing, the study suggests the existence of differences in this respect. Women relatively more often than men indicated the motivation of formal requirements, procedures in force in the enterprise. Similarly, the motivation of the possibility to obtain a material reward for sharing knowledge was indicated by women more often than by men. Men, however, relatively more often than women indicated the motivation of counting on reciprocity from other team members.

At the same time, a certain correlation can be observed between indicating the motivations for knowledge sharing and the age of the respondent. It turned out that respondents under 40 years old significantly more often indicated the motivation of counting on reciprocity from other team members than respondents over 40 years old ($p = 0.041$). There were no other significant differences in the distribution of responses between the groups of respondents identified by age. The frequency of indications in terms of motivations for knowledge sharing, by age of respondents, as well as the results of the chi-square test are summarized in Table 11.

Categories of motivations for knowledge sharing	Age		Chi-square test	
	Below age of 40	Above age of 40	χ^2	p
The internal need, character, own nature	29.4%	42.1%	2.25	0.325
A formal requirement, procedure binding in the company	32.9%	47.4%	2.65	0.265
An opportunity to increase prestige, recognition and position in the team	68.2%	71.1%	0.50	0.779
Counting on reciprocity from other team members	71.8%	50.0%	6.41	0.041
The possibility to obtain a material reward for sharing knowledge	22.4%	28.9%	1.02	0.601
Climate, atmosphere, organizational culture conducive to knowledge sharing	52.9%	34.2%	4.40	0.111

Tab. 11. Percentage of indications of each category of motivations for sharing knowledge with other members of decision-making teams by age. Source: Own study.

Next, the distribution of indications of motivations for knowledge sharing was analyzed according to the length of work in the decision-making team and the type of education held. The statistical analysis did not show any significant differences in the distribution of answers between groups separated by the length of service in the team. Nevertheless, it is worth noting that people with the shortest work experience (less than 1 year) in the decision-making team relatively more often than respondents with longer work experience indicated the motivation of the possibility to increase prestige, recognition and position in the team by sharing knowledge. The frequency of indications of particular categories of motivations with division of the respondents according to the seniority and the results of the chi-square test are presented in Table 12.

Categories of motivations for knowledge sharing	Seniority in the team			Chi-square test	
	< 1 year	1–3 years	> 3 years	χ^2	p
The internal need, character, own nature	36.0%	26.9%	37.8%	2.63	0.622
A formal requirement, procedure binding in the company	32.0%	38.5%	40.0%	1.85	0.763
An opportunity to increase prestige, recognition and position in the team	84.0%	65.4%	64.4%	4.59	0.332
Counting on reciprocity from other team members	64.0%	69.2%	60.0%	2.56	0.634
The possibility to obtain a material reward for sharing knowledge	28.0%	23.1%	24.4%	1.54	0.819
Climate, atmosphere, organizational culture conducive to knowledge sharing	52.0%	44.2%	48.9%	1.70	0.790

Tab. 12. Percentage of indications of each category of motivation for knowledge sharing by seniority in the team. Source: Own study.

The statistical analysis also showed no significant differences between respondents grouped by education. Respondents with technical industry education relatively more often than others indicated the formal requirement, the procedure binding in the company as a motivation for sharing knowledge. The frequency of indications with regard to the type of education of respondents and the results of the chi-square test are presented in Table 13.

Categories of motivations for knowledge sharing	Education				Chi-square test	
	Economic	Technical industry	Technical extra-industry	Humanities	χ^2	p
The internal need, character, own nature	30.8%	34.1%	41.2%	27.3%	3.05	0.803
A formal requirement, procedure binding in the company	33.3%	34.1%	52.9%	36.4%	4.30	0.637
An opportunity to increase prestige, recognition and position in the team	64.1%	70.5%	70.6%	72.7%	2.53	0.866

Table cont.

Categories of motivations for knowledge sharing	Education				Chi-square test	
	Economic	Technical industry	Technical extra-industry	Humanities	χ^2	<i>p</i>
Counting on reciprocity from other team members	61.5%	65.9%	64.7%	72.7%	2.74	0.841
The possibility to obtain a material reward for sharing knowledge	23.1%	25.0%	29.4%	22.7%	2.42	0.877
Climate, atmosphere, organizational culture conducive to knowledge sharing	48.7%	52.3%	29.4%	50.0%	4.94	0.552

Tab. 13. Percentage of indications by education. Source: Own study.

4.4. Attitudes of Decision-Making Team Members Towards Knowledge Sharing

The identification of respondents' attitudes towards knowledge sharing within decision-making teams was conducted based on a typology distinguishing the following attitudes: a knowledge absorber, a knowledge transformer, a knowledge creator, and a knowledge accumulator (see Figure 2). The respondents' task was to indicate one of the following statements, treated in the study as characteristics of the mentioned attitudes:

1. I am oriented primarily to obtaining knowledge from other members of the decision-making team, at the same time, I am reluctant to share my own knowledge (the attitude of a knowledge absorber);
2. I am willing to both acquire knowledge from others and share my own knowledge with other members of the decision-making team (the attitude of a knowledge transformer);
3. I am willing to share my own created knowledge with other members of the decision-making team (the attitude of a knowledge creator);
4. I am oriented towards using only self-created knowledge in the decision-making process (the attitude of a knowledge accumulator).

The results obtained allow us to state that the most frequently declared attitude was 'the attitude of a knowledge transformer', consisting in eagerly acquiring knowledge from others and sharing it with other members of the decision-making team – as many as 64.2% of respondents indicated this description as reflecting their attitude towards knowledge sharing. Significantly fewer respondents indicated other attitudes. Thus, 'the attitude of a knowledge creator', consisting in willingly sharing self-created knowledge

with other members of the decision-making team, was indicated by 13.8%; ‘the attitude of a knowledge absorber’ (I am primarily oriented towards obtaining knowledge from other members of the decision-making team, at the same time I am reluctant to share my knowledge myself) – 12%; ‘the attitude of a knowledge accumulator’ (using only self-created knowledge in the decision-making process) – 8%. No response was obtained from 1.6% of the sample. The described distribution of answers is presented in Figure 3.

Use of knowledge	External	The attitude of a knowledge creator 13.8%	The attitude of a knowledge transformer 64.2%
	Internal	The attitude of a knowledge accumulator 8%	The attitude of a knowledge absorber 12%
		Internal	External
Source of knowledge			

Fig. 3. Possible attitudes towards knowledge sharing within the decision-making team adopted by team members. Source: Own study.

The analysis showed no statistically significant differences in the distribution of responses between the groups of respondents separated by gender (chi-square independence test $\chi^2 = 0.36$; $p = 0.949$). In addition, the distribution of indications of particular attitudes among women and men was very similar and did not differ from the distribution in the entire research sample.

Similarly, the effect of seniority in the team and type of education on the analyzed attitudes towards knowledge sharing was similar. In both cases, the analysis did not show statistically significant differences in the distribution of answers between groups separated by seniority in the team (independent chi-square test $\chi^2 = 5.92$; $p = 0.433$) and by education (independent chi-square test $\chi^2 = 6.38$; $p = 0.701$). It can only be pointed out that people with long work experience in the decision-making team (more than three years) relatively more often indicated ‘the attitude of a knowledge accumulator’ than people with less experience. This attitude was indicated by 13.3% of respondents with more than three years of seniority, while among those with less than one year of seniority this percentage was only 4%, and among those with 1–3 years of seniority – 6%.

The age of the respondents had a statistically significant impact on the declared attitude towards sharing knowledge with other members of the decision-making team. Among respondents under 40 years of age, the majority (74%) indicated ‘the attitude of a knowledge transformer’ (willing to acquire knowledge both from others and to share their own knowledge with other members of the decision-making team), while among older respondents such an attitude was much rarer – only 47% of respondents indicated it. These differences are statistically significant at $p = 0.012$. The detailed distribution of responses is presented in Table 14.

Attitudes towards sharing knowledge with other team members		Age	
		< 40 years	≥ 40 years
I am primarily focused on gaining knowledge from other members of the decision-making team, while being reluctant to share my own knowledge	Number	9	6
	% of the age group	10.8%	15.8%
I am willing both to gain knowledge from others and to share my own knowledge with other members of the decision-making team	Number	61	18
	% of the age group	73.5%	47.4%
I am happy to share my own knowledge with other members of the decision-making team	Number	10	7
	% of the age group	12.0%	18.4%
I am oriented towards using only self-created knowledge in the decision-making process	Number	3	7
	% of the age group	3.6%	18.4%
Chi-square test of independence		$\chi^2 = 10.91$ $p = 0.012$	

Tab. 14. Distribution of answers concerning the represented attitudes towards knowledge sharing with other members of the decision-making team by age. Source: Own study.

4.5. Forms of Knowledge Sharing in Decision-Making Teams

For the purposes of this study, forms of knowledge sharing in decision-making teams were operationalized as follows:¹

1. Formal documentation in the form of reports, analyses, reports,
2. Casual meetings of the team members and free discussions,
3. Joint training of team members,
4. Co-participation and mutual observation during decision-making,
5. Contact through IT devices (internet, intranet, videoconferencing).

The respondents were asked to indicate any number of forms among those listed above or to propose their own form of knowledge sharing.

In the light of the results obtained, it can be concluded that the respondents most often share knowledge through casual meetings of team members and free discussions (63.4%), through joint training of team members (48.8%), through co-participation and mutual observation during decision-making (48.0%). Slightly less frequently, knowledge was shared through official documentation in the form of reports, analyses, reports (31.7%). However, contact via IT devices (internet, intranet, videoconferencing) was definitely rarely used. Only 13% of respondents indicated this form of knowledge transfer. It should be remembered that the survey was conducted under completely different macro conditions, i.e., in the absence of the coronavirus epidemic and remote working recommendations. In the new reality, the role of IT devices in the transfer of knowledge in the entire economy, including the furniture industry, becomes a priority. It is also worth noting that no statistically significant relationship was found between the form of knowledge transfer and gender, age, seniority in the team, or education.

5. Discussion and Conclusions

The study contributes to the understanding of processes related to knowledge sharing, specifically in terms of sector and market specificity (e.g. Bloice & Burnett, 2016; Akgün, Keskin, Ayar, & Okunakol, 2017). The diagnosis of the phenomenon of knowledge sharing in decision-making teams in the furniture industry in Poland included five components: assessment of the propensity to share knowledge, assessment of the significance of knowledge being shared, identification of the main motivations for sharing knowledge, identification of the dominant attitudes towards knowledge sharing as well as identification of the dominant forms of knowledge sharing. The analysis of the results allows conclusions to be drawn in relation to each of the elements. They are summarized in Table 15.

The results of the study present an interesting picture of knowledge sharing in decision-making teams. While the significance of knowledge being shared was highly rated from a strategic decision-making perspective, the highest rating was given by persons with technical industry education as well as by respondents with more than three years of experience in the decision-making team. It suggests both high relevance of technical knowledge in the industry and awareness of importance of knowledge growing together with work experience. This result is in line with other studies arguing for sector specificity of knowledge sharing in organizations (Bloice & Burnett, 2016).

Regarding individual motivation for knowledge sharing, while in general, respondents do not expect a material reward for it, respondents under 40 years of age significantly more often indicated counting on reciprocity from other team members than respondents over 40 years of age. Interestingly, women relatively more often than men indicated two motives, i.e., formal requirements, procedures in force in the company and

the possibility of obtaining a material reward for transferring knowledge. In turn, men relatively more often than women indicated the motivation of counting on reciprocity from other team members.

Diagnosis element	Conclusions of the study
Propensity to share knowledge	Members of decision-making teams showed an average propensity to share knowledge, with males more willing to share knowledge than females.
The significance of knowledge being shared	Respondents highly rated the significance of the knowledge they passed on to other team members.
Motivations for knowledge sharing	The main motivators for sharing knowledge were non-monetary, i.e., improving position and prestige in the team and counting on reciprocity from other team members.
Declared attitude towards knowledge sharing	Members of decision-making teams strongly declared knowledge transfer in both directions (to and from each other) within the decision-making team.
Forms of knowledge sharing	Direct contact between team members was strongly preferred as a form of knowledge sharing.

Tab. 15. Diagnosis of knowledge sharing in decision-making teams – main conclusions. Source: Own study.

The most frequently indicated attitude towards knowledge sharing was that of ‘a knowledge transformer’, consisting in willingly acquiring knowledge from others as well as sharing it with other members of the decision-making team, and the least frequently indicated attitude was that of ‘a knowledge accumulator’, consisting in using only self-created knowledge in the decision-making process. The other two attitudes (‘a knowledge creator’ and ‘a knowledge absorber’) were also indicated relatively rarely. Age of the respondents had a statistically significant impact on the declared attitude towards sharing knowledge with other members of the decision-making team. Among respondents aged under 40, ‘the attitude of a knowledge transformer’ was more frequent than among older respondents.

The most frequently indicated forms of knowledge sharing in decision-making teams were casual meetings of team members and free discussions, joint training of team members and co-participation and mutual observation during decision-making. It confirms the importance of informal meetings as accelerators of effective ways of knowledge exchange. For example, Gorse and Emmitt (2009) argue for the role of informal meetings in building a supportive work environment characterized by positive socioemotional interactions. Contact via IT devices was definitely rarely used as a form

of knowledge sharing; however, it is important to note that the study was conducted before the COVID-19 pandemic.

The authors are aware of the limitations of this research. Firstly, due to the non-random selection of the research sample, the conclusions cannot be generalized to the entire population of medium-sized and large companies operating in the furniture industry in Poland, let alone enterprises from other industries. Secondly, as the above research was only a fragment of a larger research project, the scope of exploration of individual elements of the diagnosis of knowledge sharing in decision-making teams was limited. Thirdly, changing conditions in the macro-environment (the pandemic currently being experienced) mean that the manner and form of knowledge sharing in work teams is undergoing a dramatic transformation before our very eyes, which also encourages the continuation of the research. The research team, represented by the authors of the study, therefore intends to continue the research in a deeper scope and on a representative research sample.

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Endnotes

- ¹ Operationalized based on: A. Brooking, *Corporate Memory. Strategies for Knowledge Memory*, International Thomson Business Press, London 1999, p. 105.

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