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Knowledge sharing in public sector organization: a case-based analysis of individual and organizational influences

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Abstract: This study aims to assess the impact of organizational factors (organizational culture, incentives, leadership, loyalty) and individual factors (trust, perceived consequences of knowledge sharing, individual attitude towards knowledge sharing, individual motivation to learn) on knowledge sharing behaviour in public sector institutions. To achieve this, a field study was conducted at the Civil Protection Directorate in the province of Ouargla (Algeria). A questionnaire was used as the primary tool for collecting study data from a sample of 45 workers, and the study results were processed using SPSS 26 software. The study found that two organizational factors (leadership and loyalty) influence knowledge sharing behaviour, while the rest of the organizational factors and all the individual factors selected by the study do not influence knowledge sharing behaviour in the institution under study.

Keywords: knowledge sharing; organizational knowledge sharing; individual knowledge sharing; public sector organization.

JEL: D83, M12, L32.

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Introduction

Knowledge is one of the most significant aspects of strength in the new knowledge-based economy, in which the production and sharing of knowledge is the driving force behind its leading sectors. It is a key source of any institution by which the transition to a knowledge-based economy has positioned knowledge as the primary resource, surpassing traditional assets such as land, capital and labor (Nonaka, Toyama, & Hirata, 2008). Thus, given the importance of knowledge as an intangible resource in this economy, it has become imperative for institutions to shift towards new organizational models that rely on the effective utilization of their human capital

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by adopting an effective knowledge management strategy through programs for generating, storing, and sharing knowledge.
In this sense, researchers have proposed several classifications of knowledge management, the most important of which is Earl's (2001) classification, that categorizes knowledge management strategies or/and schools into three categories: First, the technocratic school, which focuses on the role of information and communication technology in knowledge management. Second, the economic school of knowledge management that gives more importance to the concept of knowledge as an organizational asset, and its main concern is to protect and exploit the company's knowledge assets to generate revenue. The third and the last is the behavioral school, which consists of three schools, in its turn: organizational, spatial, and strategic. The organizational school centers on organizational structures that facilitate knowledge sharing. While, the spatial school focuses on providing spaces such as offices to facilitate greater knowledge sharing. The strategic school, however, addresses knowledge management as a corporate strategy (Handzic & Zhou, 2005). Thus, our study will rely on the behavioral school since it emphasizes knowledge sharing**.**
Basically, knowledge sharing contributes to improving the performance of public institutions (Abdulah, Hassen, & khemis, 2023); (Jorgensen, Edwards, Scarso, & Ipsen, 2021); (Rohman, Eliyana, Purwana, & Hamidah, 2020); (Hatem Ali, 2018); (Sujata & Santosh, 2016) ; (Titi Amayah, 2013); (Willem & Bluelens, 2007). Yet, studies that have tackled this topic in public sector institutions remain limited, as most of them dive into the higher education sector. Whereas, studies that have addressed the private sector are numerous and varied in terms of activities (Dammaj, Alawneh, Abu Hammad, & Sweis, 2016); (Noorazah & Juhana, 2012); (Chen & Cheng, 2012); (Salina & Hanifah, 2006); Whilst other studies have dealt with knowledge sharing in both public and private sectors (Shamshad, Ashraf, & Shiekh, 2020); (Roger & Jennifer, 2017); (Al-Alawi, Al-Marzooqi, & Mohammed, 2007) by conducting a comparative study between the two sectors. Through this, we find that there is a need for more research in public sector institutions with diverse activities.
In fact, public sector institutions contribute to economic and social development just like private sector institutions, where knowledge is a vital resource, mainly for public institutions to achieve their goals. Moreover, sharing knowledge among workers contributes in a way or another to improving performance and achieving organizational effectiveness. Thus, it is found that knowledge sharing is influenced by several factors that facilitate or hinder knowledge sharing among individuals, mainly in public institutions. Those factors can be either organizational, related to organizational culture, incentive systems, and leadership style, or individual factors related to personal trust, individual motivations, the expected outcomes of knowledge sharing, and so forth. For that reason, this work intends to identify the organizational and individual factors that influence knowledge sharing behavior in public institutions through a case study in an Algerian public institution, namely the Civil Protection Directorate in the province of Ouargla. Civil Protection Directorate, in Algeria, is a large paramilitary organization whose mission is to protect lives,

properties, and the environment. The institution, i.e., Civil Protection Directorate of Ouargla province, was chosen for the following reasons:
- In 2023, the institution carried out a major recruitment drive, hiring around 3,000 employees nationwide, including 60 employees in civil protection in the province of Ouargla. Workers join the work centers after completing a full year of theoretical and practical training. As such, new workers joining the institution need a great deal of organizational knowledge at the beginning of their career path. The process of knowledge sharing is of paramount importance for workers, especially new ones, as it is influenced by several factors that must be studied and understood.
- The institution is interested in knowledge management practices, particularly knowledge sharing and transfer, through its focus on human resource training and development. The institution may have a strong organizational culture since it emphasizes the process of training and continuous knowledge renewal through the implementation of initial training programs for new employees in its training centers, and the renewal of employees' knowledge as part of promotion processes throughout their career path.

Thus, the study aims to pinpoint the organizational and individual factors that influence knowledge sharing behavior in Algerian public institutions. This research seeks to answer the following question: To what extent do organizational and individual factors influence knowledge sharing behaviour in the public sector, mainly in the Civil Protection Directorate in the province of Ouargla in Algeria?

1. Literature review

This study attempts to provide helpful insights on both organizational and individual factors within public institutions and evaluates their impacts on knowledge sharing behaviour.

1.1 knowledge sharing

According to (Kessel *et al*., 2012), knowledge sharing can be defined as an interactive communication process among individuals in a collective setting that fosters interdependent relationships aiming at reaching common objectives. Others, like (Deasy, 2022, p. 375) highlight the social aspects of knowledge sharing, emphasizing the value of informal relationships and facilities for observational learning and trust as main elements to share best practices efficiently.

1.2 Knowledge sharing in public sector organization

Previous studies have focused on knowledge sharing in both public and private sector organizations, along with its influential factors. Some studies address organizational factors that affect knowledge sharing either in public sector organizations or in the private sector. While other studies have focused on individual

factors that influence knowledge sharing. Meanwhile, other growing research has integrated both organizational and individual factors influencing knowledge sharing in both public and private sector institutions. Yet, it is observed that many studies are conducted in private sector institutions; and therefore, it is necessary to conduct more studies on knowledge sharing within the public sector context due to several key differences between both public and private institutions.
Public sector organizations differ from private ones mainly in terms of goals. According to (Anisur & Shahriar Khandaker, 2016, p. 2875), it is argued that public agencies have unique goals, such as fairness, transparency and accountability, unlike the private sector. Besides, public organizations are restricted primarily by political rather than market forces. Moreover, as (Titi Amayah, 2013, p. 456) mentioned, other differences may include fragmented authority structures and less competence-based incentives.

1.3 Factors affecting Knowledge sharing

There are several factors that may affect knowledge sharing. They can be divided into individual and organizational factors.

1.3.1 Individual Knowledge sharing:

Regarding individual factors, the study highlights four (04) main dimensions, which are: trust, perceived consequences of knowledge sharing, the individual's attitude toward knowledge sharing, and the individual's motivation to learn.

- **Trust:** One key element that plays a vital role in knowledge sharing and is closely associated with culture is trust. According to (Leistner, 2010, p. 64), trust is so important for a high-quality knowledge transfer since a high level of trust can foster a safe environment in favour of knowledge sharing. Abrams *et al* (2003) also argued that trust can amplify the overall efficiency of knowledge transfer and lessen the costs of knowledge exchanges. It raises the possibility of knowledge understanding obtained from individuals and enables them to willingly absorb and apply shared knowledge (Birgit, 2008, p. 209).
- **Perceived consequences of knowledge sharing:** This refers to what an individual expects to gain in terms of positive outcomes related to recognition, status, and benefits, as well as relationships with other members.
  According to (Swift, Balkin, & Matusik, 2010), individuals are motivated to share knowledge only when they think it will be beneficial for them or at least will not damage their reputation.
- **Individual's attitude toward knowledge sharing:** About knowledge sharing among individuals in an organization, it is important to know the individual's attitude toward knowledge sharing to correct, adjust, modify, or adapt to increase knowledge sharing among individuals by making them aware of its importance.
  Attitudes toward knowledge sharing refer mainly to the extent of an individual's negative or positive views and feelings on knowledge sharing. In other words, it

is the amount of an individual's thoughts on sharing knowledge, on one side; on the other side is the relationship between the motivation and attitudes toward knowledge sharing, which can be studied via social exchange relationships. Thus, Social Exchange Theory suggests that employees behave in ways that maximize rewards and minimize costs (Abdelsalam, Maisoon ALI, Al. BeisaniAl, & Abdullah, 2020, p. 139).

- **Individual's motivation to learn:** About the impact of an individual's motivation to learn on knowledge sharing behaviour among individuals in the organization, the stronger their motivation to learn, the more they develop and improve their skills at work and acquire new knowledge; as well as develop their knowledge base, and they will have a desire to share their knowledge to renew and develop their knowledge through sharing it. Hence, knowledge increases and grows through the sharing and discussion of ideas and information among individuals.

As per learning opportunities, March (1991) and Nonaka (1994) argue that the knowledge sharing process is unique in that the receiver of knowledge does not only benefit from the acquisition of knowledge, but the act of sharing itself can also stimulate the knowledge provider to learn. Furthermore, it provides individuals with the chance to respond to inquiries about their knowledge and use the exchanged information in the process of knowledge sharing to refine their conceptual understanding (Swift, Balkin, & Matusik, 2010, p. 381).

1.3.2 Organizational Knowledge Sharing:

Regarding organizational factors, the study sheds light on four (04) main dimensions, which are: Organizational culture, incentives, leadership, and loyalty.

- **Organizational Culture:** Organizational culture plays an important role in organizations by shaping patterns of behaviour among individuals and the way groups communicate. Most researchers agree on its importance within organizations and its impact on their effectiveness and performance. According to Schein (1985), culture is defined as the overall common values, beliefs, and general practices in an organization. See (Girdauskienė & Savanevičienė, Influence of Knowledge Culture on Effective Knowledge Transfer, 2007, p. 39).
- **- Incentives/rewards:** Most studies indicate that incentives, or simply motivation and rewards, are one of the most significant factors influencing knowledge sharing behaviour, as it is considered one of the enabling factors that encourage or hinder knowledge sharing. It has a dual effect, influencing both the source of knowledge (the holder) and the recipient of knowledge (the receiver). In this context, Gabriel Szulanski (1996) argues that: "A knowledge source may be reluctant to share crucial knowledge for fear of losing ownership, a position of privilege, superiority; it may resent not being adequately rewarded for sharing hard-won success; or it may be unwilling to devote time and resources to support the transfer." (Szulanski, 1996, p. 31). This means that a person or group with important knowledge may hesitate to share it because of fear of losing their unique position of authority or advantage. They may also feel that their efforts

are poorly rewarded. Moreover, they might not be willing to spend more time to help transfer the knowledge.

Lack of motivation may result in various forms of resistance: delaying tasks, showing little interest, pretending to agree without real commitment or even rejection in the implementation and use of new knowledge (Szulanski, 1996, p. 31). As a result of these reasons, organizations must work to develop reward systems that encourage individuals to transfer knowledge and link performance evaluation programs to the process of knowledge sharing and transfer within the organization. In this regard, Davenport and Prusak (2003) noted that establishing a reliable culture of knowledge sharing and using financial motivations or rewards like considerable privileges, salary increases, promotions and so forth are indispensable. See (Joia & Lemos, 2010, p. 414).

- **Leadership:** As explained by Politis (2001), leadership is characterized by trust, respect for minor ideas, collaborative behaviour, and encouraging creativity, as well as creating and spreading knowledge, more than being characterized by autocratic behaviour and the orientation of tasks and duties. See (Girdauskienė & Savanevičienė, Leadership role implementing knowledge transfer in creative organization: how does it work?, 2012, p. 17).

  Amabile (1995), however, suggested that the major task of leaders is to create a positive environment or setting in which the organization's members could create ideas, adjust and develop knowledge, apply innovation and enhance the company's performance since regular communication between leaders and employees would be turned into a knowledge acquisition. See (Girdauskienė & Savanevičienė, Leadership role implementing knowledge transfer in creative organization: how does it work?, 2012, p. 18) .
- **Loyalty:** According to Steers & Porter (1983), loyalty to institutions is an attitude, mainly the extent to which workers signify their workplace as identified by a desire to work and to seek for progress. Besides, loyalty to the company as a behaviour, particularly the process of an employee's decision about not to leave the company or the institution, namely if S/he does not make severe mistakes. See (Deasy, 2022, p. 377).

2. Methodology

2.1 Hypothesis

The *main hypothesis* of the study is: Organizational and individual factors affect knowledge sharing behavior at the significance level (α=0.05). It includes the following *sub-hypotheses*:

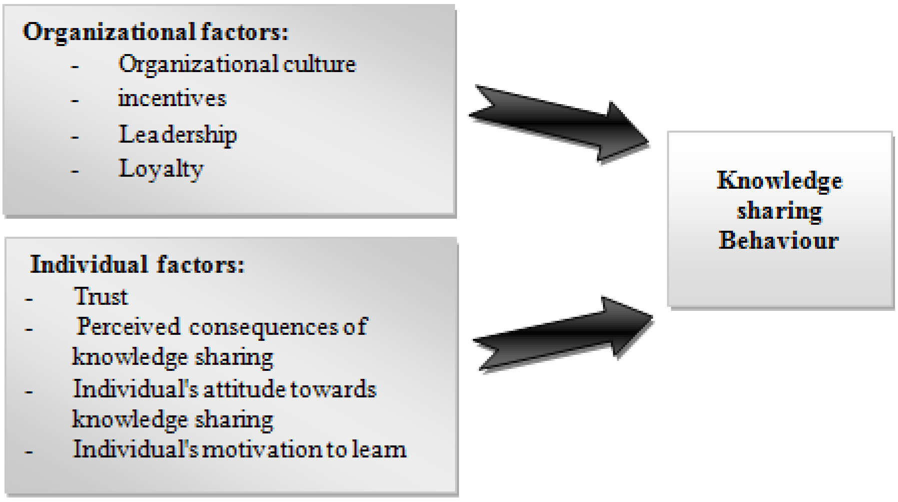
- Organizational culture affects knowledge sharing behavior at the significance level (α=0.05).
- Incentives affect knowledge sharing behavior at the significance level (α=0.05).
- Leadership affects knowledge sharing behavior at the significance level (α=0.05).
- loyalty affects knowledge sharing behavior at the significance level (α=0.05).

- There is an effect of trust on knowledge sharing behavior at the significance level (α=0.05).
- There is an effect of perceived consequences of knowledge sharing on knowledge sharing behavior at the significance level (α=0.05).
- There is an effect of individual orientation toward knowledge sharing on knowledge sharing behavior at the significance level (α=0.05).
- There is an effect of individual motivation to learn on knowledge sharing behavior at the significance level (α=0.05).

2.2 Study model

The study model is represented in the following figure (Figure 1), which indicates the conceptual framework of the study that illustrates the relationship between the three 3 main variables:
- Dependent variable: Knowledge-sharing behavior.
- Independent variable 1: Organizational factors.
- Independent variable 2: Individual factors.

Figure 1. Framework of the study



Source: Prepared by authors

2.3 Description of the institution

Civil protection is considered as one of the most vital public institutions in Algeria. It is a paramilitary organization that works to protect lives, properties, and the environment. Its most essential tasks include: fighting forest and agricultural fires; protecting beaches and recreational areas; preventing major industrial and technological hazards; urban security in various incidents (fires, explosions, floods, earthquakes, etc.); implementing and coordinating emergency plans in the event of major incidents; studying the security rules and procedures applied in the field of civil protection against all fire risks and their consequences in various types of industrial and public institutions, and monitoring their implementation.
The organizational structure of the Civil Protection Directorate in the province of Ouargla (Algeria) consists of: Prevention Department, Public Protection Department, Administration and Supply Department, and Intervention Units.
The institution has 600 employees at various levels, including 50 individuals holding administrative positions, who are the target sample for the study. Yet, intervention officers (about 550 employees) who intervene in the field (in case of: firefighting, accidents, emergency response, disaster management, etc.), were not targeted.

2.4 Sample

The Civil Protection Directorate in the province of Ouargla (Algeria) was selected as the research community of the study, targeting all male and female administrative staff in the institution (including: the director, lieutenants, sergeants, corporals, and majors) for a total of fifty (50) employees, whose main task is to process administrative documents for all civil protection employees in the province of Ouargla in various intervention centres and units. Thus, the sample size was 50 individuals.

2.5 Data collection procedures

A questionnaire was used as a tool for collecting data for the study. The questionnaire was distributed in a limited period of time (from January 20, 2025, and February 20, 2025). It was distributed manually to respondents at their workplace in the institution, and the questions were clearly explained to them. Fifty (50) questionnaires were distributed to all administrative staff at the directorate, and 45 of them were returned and deemed valid for statistical analysis, with a response rate of 90%. The data was processed using SPSS 26 software. The questionnaire was designed using a three-point Likert scale (agree, neutral, disagree), where 1 means (disagree), 2 means (neutral), and 3 means (agree).
The questionnaire was designed based on previous studies on the topic, with the necessary modifications and additions to serve the nature of the study and the organizational environment in which it is tested. The questionnaire was divided into four (04) main parts, including 47 questions. The first section included questions

about the personal and demographic status of the respondents (gender, education level, experience, position). The second part included 08 questions about knowledge sharing behaviour. The third part included 17 questions about organizational factors. The fourth section included 18 questions about individual factors.

2.6 Validity and reliability of the study tool

To measure the reliability of the questionnaire, we used Cronbach's alpha coefficient, which was found to be 0.892, a very acceptable value for the study.

3. Research results and discussions

This section presents the findings of the case study attained through data collection and processing using the statistical program (SPSS), followed by analysis and discussion to confirm or refuse the stated hypotheses.

a. Characteristics of the study sample

The following table shows the distribution of the study sample according to personal characteristics, as follows:

Table 1. Profile of respondents

Characteristics	Frequency (n)	Percentage (%)
Gender:		
- Male.	40	88.9%
- Female.	05	11.1%
Experience:		
- More than 1 year to less than 5 years.	1	2.2%
- 5 years to 10 years.	2	4.4%
- 10 years to 15 years.	25	55.6%
- 16 years and more.	17	37.8%
Education Level:		
- High school and below.	12	40%
- Diploma (TS).	11	24.4%
- Bachelor.	05	11.1%
- Master's.	11	24.4%
Position:		
- Head of unit	01	2.2%
- Corporal	16	35.6%
- Major	02	4.4%
- Sergeant	04	8.9%
- First Lieutenant	06	13.3%
- Lieutenant	16	35.6%
Total :	45	100%

Source: Prepared by authors based on SPSS outputs

The results of Table 1 indicate that 88.9% of the study sample are male, while only 11.1% are female. This is justified by the nature of the institution's activities and the nature of the work, which relies on field interventions. We also find that (55.6%) have more than 10 years of professional experience. We also find that (60%) of the study sample are holders of university degrees and vocational training certificates (postgraduate, bachelor's, advanced technical); while (40%) of them have certificates below the technical level, i.e., an educational level below secondary school. This is justified by the fact that one of the conditions for employment in civil protection is a high school diploma or higher, whereas previously it was a middle school diploma (formerly ninth grade), which is why we find a significant percentage of workers with this level of education.

b. Presentation and analysis of the study variables' results

To clarify the research findings, this section demonstrates the results related to the study variables, based on gathered data and statistical analysis via SPSS outputs.

Table 2. Results of the organizational factors dimension statements

Variable	Arithmetic mean	Standard deviation	General direction
Organizational culture	2.52	0.441	High
Incentives	2.38	0.451	High
Leadership	2.42	0.434	High
Loyalty	2.46	0.379	High

Source: Prepared by authors based on SPSS outputs

Table 2 shows that the overall average of the study sample's responses regarding organizational culture is 2.52, with a standard deviation of 0.441, which is in the high range, indicating that the prevailing organizational culture in the institution supports knowledge sharing among individuals. We find that the overall average of the study sample's responses regarding incentives is 2.38, with a standard deviation of 0.451, which falls within the acceptable range. This is because half of the statements had average scores and fell within the neutral range, and half of them had high arithmetic means, which were in the agreeable range. This shows that the respondents' level of satisfaction with incentives is average and that the level of incentives provided by the institution that supports knowledge sharing behaviour is insufficient and does not satisfy all individuals. The overall average of the study sample's responses regarding leadership was (2.42), with a standard deviation of (0.434), which falls within the agreeable range. This is because half of the axis statements had average scores and fell within the neutral range, while the other half had high average scores and fell within the agreeable range. This shows that the respondents' level of satisfaction with the encouragement of leadership for knowledge sharing behaviour in the organization ranges from average to high. It is also clear that the overall average of the study sample's responses regarding loyalty is 2.46, with a standard deviation of 0.379, which falls within the high range, confirming that the level of employee loyalty to the organization is high.

Table 3. Results of the individual factors dimension statements

Variable	Arithmetic mean	Standard deviation	General direction
Trust	2.44	0.316	High
Perceived consequences of Knowledge sharing	2.72	0.362	High
Individual's attitudes toward Knowledge sharing	2.12	0.470	Average
Individual's motivation to learn	2.49	0.342	High

Source: Prepared by authors based on SPSS outputs

Table 3 illustrates that the overall average of the study sample's responses regarding personal trust was 2.44, with a standard deviation of 0.316, which falls within the acceptable range, confirming the importance of trust and respect among individuals and their role in supporting knowledge sharing behaviour among individuals. We find that the overall average of the study sample's responses regarding the perceived consequences of knowledge sharing is 2.72, with a standard deviation of 0.362, which falls within the acceptable range, confirming that the results individuals expect from knowledge sharing among them are at a high level. The overall average of the study sample's responses regarding the individual's attitude towards knowledge sharing is 2.12, with a standard deviation of 0.470, which falls within the neutral range, confirming that individuals' attitudes towards knowledge sharing in the institution are average. The overall average of the study sample's responses regarding individuals' motivation to learn is 2.49, with a standard deviation of 0.342, which falls within the corresponding range, indicating that individuals' motivation to learn in the institution is high.

Table 4. Results of knowledge sharing behaviour dimension statements

Variable	Arithmetic mean	Standard deviation	General direction
Knowledge sharing behaviour	2.57	.0379	High

Source: Prepared by authors based on SPSS outputs

The above table shows that the overall average of the study sample's responses regarding knowledge sharing behaviour is 2.57, with a standard deviation of 0.379, which falls within the acceptable range, indicating that knowledge sharing behaviour among individuals is high.

c. Test of Hypotheses

This section presents the testing of hypotheses to evaluate the relationships between organizational and individual knowledge-sharing factors and knowledge-sharing behaviour.

3.1 Relationship between the variables of the multiple regression model

The following table shows the relationship between the dependent variable and the independent variables:

Table 5. Coefficient of determination for the multiple regression model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.621[a]	0.385	0.370	2.41199

a. Predictors (Constant)
b. Dependent Variable: knowledge sharing behaviour

Source: Prepared by authors based on SPSS outputs

Table 5 points out that the correlation coefficient (R) for the study model was 0.621, which indicates a moderate positive correlation between the independent variables (organizational and individual factors) and the dependent variable (knowledge sharing behaviour). It is also clear that the adjusted R-squared value was (37%), meaning that organizational and individual factors explain approximately (37%) of the variance in knowledge sharing behaviour.

3.2 Testing the main hypothesis

H0: There is no effect of organizational and individual factors on knowledge sharing behaviour at the significance level (α=0.05).
H1: There is an effect of organizational and individual factors on knowledge sharing behaviour at the significance level (α=0.05).

Table 6. Analysis of regression variance

Model	Sum of Squares	DF	Mean Square	F	Sig
1 Regression	149.521	1	149.521	25.701	0.000[b]
Residual	238.525	41	5.818		
Total	388.047	42			

a. Dependent Variable: knowledge sharing behaviour.
b. Predictors (Constant).

Source: Prepared by authors based on SPSS outputs

The above table shows that the multiple regression model of organizational and individual factors on knowledge sharing behaviour is significant, with a value of (F= 25.701) and a significance level (sig=0.000), which is lower than the significance level (α=0.05).
Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, i.e., there is an effect of organizational and individual factors on knowledge sharing behaviour at the significance level (α=0.05).

3.3 Testing sub-hypotheses

Based on SPSS outputs, the following table reveals the results of testing sub-hypotheses of the study:

Table 7. Multiple linear regression

Variants	Regression Coefficients	Beta	T	Statistical significance
Constant	-0.983	-	-0.280	0.781
organizational culture	-0.085	-0.61	-0.414	0.681
Incentives	0.235	0.143	1.065	0.294
Leadership	0.501	0.282	2.131	0.04
Loyalty	0.500	0.315	2.048	0.48
Trust	0.004	0.002	0.016	0.988
Perceived consequences of knowledge sharing	-0.123	-0.077	-0.670	0.507
Individual's attitude towards knowledge sharing	0.389	0.231	1.480	0.147
Individual's motivation to learn	0.516	0.231	1.705	0.097

Source: Prepared by authors based on SPSS outputs

Thus, Table 7 shows the following findings:

First sub-hypothesis: Organizational culture affects knowledge sharing behaviour at the significance level (α=0.05).

H0: Organizational culture does not affect knowledge sharing behaviour at the significance level (α=0.05).

H1: Organizational culture affects knowledge sharing behaviour at the significance level (α=0.05).

The alternative hypothesis is rejected and the null hypothesis is accepted, which states that: Organizational culture does not affect knowledge sharing behaviour at the significance level (α=0.05).

Second sub-hypothesis: Incentives affect knowledge sharing behaviour at the significance level (α=0.05).

H0: Incentives do not affect knowledge sharing behaviour at the significance level (α=0.05).

H1: Incentives affect knowledge sharing behaviour at the significance level (α=0.05).

The alternative hypothesis is rejected and the null hypothesis is accepted, which states that: Incentives do not affect knowledge sharing behaviour at the significance level (α=0.05).

Third sub-hypothesis: Leadership affects knowledge sharing behaviour at the significance level (α=0.05).

H0: Leadership does not affect knowledge sharing behaviour at the significance level (α=0.05).

H1: Leadership affects knowledge sharing behaviour at the significance level (α=0.05).
The null hypothesis is rejected and the alternative hypothesis is accepted, which states that: Leadership affects knowledge sharing behaviour at the significance level (α=0.05).
Fourth sub-hypothesis: loyalty affects knowledge sharing behaviour at the significance level (α=0.05).
H0: Loyalty does not affect knowledge sharing behaviour at the significance level (α=0.05).
H1 loyalty affects knowledge sharing behaviour at the significance level (α=0.05).
The null hypothesis is rejected and the alternative hypothesis is accepted, which states that loyalty affects knowledge sharing behaviour at the significance level (α=0.05).
Fifth sub-hypothesis: Trust affects knowledge sharing behaviour at the significance level (α=0.05).
H0: Trust does not affect knowledge sharing behaviour at the significance level (α=0.05).
H1: Trust affects knowledge sharing behaviour at the significance level (α=0.05).
The alternative hypothesis is rejected and the null hypothesis is accepted, which states that: Trust does not affect knowledge sharing behaviour at the significance level (α=0.05).
Sixth Sub-hypothesis: There is an effect of perceived consequences of knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
H0: There is no effect of perceived consequences of knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
H1: There is an effect of perceived consequences of knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
The alternative hypothesis is rejected and the null hypothesis is accepted, which states that: There is no effect of perceived consequences of knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
Seventh Sub-hypothesis: There is an effect of an individual's attitude toward knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
H0: There is no effect of an individual's attitude toward knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
H1: There is an effect of an individual's attitude toward knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
The alternative hypothesis is rejected and the null hypothesis is accepted, which states that: There is no effect of an individual's attitude toward knowledge sharing on knowledge sharing behaviour at the significance level (α=0.05).
Eighth sub-hypothesis: There is an effect of an individual's motivation to learn on knowledge sharing behaviour at the significance level (α=0.05).
H0: There is no effect of an individual's motivation to learn on knowledge sharing behaviour at the significance level (α=0.05).

H1: There is an effect of individual motivation to learn on knowledge sharing behaviour at the significance level (α=0.05).
The alternative hypothesis is rejected and the null hypothesis is accepted, which states that: There is no effect of individual motivation to learn on knowledge sharing behaviour at the significance level (α=0.05).

3.4 Discussion of study results

The organizational factors that influence knowledge sharing behaviour in the study are: leadership and loyalty, as the significance level for both is less than 0.05, which means that they have a significant impact on knowledge sharing behaviour in the organization, with leadership influencing knowledge sharing behaviour in the organization by 50%. On the other hand, loyalty affects knowledge sharing behaviour in the organization by 50%. Meanwhile, organizational culture and incentives are organizational factors that do not affect knowledge sharing behaviour, as the significance level for both is greater than 0.05.
As for the individual factors represented by trust, perceived consequences of knowledge sharing, individual attitude towards knowledge sharing, and individual motivation to learn, they do not affect knowledge sharing behaviour because the significance level for each of them is greater than 0.05.
We can, therefore, conclude that both leadership and loyalty influence knowledge sharing behaviour among individuals working in the Civil Protection Directorate in the province of Ouargla, Algeria.
Based on the above, we find that the results of this study are consistent with the results of a study by (Rohman, Eliyana, Purwana, & Hamidah, 2020), which found that leadership affects knowledge sharing behaviour at a cancer research centre in Indonesia, and are consistent with the results of the study of (Areekkuzhiyil, 2016) which found that organizational culture affects knowledge exchange practices among teachers working in the higher education sector in the Indian state of Kerala. It is also consistent with the study by (Shamshad, Ashraf, & Shiekh, 2020), which revealed a correlation between organizational culture dimensions and knowledge sharing dimensions in public and private university libraries in Punjab, Pakistan.
However, it differs from the findings of studies by (Rohman, Eliyana, Purwana, & Hamidah, 2020) and (Titi Amayah, 2013), which concluded that incentives influence knowledge sharing. It also differs from the findings of studies by (Areekkuzhiyil, 2016), (Rohman, Eliyana, Purwana, & Hamidah, 2020) and (Shamshad, Ashraf, & Shiekh, 2020), which concluded that trust influences knowledge sharing. In addition to (Areekkuzhiyil, 2016), (Rohman, Eliyana, Purwana, & Hamidah, 2020), and (Shamshad, Ashraf, & Shiekh, 2020), which found that trust affects knowledge sharing; yet, it agrees with the study of (Titi Amayah, 2013), which revealed that trust does not affect knowledge sharing.
This differs from the results of the study of Jeon et al., 2011, which indicated that perceived consequences can significantly affect knowledge sharing in communities of practice. As well as, the study of (Hatem Ali, 2018) revealed that perceived

consequences affected knowledge sharing behaviour in the department of economic sciences of Baghdad University. It also differs from the results of Abdulah Hassen and Khemis (2023) study, which found that there is a positive and statistically significant effect between an individual's attitudes toward knowledge sharing and the dependent variable of knowledge sharing.

4. Conclusions

This study evaluated the impact of organizational and individual factors on knowledge sharing behaviour in a public sector institution, namely the Civil Protection Directorate in the province of Ouargla (Algeria). Thus, the following conclusions were reached: Firstly, the organizational and individual factors selected in the study have a moderate impact on knowledge sharing behaviour in the institution. Secondly, the study revealed that leadership and loyalty as organizational factors have a positive impact on activating and shaping knowledge-sharing behaviour. Individual factors, on the other hand, have no impact on knowledge sharing behaviour. Thirdly, the organization was unable to activate the role of individual factors in the formation of knowledge-sharing behaviour. Nonetheless, the sample size of the study may not be sufficient, as the study was conducted on a sample of only 45 workers, which is not a large sample. Therefore, the sample size could be expanded in future research so that the results are more representative of the overall community. Our current study targeted only the Civil Protection Directorate in the province of Ouargla in Algeria, while there are many units and intervention centres in other provinces that may include more workers in the same country. Researchers, however, can conduct similar studies in various public sector institutions, such as universities, hospitals, and telecommunications companies, as these are knowledge-intensive institutions where knowledge sharing among individuals is more prevalent than in the institution studied in our current study. Also, future researchers can determine in which dimension of knowledge sharing organizational and individual factors have an impact since our study did not specify the dimensions of knowledge sharing, like knowledge transfer, knowledge exchange and knowledge transmission. Lastly, our study focused on four organizational factors and four individual factors only; future studies could examine other factors, like technological ones. Yet, these limitations do *not invalidate* the results but rather emphasize areas for further research.

5. Recommendations

The following are a set of recommendations based on the conclusions:

- Strengthening the organizational culture that supports knowledge-sharing behaviour among workers by supporting teamwork and fostering a spirit of cooperation among individuals.
- Senior management should focus on activating organizational factors that promote knowledge-sharing behaviour, such as providing incentives (material

and moral) to employees for sharing knowledge that contributes to the development of administrative work.

- Adopting people-oriented policies to enhance the role of individual factors in knowledge sharing: by encouraging them to establish friendly relationships with each other that increase social interaction, thereby creating mutual trust that, in turn, promotes knowledge sharing behaviour. Also, hold training courses that improve communication skills among individuals and develop their motivation to learn and acquire new knowledge and skills.
- Raising awareness among workers of the importance of sharing knowledge among themselves to avoid hoarding it.

Conflict of interest statement

The authors declare no conflict of interest.

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References

Abdelsalam, A.H., Maisoon ALI, A., Al. BeisaniAl, N.Y., and Abdullah, H.H. (2020). Collaborative climate and knowledge sharing attitude: a study on sudanese insurance companies. *Journal Of Organizational Behavior Research , 5*, 135-147.

Abdulah, H.Y., Hassen, R.M., and Khemis, M.A. (2023). The impact of organizational and individual factors on the degree of knowledge sharing: The mediating role of individual motivation to learn. *Alexandria University Journal of Administrative Sciences , 60* (1), 101-155.

Al-Alawi, A.I., Al-Marzooqi, N.Y., and Mohammed, Y.F. (2007). Organizational culture and knowledge sharing:critical success factors. *Journal of Knowledge Management , 11* (2), 22-42. https://doi.org/10.1108/13673270710738898

Anisur, R.K., Shahriar Khandaker, K. (2016). Public and Private Organizations: How Different or Similar are They. *Journal of Siberian Federal University. Humanities & Social Sciences , 12* (9), 2873-2885. https://doi.org/10.17516/1997-1370-2016-9-12-2873-2885

Areekkuzhiyil, S. (2016). Attitude towards Knowledge Sharing among Under Graduate Students in Kerala. *Edutracks , 18* (7), 25-31.

Birgit, R. (2008). Trust in management and knowledge sharing: The mediating effects of fear and knowledge documentation. *The International Journal of Management Science* , 206-220. https://doi.org/10.1016/j.omega.2006.06.005

Chen, W.-J., Cheng, H.-Y. (2012). Factors affecting the knowledge sharing attitude of hotel service personnel. *International journal of hosbitality management , 31* (2), 468-476. https://doi.org/10.1016/j.ijhm.2011.07.005

Dammaj, A., Alawneh, A., Abu Hammad, A., and Sweis, R. J. (2016). Investigating the relationship between knowledge sharing and service quality in private hospitals in Jordan. *Int. J. Productivity and Quality Management, 17* (4), 437-455. https://doi.org/10.1504/IJPQM.2016.075248

Deasy, R.P. (2022). The effect of knowledge management system and knowledge sharing on employee performance and loyalty. *Indonesian Interdisciplinary Journal of Sharia Economics , 5* (1), 371-389. https://doi.org/10.31538/iijse.v5i1.2162

Girdauskienė, L., Savanevičienė, A. (2007). Influence of Knowledge Culture on Effective Knowledge Transfer. *Engineering Economics, 54* (4), 36- 43.

Girdauskienė, L., Savanevičienė, A. (2012). Leadership role implementing knowledge transfer in creative organization: how does it work? *Procedia - Social and Behavioral Sciences , 41*, 15-22. https://doi.org/10.1016/j.sbspro.2012.04.002

Handzic, M., & Zhou, A. Z. (2005). *Knowledge Management: An Integrative Approch.* Englend: Chandos publishing, Oxford.

Hatem Ali, A.A. (2018). The impact of Knowledge sharing in sustaining Dynamic capabilities An Analytical study for a sample of Baghdad collage Economic sciences University lecturers. *Baghdad University Journal of Economic Sciences* (54), 105-131.

Jeon, S.-H., Kim, Y.-G., and Koh, J. (2011). Individual, social, and organizational contexts for active knowledge sharing in communities of practice. *Expert Systems with Applications 38, ELSEVIER*, 12423-12431. https://doi.org/10.1016/j.eswa. 2011.04.023

Joia, L.A., Lemos, B. (2010). Relevant factors for tacit knowledge transfer within organisations. *Journal Of Knowledge Management , 14* (3), 410-427. https://doi.org/ 10.1108/13673271011050139

Jorgensen, R., Edwards, K., Scarso, E., and Ipsen, C. (2021). Improving public sector knowledge sharing through communities of practice. *VINE Journal of Information and Knowledge Management Systems, 51* (2), 318-332. https://doi.org/10.1108/ vjikms-08-2019-0115

Leistner, F. (2010). *Mastering organizational knowledge flow: how to make knowledge sharing work.* New Jersey, USA: John Wiley & Sons , Ins, Hoboken.

Nonaka, I., Toyama, R., and Hirata, T. (2008). *Managing Fow: A process theory of the knowledge- based firm.* New York: PALGRAVE MACMILLAN.

Noorazah, M.N., Juhana, S. (2012). The Influence of Individual, Organizational and Technological Factors on Knowledge Sharing in the Private Sector in Malaysia. *International conference on Information retrieval and knowledge management* (pp. 167-171). Kuala Lumpur, Malaysia: IEEE.

Roger, F., Jennifer, R. (2017). An investigation of factors affecting knowledge sharing amongst UK academics. *Journal of Knowledge Management, 21* (5), 1254-1271. https://doi.org/10.1108/JKM-07-2016-0274

Rohman, A., Eliyana, A., Purwana, D., and Hamidah, H. (2020). Individual and organizational factors' effect on knowledge sharing. *Journal of Entrepreneurship and Sustainability Issues, 8* (1), 38-48. https://doi.org/10.9770/jesi.2020.8.1(3)

Salina, D., Hanifah, A.H. (2006). Successful Knowledge Sharing in Private Higher Institutions Education: Factors and Barriers. 542-546.

Shamshad, A., Ashraf, A., and Shiekh, A. (2020). Relationship between Organizatinal culture and knowledge Sharing: A Study of University Librarians. *De Gruyter, 70* (2), 143-156. https://doi.org/10.1515/libri-2019-0034

Sujata, S., Santosh, P. (2016). Sharing of Knowledge among Faculty in a Mega Open University. *Open Praxis, 8* (3), 247-264. http://dx.doi.org/10.5944/openpraxis. 8.3.317

Swift, M., Balkin, D. B., and Matusik, S. F. (2010). Goal orientations and the motivation to share knowledge. *Journal of Knowledge Management, 14* (3), 378-393. https://doi.org/10.1108/13673271011050111

Szulanski, G. (1996). Exploring Internal Stickiness: Impediments to the Transfer of Best Practice Within the Firm. *Strategic Management Journal, 17*, 27-43. https://www.jstor.org/stable/2486989

Titi Amayah, A. (2013). Determinants of knowledge sharing in a public sector organization. *Journal of Knowledge Management, 17* (3), 454-471. https://doi.org/10.1108/JKM-11-2012-0369

Willem, A., Bluelens, M. (2007). Knowledge Sharing in Public Sector Organizations: The Effect of Organizational Characteristics on Interdepartmental Knowledge Sharing. *Journal of Public Administration Research and Theory, 17* (4), 581-606. https://doi.org/10.1093/jopart/mul021