

Knowledge Sharing in Manufacturing Subsidiaries: Proactive and Reactive Perspective in the Knowledge Exploitation Context

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Abstract: Employee knowledge-sharing behaviour is an important building block of effective knowledge flow in all organisations. Employees share their knowledge in response to a specific demand for knowledge (reactive knowledge-sharing behaviour) or entirely voluntarily, on their own initiative (proactive knowledge-sharing behaviour). Those two types of knowledge sharing although were recognised but are under-researched. The study aims to shed some light on the specificity of reactive and proactive knowledge-sharing behaviours in the knowledge exploitation context, looking at manufacturing-based entities and groups of knowledge-workers and blue-collar workers. Using survey-based data on a group of 799 employees, the study answers the questions regarding the dominance of reactive or proactive knowledge-sharing behaviours in manufacturing-based organisations and the influence of work specificity and individual knowledge on those behaviours. Based on ANOVA and t-test analyses, the main findings showed that regardless of the type of work performed, employees in manufacturing subsidiaries were more likely to share their knowledge with others when they were explicitly asked for it. This suggests that managers should create opportunities and incentives aimed not only at enhancing knowledge-sharing but also knowledge-seeking. The results also showed that work-related characteristics influence knowledge sharing. The type of work was related to reactive knowledge sharing of blue-collar workers, while the perceived need for creativity at work, and coordinating work of others were related to proactive knowledge-sharing of knowledge-workers. Also, the individual knowledge of the blue-collar employees was significant for both knowledge-sharing behaviours and the relationship had an inverted U shape.

Keywords: Proactive knowledge sharing, Reactive knowledge sharing, Job design, Tenure, Education, Work experience

1. Introduction

Looking at organisations from the viewpoint of knowledge their success depends on the knowledge stocks (what knowledge they have access to) and the knowledge flows, which covers sharing, transferring and applying knowledge among organisational units and members. The flow of knowledge on the individual and group levels is a source for knowledge creation and integration (Zahra *et al.*, 2020) and results in better organisational performance (Monteiro *et al.*, 2008) and innovativeness (Sung and Choi, 2018). Schulz (2001) argued that in organisations, the knowledge flow takes place in the form of (1) a “knowledge pull”, where knowledge is shared by a knowledgeable unit in reaction to a specific request placed by another unit (due to the problematic search), and (2) a “knowledge push” by broadcasting the solutions to others as new knowledge.

The micro-foundation of the organisational knowledge flow is employees’ knowledge-sharing behaviour (KSB) (Foss *et al.*, 2010). While the vast amount of research emphasised the benefits of knowledge sharing (KS), and distinguished different types of KSB regarding the knowledge types (tacit vs explicit), inclusion of sharing behaviour in the job description (in-role vs extra-role), a situation when KS takes place (e.g. planned vs unplanned) (Ahmad and Karim, 2019), only a few addressed an issue of pulling and pushing knowledge proposing proactive and reactive KSB (Berends *et al.*, 2006; Teng and Song, 2011; Zhang and Jiang, 2015). The main differences between reactive and proactive KSB is an agent that initiates and leads the exchange, then the reason and focus of KS (Berends *et al.*, 2006). The theoretical base for those two forms of KSB derives from the organisational behaviour literature on prosocial behaviour (Bolino and Grant, 2016).

While the proactive-based KS mechanisms are more frequent in the knowledge explorative work context, where innovativeness and knowledge re-creation are important, like in the R&D team (Berends *et al.*, 2006), there are no studies analysing proactive and reactive KSB in more knowledge exploitative context, where refinement and efficiency play main role (March 1991), like manufacturing-based subsidiaries. This is the gap this study aims to fill by answering the following research questions:

- Which type of knowledge-sharing behaviour is more frequent in manufacturing-based organisations?
- Does the KSBs depend on the work specificity and individual knowledge of employees’?

This study aims to contribute to the literature on KS by identifying how a work type and individual knowledge base affect the reactive and proactive KSB among both knowledge-workers and blue-collar workers. Apart from differentiating proactive from reactive KSB, blue-collar workers are investigated. This group was rather neglected in the knowledge-sharing and knowledge-management studies (Sergeeva and Andreeva, 2016).

Meanwhile, KS among employees is a component of informal workplace learning and by this is important for the task quality and process performance on the shop-floor (Nakano *et al.*, 2013). Also previous studies on KS surprisingly did not pay much attention to individual knowledge of knowledge providers in the form of education, work experience and organisational tenure (Kim *et al.*, 2018).

2. Theory and hypotheses

2.1 Knowledge-Sharing Behaviours

This study applies the perspective of KS as relational behaviour, through which knowledge possessed by one individual is made available (Foss *et al.*, 2009) for the interpretation, understanding and assimilation by others in an organisation (Bonti *et al.*, 2017). The act of sharing one's knowledge with others occurs through interpersonal interaction, which can be realised face-to-face or through various means of communication, both synchronous and asynchronous. Knowledge is understood as "ideas, facts, expertise, judgements relevant for task or performance" (Wang and Noe, 2010, p. 117). This conceptualisation underlines that KS refers to the behaviour of a knowledge provider only and is a type of prosocial behaviour (Bolino and Grant, 2016). Looking at the process of that knowledge-related interaction and the typology of prosocial behaviours, KSB can be distinguished into reactive KSB – that is, providing knowledge in response to a request – and proactive KSB – fully voluntary providing knowledge with an anticipation of future outcomes, willingness to take control or cause change. In previous studies knowledge-sharing has been mainly assumed as an in-response format (Teng and Song, 2011).

Reactive KSB is initiated by the other individual that identified and defined the knowledge gap, identified individuals who can fill it and expressed a request to them. The reactive KSB depends mostly on a knowledge-seeker and on how the knowledge provider is willing to react to the request by sharing knowledge (or manipulating, hiding). It causes that reactive KSB is situational, thus, is hard to plan for the sharer. Also, its temporal stability depends on previous benefits of sharing and context that allows questions to be asked and knowledge shared (c.f. Spitzmuller and Van Dyne, 2013). This KS interaction focuses on the interest of a requester and the potential reciprocity relationship between the requester and provider. With reactive KS it is more likely that knowledge transfer would be effective as the knowledge receiver is keenly interested in interpreting, understanding and applying the knowledge received. Problematic are situations when the potential receiver cannot identify or express knowledge need, does not know whom to ask, et cetera, because no request means no sharing. In line with that, the scarce studies on reactive KSB suggests that when the procedural and process knowledge is well established (task routineness) the reactive KSB will take place (Teng and Song, 2011).

In the case of proactive KSB, the knowledge provider voluntarily defines the content, situation and a receiver of sharing. The focus of proactive KSB is not necessarily on the knowledge recipient's immediate needs but also on the self-interest of the provider ('self-suggesting') to receive some reaction to the ideas and further re-create knowledge for the self-use. It also might be directed towards a potential selected recipient or a group by diffusing new insight, pushing new solutions and pooling solutions (Berends *et al.* 2006). It focuses on the future change or improvement by developing collective knowledge and transactive memory (Kotlarsky *et al.*, 2015), available for others to use when needed. In a work context aiming to develop new knowledge, combine existing solutions in a new way, and where individuals are open to diversifying their knowledge base, a proactive KSB is needed (Berends *et al.* 2006).

The manufacturing subsidiaries of multinational enterprises (MNEs) in Central and Eastern Europe usually concentrate on effective exploitation of the technological and procedural knowledge transferred to their locations. This suggests that within a manufacturing-based subsidiary, a pull knowledge flow would be addressed with the predominance of reactive KSB.

H1: In manufacturing-based subsidiaries, employees more frequently share their knowledge in response to requests than proactively.

2.2 Type of Work and Knowledge-Sharing Behaviour

The previous research on KSB found evidence that the work design influences motivation to KS and KSB itself. However, they did not differentiate the reactivity or proactivity of that behaviour. The studies showed that work autonomy or task identity (Foss *et al.*, 2009) positively relate to KSB, because in such context individuals gain greater sense of responsibility in what they do. On the other hand, low autonomy or strictly defined job descriptions increase knowledge-hiding behaviours (Škerlavaj *et al.*, 2018). In this line, it can be

assumed that the blue-collar workers with more precise work descriptions than the knowledge-workers, would less frequently share their knowledge.

Additionally, the cognitive demands of a job (job complexity, information processing, problem-solving and specialisation) positively affect the frequency of KSB (Gagné *et al.*, 2019). Therefore, the employees perceiving their work requiring more creativity would more frequently share knowledge. Moreover, performing work that involves task interdependencies and coordinating others, like in problem-solving projects (Gagné *et al.*, 2019) also positively affects the KSB.

H2: The frequency of reactive (H2a) and proactive (H2b) KSB differs in the type of work employees perform.

H3: There is a relationship between the level of creativity required at work and reactive KSB (H3a) and proactive KSB (H3b).

H4: There is a relationship between coordinating the work of others and reactive KSB (H4a) and proactive KSB (H4b).

2.3 Individual Knowledge and Knowledge-Sharing Behaviour

Individual knowledge in the form of the educational level, work experience and organisational tenure represent both employees' general and firm-specific human capital (Yanadori and Kato, 2007). With the level of education the general competences grow (skills and understanding over general and specified subject; social and communication skills) that help individuals to listen and communicate, explain ideas more precisely using professional expressions. Next, work experience, even if not related with current job, gives individuals understanding and skills to behave in work situation according to work norms. Finally, employees having long-term experience in the organisation possess firm-specific work skills, experience and knowledge (Kim *et al.*, 2018). All the above suggest that with an increase of knowledge level employees should be acknowledged as important knowledge providers and more frequently reactively share knowledge.

Additionally, with the development of knowledge an individual develops their self-efficacy, which reflects their individual belief that one has ability to provide knowledge. Individual with greater knowledge levels would be more willing to react to knowledge-related question and also to share knowledge proactively (Cavaliere *et al.*, 2015).

H5: Employee's organisation-based knowledge, in the form of organisational tenure, is related to reactive KSB (H3a) and proactive KSB (H3b).

H6: Employee's experience-based knowledge, in the form of employees' work experience, is related to reactive KSB (H4a) and proactive KSB (H4b).

H7: General employee's knowledge, in the form of educational level, is related to reactive KSB (H5a) and proactive KSB (H5b).

3. Methods

3.1 Data Collection and Sample

Data for the study was collected in 2019 and early 2020 (pre-pandemic) from ten manufacturing subsidiaries of multinational enterprises located in North-West of Poland, which were medium to big in size and were operating for more than 15 years in different industries. The data collection proceeded using a self-report survey in Polish with web-based and paper-based questionnaires, depending on employees' group (knowledge-workers, blue-collar workers). Every invited participant was informed about the study and its purpose before the start of data collection through in-company communication. In the questionnaire's cover letter, participants were informed about the study's aim and the use of data, assured of the voluntariness of their participation, confidentiality and need of their consent to participate.

In total, 799 complete responses were received (54% response rate), of which 274 were from knowledge-workers, and 525 were from blue-collar workers. Among the knowledge-workers, 42% were female; an average work experience was 9.5 years and organisational tenure - 7.5; 74% held at least a bachelor's or engineering degree. The blue-collar workers, of which 15% were female, had 11.9 years of average work experience and 7.2 years of organisational tenure, and 82% had a maximum of secondary education.

3.2 Measures

To measure reactive and proactive KSB, the scales proposed by van den Hooff and de Leeuw van Weenen (2004) and Teng and Song (2011) were assessed, and four items for each KSBs were selected, noting whether they covered only the behaviour of giving knowledge and were explicitly specifying that the sharing took place in response to a request or on employee's own initiative. Respondents were asked about the frequencies with which they faced the knowledge-sharing situations on a 7-point scale from 1 (never) to 7 (always, it is my daily routine). Eventually, *proactive KSB* was measured with four items that concerned sharing on the employee's own initiative with observations and insight regarding the employee's own work or the company, new things that the employee has learned or sharing skills. The *reactive KSB* was measured with four items that captured the frequency with which employees shared skills, task-related experiences and opinions, problem-related knowledge or information when specifically asked for it. The exploratory factor analysis (EFA), with two factors that explained 74% of the variance, and confirmatory factor analysis (CFA) showed good reliability and validity of both measures, as presented in Table 1. Moreover, the CFA with two factors of reactive and proactive KSB had significantly better model fit to data ($\chi^2(16)=79.4$; CFI=0.98; TLI=0.97; RMSEA=0.07; SRMR=0.019) than one-factor model ($\chi^2(17)=318.2$; CFI=0.93; TLI=0.88; RMSEA=.15; SRMR=0.042). The values of reactive and proactive KSB were calculated as items' means.

Table 1: Factor Loadings and Reliability Indices of Proactive and Reactive KSB

Variables	Items	EFA factor loadings		CFA standardised loadings	Cronbach's α	Composite reliability	AVE
		Proactive KSB	Reactive KSB				
Proactive KSB	P-KSB1	0.824	0.201	0.711	0.87	0.886	0.66
	P-KSB2	0.730	0.380	0.832			
	P-KSB3	0.791	0.361	0.861			
	P-KSB4	0.758	0.395	0.840			
Reactive KSB	R-KSB1	0.396	0.782	0.824	0.88	0.888	0.67
	R-KSB2	0.484	0.731	0.855			
	R-KSB3	0.502	0.706	0.871			
	R-KSB4	0.171	0.847	0.705			

The *organisation-based knowledge* was measured with a proxy of employees' organisational tenure, which respondents indicated in years. For further analysis, tenure was categorised in five groups 0-5 years, 5-10, 10-15, 15-20 and above 20 years. It is assumed that the longer employees work in an organisation, the better organisation-based knowledge they have, considering their own work, organisational policies and processes. The *experience-based knowledge* was measured with a proxy of work experience, specified in the questionnaire in years, and further categorised into five groups, similarly to organisational tenure. Finally, the *general knowledge* was measured with a proxy of the employee's level of education. There were five levels of education: 1-primary, 2-secondary, 3-bachelor's or engineering degree, 4-master's degree and 5-postgraduate or doctoral.

The employees were assigned to the group of *knowledge-workers* or *blue-collar workers* based on the information received from the HR department, basing on the premise that blue-collar workers are those whose majority of work considers manual, routine work and do not have a company email account. Otherwise, they were assigned as knowledge-workers. Additionally, based on the brief job descriptions received in the questionnaires, the specific *type of work* related to the functional area was defined - eight in the group of knowledge-workers (administration, customer service, quality assurance, logistics, production engineering, new products, organising production process, production support) and three in the group of blue-collar workers (production; warehouse; production technical support). Additionally, in the group of knowledge-workers, employees rated the extent to which *creativity is required* for performing their job on a scale of 1-'not at all' to 5-'very largely'. For the analyses, the received answers were grouped into three categories: "low creativity" (answers 1 and 2), "medium" (3) and "high creativity" (answers 4 and 5). Employees also indicated (yes/no) whether they *coordinate the work of others* in their work.

3.3 Analytical Procedure

To verify the hypotheses, I used: two sample t-tests, one-way ANOVA with Tukey HSD post-hoc tests, dependent-t-test (to analyse the differences between reactive and proactive KSB). Because of significant differences in gender and educational level in the group of knowledge-workers and blue-collar workers, most of the analyses were performed separately for those two groups of employees.

4. Results

4.1 Frequency of Reactive and Proactive KSB

Considering the H1, the dependent-t-test performed both in the group of knowledge-workers ($t(df)=14.2(273)$, $p<0.001$) and blue-collar workers ($t(df)=11.2(524)$, $p<0.001$) showed that employees more frequently were sharing knowledge when they were explicitly asked to do so (knowledge-workers=5.4 and blue-collar workers=4.9) than proactively (4.7 and 4.5 respectively) (Figure 1). These results support the H1.

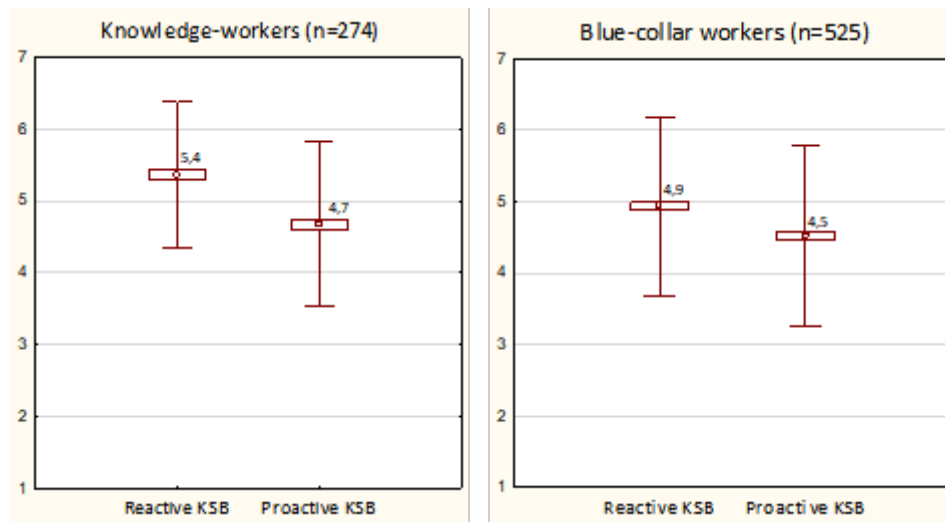


Figure 1: Means and Standard Deviations of Proactive and Reactive KSB of Knowledge-Workers and Blue-Collar Workers

4.2 Work Characteristics and KSBs

Regarding H2 firstly, using a two-sample t-test ($t(df)=4.95(797)$; $p<0.001$), it was found that the knowledge-workers were more frequently reactively sharing their knowledge (mean 5.36 ± 1.02) than blue-collar workers (mean 4.93 ± 1.25). However, the difference between these groups in their proactive KSB was smaller ($t(df)=1.81(797)$; $p=0.07$), as presented in figure 1. This supported H2, indicating that when performing intellectual work, employees share their knowledge more frequently than when performing physical work. However, the difference was mainly in reactive KSB.

Next, separately in each group of workers, using one-way ANOVA, it was analysed whether the work type was related to KSBs (Table 2). In the case of *blue-collar workers*, ANOVA showed that the type of work was not related to proactive KSB ($p=0.174$) but was linked to reactive KSB ($p=0.039$) with small effect size ($\eta_p^2=0.01$). The technical support employees (reactive KSB=5.4) were more frequently sharing their knowledge than workers of production (reactive KSB=4.9; $p=0.04$) and warehouse (reactive KSB=4.8; $p=0.06$). With that result, the H2 was supported for blue-collar workers.

Table 2: Relationship Between Job Characteristics, Employee's Knowledge and KSBs (Results of one-way ANOVA)

	Knowledge-workers (n=274)		Blue-collar workers (n=525)	
	Reactive KSB	Proactive KSB	Reactive KSB	Proactive KSB
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Work types	$F(7;265)=1.29$ $p=0.26$	$F(7;265)=2.32$ $p=0.03$	$F(2;522)=3.25$ $p=0.04$	$F(2;522)=1.76$ $p=0.174$

		Knowledge-workers (n=274)		Blue-collar workers (n=525)	
		Reactive KSB	Proactive KSB	Reactive KSB	Proactive KSB
8 for knowledge-workers*			prod. proc. org.: 5.1 quality ass.: 4.4	tech. supp.: 5.4 production: 4.9 warehouse: 4.8	
3 for blue-collar workers*					
Creativity requirement of work		$F(2;271)=15.59$ $p<0.01$	$F(2;271)=19.70$ $p<0.01$		
Low		4.47 (1.32) ^{a,c}	3.94 (1.11) ^a		
Medium		5.06 (1.03) ^{b,c}	4.24 (1.22) ^b		
High		5.63 (0.87) ^{a,b}	4.93 (1.01) ^{a,b}		
Coordinating work of others		$F(1;233)=-1.06$ $p=0.30$	$F(1;233)=-6.83$ $p<0.01$		
Yes (1)		5.52 (0.89)	4.96 (1.03)		
No (0)		5.20 (1.13)	4.37 (1.21)		
Experience-based knowledge		$F(4;248)=1.91$ $p=0.11$	$F(4;248)=2.24$ $p=0.06$	$F(4;454)=5.48$ $p<0.01$	$F(4;454)=4.27$ $p<0.01$
Work experience					
0-5 years			4.36 (1.28) ^a	4.46 (1.43) ^{a,b,c}	4.03 (1.32) ^{a,b,c}
5-10 years			4.70 (1.09)	4.96 (1.12) ^a	4.51 (1.19) ^a
10-15 years			4.92 (1.10) ^a	5.24 (1.14) ^b	4.77 (1.22) ^b
15-20 years			4.60 (0.83)	5.16 (1.26) ^c	4.56 (1.24) ^c
above 20 years			4.81 (1.04)	4.83 (1.33)	4.52 (1.30)
Organisation-based knowledge		$F(4;265)=1.89$ $p=0.13$	$F(4;265)=2.22$ $p=0.07$	$F(4;507)=6.09$ $p<0.01$	$F(4;507)=3.77$ $p<0.01$
Tenure in organisation					
0-5 years				4.68 (1.36) ^{a,b}	4.29 (1.35) ^{a,b}
5-10 years				5.12 (1.13) ^a	4.67 (1.18) ^a
10-15 years				5.26 (1.10) ^{b,c}	4.79 (1.14) ^b
15-20 years				4.78 (1.40)	4.25 (1.34)
above 20 years				4.45 (1.20) ^c	4.51 (1.22)
General knowledge		$F(4;265)=0.50$ $p=0.73$	$F(4;265)=0.95$ $p=0.44$	$F(4;510)=4.51$ $p<0.01$	$F(4;510)=1.19$ $p=0.31$
Education					
1-primary				4.59 (1.23) ^{a,b}	
2-secondary				4.95 (1.28)	
3-bachelor/engineer				5.31 (1.07) ^a	
4-master's degree				5.48 (0.93) ^b	
5-higher				5.00 (0.71)	

Note: * only significant at $p<0.05$ differences between work types are shown baes on post-hoc tests; ^{a,b,c} designate significant at $p<0.05$ differences between categories based on post-hoc test.

In the group of *knowledge-workers*, there were no significant differences in the extent of reactive KSB ($p=0.256$) between employees performing different work types. Nevertheless, there was a significant difference in proactive KSB ($p=0.025$) with medium effect size ($\eta_p^2=0.06$) - employees working in organising production

processes were more frequently proactively sharing their knowledge (proactive KSB=5.1) than employees in quality assurance (proactive KSB=4.4; $p=0.03$).

Finally, ANOVA analyses showed that the creativity requirements of work were significantly related to both reactive KSB ($p<0.001$) and proactive KSB ($p<0.001$) with significant effect ($\eta_p^2>0.12$). Employees who perceived higher creativity requirements shared knowledge more frequently (reactively and proactively) than those whose jobs required medium or low creativity (supporting H3a and H3b). However, coordinating work of others was not related to the reactive KSB ($p=0.3$) but affected the proactive KSB ($p<0.01$) (H4a-not supported; H4b-supported). Additionally, separately for the groups of employees that rated the creativity requirements as high ($n=183$) and whose work was related to coordinating others ($n=126$), the dependent-t-test showed that those employees were still more frequently sharing their knowledge in a reactive than proactive way.

4.3 Employees' Knowledge and KSBs

In the group of knowledge-workers, the one-way ANOVAs and post-hoc tests, showed some differences in proactive KSB between employees with different levels of experience-based knowledge ($p=0.066$) and organisation-based knowledge ($p=0.067$). Employees with 10-15 years of work experience more frequently proactively shared knowledge than those with work experience of fewer than 5 years ($p=0.03$). However, post-hoc tests did not reveal any differences between employees of different tenure. Next, the analyses showed that there are no differences in reactive KSB between employees of different work experience ($p=0.109$) or organisational tenure ($p=0.125$). Similarly, level of education did not have any effect neither on proactive ($p=0.439$) nor reactive KSB ($p=0.734$). Summing up, in the group of knowledge-workers, the individual knowledge is not related to their reactive KSB (H5a, H6a and H7a not supported). Only the proactive KSB differs among employees with little work experience and average work experience (H6b-supported; H5b, H7b not supported).

In the group of blue-collar workers, ANOVA results showed that work experience and tenure are related to reactive KSB ($p<0.001$) and proactive KSB ($p<0.01$). Employees with tenure of 5-15 years or 5-20 years of work experience share knowledge more frequently than employees with tenure up to 5 years. Educational level was found to be important only for reactive KSB ($p=0.001$). Results showed that employees with higher education degrees share their knowledge more frequently than those with only primary education (H5, H6, H7 supported).

5. Discussion and Conclusions

The presented study shed some light on the KSBs of knowledge- and blue-collar workers in the manufacturing-based context by analysing the frequency of giving knowledge to co-workers in the demand-driven (reactive) and supply-driven (proactive) format. Firstly, this study allowed comparing the frequency of KSBs of employees whose work was more intellectual and more physical. One of the findings was that on the shop-floor, there is a significant amount of interpersonal knowledge flow (considering the means of KSBs variables), even though the work was not knowledge-intensive (Nakano *et al.*, 2013). However, the frequency of KSB of blue-collar workers was lower than knowledge-workers, as it was assumed. Also, further analyses suggest that the knowledge-based antecedences of KSBs for blue-collar workers and knowledge-workers differ. Specifically, the level of individual human capital (general and firm-specific) seems to be significant predictors of blue-collar workers' KSBs, while for knowledge-workers not necessarily. Therefore, future studies should be more open to investigating knowledge-related behaviours and practices supporting them looking at shop-floor employees because they have an extensive level of experience-based knowledge with fewer opportunities for sharing it.

Secondly, several analyses confirmed that KS in the manufacturing-based subsidiaries, where tasks are more routinised due to procedures (Teng and Song, 2011), is mainly reactive, meaning that KS is driven by the specified demand for it in the form of knowledge request from co-workers (Bonti *et al.*, 2017). One of the conclusions resulting from these findings is that to support knowledge flow in such context, it is needed to facilitate knowledge-seeking behaviours. From the research perspective, there is a need for more studies in this area.

Thirdly, the work type characteristics influence KSBs, which signals that employees perceive KSB as a means of performing their work well and engage in those behaviours if they perceive it as meaningful (Gagné *et al.*, 2019; Stenius *et al.*, 2016). This is an important implication suggesting that employees engage and choose the KSB type if they see the relevance of this behaviour to what they do. Also, the more employees perceive that their work requires high levels of creativity, the keener they share knowledge. It could be explained that KSB, and proactive KSB specifically, stimulates their own learning and ideas testing (Nonaka and von Krogh, 2009). However, the more frequently they help co-workers by sharing the knowledge they request, they develop and maintain the reciprocity relationship, which is important for their creativity in the future (Černe *et al.*, 2014).

Finally, it was found that among different types of knowledge, the general work experience affects the KSBs of both group of workers, with the highest KS frequency between 10-20 years of experience. Also, results show that knowledge is a significant predictor of reactive KSB of blue-collar workers. This can suggest not only that more knowledgeable individuals are more willing to share what they know but also that knowledge-seekers are selecting more knowledgeable individuals. However, the results on the relationship between organisational tenure or work-experience and KSB signals an inverted U shape, showing avenues for future research.

One of the study's limitations that could be addressed in future studies is related to analysing only the frequency of KSB without its quality. This issue should be addressed, as KSB is vulnerable to manipulation.

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