



# The Impact of Teleworking on the Quality of Knowledge Sharing During and After Covid-19: Clusters in Morocco as a Case Study

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## Abstract

In early 2020, the coronavirus pandemic spread around the world and many countries introduced confinement measures encouraging the population to limit physical contact. These restrictions limited the costs of agents, the movement of workers and trade between countries, creating demand shocks that have had repercussions for the entire global production structure. The Covid-19 crisis has created a sudden need for companies and their employees to introduce or improve teleworking, which is strongly encouraged by both private and public companies. Many clusters in Morocco are discovering, on the one hand, the benefits of teleworking to further their business model, and on the other hand, the digital divide that separates them and allows them to achieve cohesive, better communicated and more efficient teams through collaborative working. In addition, the degree to which organizations are prepared to adopt teleworking, the new format of the working environment of the future, requires the implementation of knowledge management tools that adapt to the new situation and its new contingencies. Hence the problem of our study, which aims to understand how this transition can be carried out successfully with the required quality of knowledge sharing. The aim of this article is to examine the adaptation and satisfaction of Moroccan people towards telework and its impact on the quality of knowledge sharing, using a quantitative approach, with 210 teleworkers working in Moroccan clusters during and after Covid-19.

## Keywords

Knowledge sharing, Telework, Clusters, Covid-19

## INTRODUCTION

The impact of the health crisis on the global economy has been marked by a drop in industrial production, plant closures, halted construction and infrastructure projects, delayed investment plans, serious disruptions to corporate supply chains, restricted international mobility and border closures. As a result, consumption has slowed as a result of the confinement measures, which has led to a severe recession and a negative demand shock.

The Moroccan economy is already affected by the collapse of the global economy, particularly Europe, its main trading partner. Confinement measures to combat the spread of the pandemic have also had a rapid negative impact on the country's economy. In addition, two-thirds of the working population (66.2%) have had to temporarily hold their activities, including 68.2% of urban residents, 63.1% of rural residents, 88% of craftsmen and skilled workers and 79% of non-agricultural workers (HCP, Morocco's social indicators 2020, 2022 edition). These circumstances present unprecedented challenges for the country, which is already facing an agricultural year marked by drought, suggesting that the Moroccan economy is likely to be strongly affected by the adverse effects of this global pandemic.

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However, Morocco has been less affected by the epidemic than other countries, including Italy, Spain, the United States, France, India and China, which have suffered mostly. We can only applaud the strategy adopted to combat the epidemic since 13th March 2020. As a result, Morocco stands at the fore of the world with respect to the measures to contain and combat the spread of the Covid-19 virus, on the one hand, and on the other, to the mass vaccination strategy carried out throughout the country, which has been comparatively the most successful. The vaccination campaign launched on 28th January 2021 covered a total of 23,418,622 beneficiaries by 31st December, 2022 (2nd vaccination dose), i.e. 93% of the country's target population aged over 17, estimated at 25,000,000 (HCP, Morocco's social indicators 2020, 2022 edition).

Some companies faced a new paradigm in terms of location and organization of work during the pandemic, with some public and private organisations suspending their activities due to serious concerns about the spread of the virus. New ways of working have emerged, forcing companies to re-examine the way they operate, collaborate and share information.

Faced with this unprecedented situation, the move to teleworking for the whole or some components of companies has led to the use of remote collaborative working and videoconferencing solutions, as well as virtual private network (VPN) platforms.

However, the knowledge base can be highly fragmented; it can be found on the Intranet, on social networks, in emails and even in files and documents. And it's not all based on knowledge that's only available in the employee's mental capacity. Therefore, when these employees worked remotely, they needed to be able to access all the information they needed, when they needed it, and use the most fluid digital practices open for them.

This article contributes to a reflection on the way in which knowledge is shared in the Covid-19 and post-Covid era, within Moroccan companies, through the following research problem: What is the impact of the emergence and adoption of telework on the quality of knowledge sharing within Moroccan clusters? This question can be broken down into the following sub-questions:

- What is the level of acceptance and adaptation of employees to this new way of working?
- What are the determining factors that can impact the quality of knowledge sharing within Moroccan companies through the adoption of teleworking?

## LITERATURE REVIEW

### Conceptual framework of the research

The importance of intangible resources, such as knowledge, for companies is not new. In fact, it has given rise to a great deal of research in both Economics and Management, the first of which gave rise to Resource Theory (Penrose, 1959).

### Notions of Knowledge

In Information and Communication sciences, knowledge is an intellectual activity, a construct of the mind, which enables facts or phenomena to be apprehended and analysed in order to understand, predict, capitalise on or reproduce them (Meyriat, 1985). It is considered and presented as a personal or collective step back from information. Knowledge is not static; it is constructed. It is both durable and sharable, but the medium is not identifiable.

A review of the literature shows that various researchers have defined knowledge in different ways. Knowledge is a fluid combination of experience, relevant information and expert opinion, which provides a structure for evaluating and integrating new experience and information. It starts and operates in the mind of the knower. In organisations, it is often embedded not only in documents, but also in routines, practices, methods, progress and organisational norms (Davenport & Prusak, 1997). It is a dynamic framework within which information can be stored, processed and understood (Plotkin, 1994), and is seen as a dynamic human process that justifies an individual's belief in the truth (Nonaka & Takeuchi, 1995). Knowledge can be divided into four categories: (1) personal and public, (2) material and immaterial, (3) theoretical and practical, (4) and internal and external (Pathirage et al., 2008). Essentially, however, we refer to the famous theory of Nonaka and Takeuchi, (Nonaka & Takeuchi, 1995; Takeuchi, 2006) which has strongly influenced all current research and approaches to knowledge management. This theory distinguishes between two types of knowledge, explicit

knowledge and tacit knowledge. Explicit knowledge is directly understandable and expressible by every individual in the company. Tacit knowledge is specific to each individual and is formed from personal know-how and individual beliefs and aspirations.

## **Evolution of teleworking**

### ***Teleworking***

Most of the definitions reviewed are no more than an attempt to clarify a "simple but vague concept" (Lemesle & Marot, 1994). The notion of telework always implies geographical distance and the use of new information and communication technologies (NICT). But the problem arises when we try to understand the range of distances and what it means to use NICTs. Whether you want to be recognised as a teleworker or not, the situation is very different. Besides, the answer to the question: to stay away from whom or from what? can be very changeable, especially today when flexibility and mobility have become organisational norms.

From one definition to another, the reality of teleworking is therefore multiple. It can therefore be defined as any situation that enables an individual, at his or her own request or that of the employer, to carry out his or her activity away from the premises of the company or establishment, using communication technologies.

According to a study carried out by Eurofound's Network of European correspondents in 10 EU Member States, only a small proportion of employees in the European Union worked remotely on a regular or occasional basis. In 2017, this percentage was 30% or more in some Nordic countries, such as Sweden and Norway, but only 10% or less in other countries, such as Greece, Italy and Poland (Messenger et al., 2017). According to the World Bank, teleworking is possible on average once in every five different jobs in developed countries, while it takes 26 different jobs for one opportunity to work remotely in developing countries (Garrote Sanchez et al., 2021). This is explained in particular by an overweighting of primary jobs compared with tertiary jobs in emerging countries.

During Covid, several countries were obliged to introduce teleworking for the first time, including Morocco. Since the advent of Covid-19, teleworking has emerged as an alternative means of ensuring business continuity.

The Moroccan Labour Code considers that an employee working from home is "charged, either directly or through an intermediary, with carrying out work in return for remuneration, on behalf of one or more companies" (Article 8 of Act no. 65-99 on the Moroccan Labor Code, 2004).

A study carried out by Rekrute (Moroccans and teleworking, Survey, Rekrute, 2021) shows that more than half (56%) of Moroccan executives teleworked during confinement. Among the sectors that have deployed teleworking is the Information Technology sector, which accounts for 15% of companies, followed by the education and training sector (8%), the consultancy and research sector (7%), and 16% of companies in the banking and finance sector.

### ***Face-to-face knowledge sharing***

Unlike the definitions of transfer, which generally converge towards close understandings, researchers have failed to reach unanimity regarding the definition of "knowledge sharing". The definitions proposed have each conditioned the process of knowledge sharing on a specific factor, such as reciprocity, collectivism, stake, etc. Knowledge sharing, according to Van Den Hooff & Hendrix (2004; De Vries et al., 2006), is a process in which individuals mutually exchange their knowledge (tacit and explicit) and jointly create new knowledge. This definition implies that all knowledge-sharing processes involve both contributing (or giving) knowledge and obtaining (or collecting) other knowledge. In other words, knowledge sharing requires the exchange of knowledge in both directions.

Pulakos et al. (2003), Cummings (2004) and Wang & Noe (2010) define knowledge sharing as the communication of information and know-how to help or collaborate with others in order to solve problems, develop new ideas, or implement policies or procedures. Sharing would therefore be through written correspondence or through face-to-face communication, or on a network, with other experts, where communication can be formal or informal.

Lee (2001) defined the process of knowledge sharing as a set of activities for transferring and disseminating tacit or explicit knowledge from one person, a group or an organisation to another. Some works, such as those by Cabrera et al. (2006), have used the concept of "knowledge sharing" interchangeably with the concept of "knowledge exchange". However, knowledge exchange, according to Wang & Noe (2010), includes both seeking knowledge from others and then sharing knowledge with others.

### ***Remote knowledge sharing in the case of teleworking***

The Covid-19 crisis has created a sudden need for companies, public institutions and their employees, forced by exceptional circumstances, to introduce or reinforce telework. By facilitating this transition, information and communication technologies have played a key role in enabling economic activities to continue and a significant proportion of individuals to continue to receive income. Making knowledge management more fluid is therefore essential, particularly when employees are working remotely. In fact, in this context, teams cannot exchange face-to-face information every day because of the health and distance measures imposed by the public authorities.

Organisations today generate massive amounts of information and content as part of their day-to-day activities. But getting this knowledge to the right people at the right time was an ongoing challenge, made it all the more difficult by the Covid-19 pandemic. Of all the initiatives aimed at facilitating remote knowledge sharing within organisations, the implementation of knowledge management systems is one of the most popular (Bernard, 2006). In reference to this type of tool, the literature also uses the acronym KMS (Knowledge Management System), and these systems can be defined as

an element of an information system. According to Alavi & Leidner (2001), they are developed to facilitate and improve the three main processes: the creation, formalisation and re-use of knowledge. To gain a better understanding of the scope covered by KMSs, we draw on the work of De Carvalho & Ferreira (2001), who defined their types and classified them into 10 categories (Table 1).

Knowledge has been and will continue to be a key competitive advantage in organisational performance. New ways of working are forcing companies to rethink their approach to knowledge sharing. Today, many companies have already set up systems to shape the interaction between people and technology, improve the flow of information and increase the sharing of knowledge within the organisation. Collaboration platforms, messaging applications, content management systems, purpose-built knowledge management systems and employee incentive schemes are often important components of an organisation's knowledge sharing structure, enabling companies to capture knowledge, increase access to knowledge, promote a knowledge sharing culture and manage knowledge as an asset.

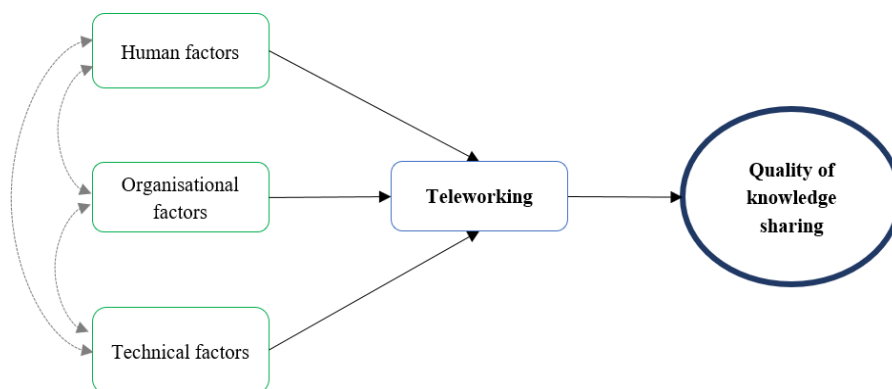
**Table 1** Classification of knowledge management systems (KMS) according to De Carvalho & Ferreira (2001)

Category	Definition
Intranet	An internal company system that uses Web technologies to share content linked by hypertext links.
Electronic document management (EDM)	Tools that provide more efficient ways of storing, filing and retrieving documents. They can be seen as electronic libraries.
Collaborative tools	Spaces for exchanging information that encourage collaboration and have synchronous (instant messaging) and asynchronous (discussion forums) functions. This type of tool is centred on the notion of community (referred to as e-groups).
Workflow tools	Tools for regulating information flows within organisations, based on the 3R model (Roles, Rules and Routes) by Cruz (1998) to define a Workflow.
Expert systems	Computer systems that emulate the decision-making ability of a human being.
Business intelligence tools	Tools providing functionalities for extracting, transforming and representing information, with the aim of making it easier for individuals to make decisions.
Knowledge mapping	The purpose of these tools is not to store information derived from the externalisation of declarative, procedural, causal and conditional knowledge, but rather to store only information linked to relational knowledge. This type of tool can therefore be used to locate expertise within the organisation.
Innovation support	Tools that contribute to the creation of knowledge during the design or creation of new products or services. They generally rely on knowledge bases to provide information relating to a context.
Business intelligence	Tools offering qualitative information collected in the public domain. As with business intelligence, their purpose is to facilitate decision-making.
Knowledge portals	Historically, the aim of these tools was to structure access to the organisation's various resources. However, according to the authors, these tools are now evolving towards increasingly complex functionalities, offering individuals the possibility of personalising their own spaces.

## METHODOLOGY

### Conceptual research model

On the basis of the concepts in use in the theoretical part, we drew up the conceptual research model enabling us to highlight the impact of teleworking on the quality of knowledge sharing, through three categories of factors: human, technical and organisational (Fig. 1).



**Fig. 1:** Explanatory model for the variable "knowledge sharing quality"

In order to assess the impact of these factors on the quality of knowledge sharing via teleworking, we formulated the following hypotheses:

- H1: Human factors have a positive influence on the quality of knowledge sharing.
- H2: Technical factors have a positive influence on the quality of knowledge sharing.
- H3: Organisational factors have a positive influence on the quality of knowledge sharing.

Each factor brings together several explanatory variables, divided into a set of items that are measured on a 5-point Likert scale (Strongly disagree, Disagree, Neither agree nor disagree (neutral), Somewhat agree and Strongly agree).

The human factor presents four variables, divided into (10) items: Knowledge-sharing behaviour (4 items); Interpersonal trust (2 items); Quality of communication (2 items) and Reward Systems (2 items).

As to the technical factor, three explanatory variables were retained, divided into (06) items: Use and mastery of collaborative technologies (3 items); Perceived usefulness of collaborative technologies (2 items) and Knowledge typology (1 item).

For organisational factors, we constructed three variables including (08) items: Organisational culture (3 items), Organisational structure (3 items) and Organisational support (2 items).

### Research methodology

To be able to describe the quality of knowledge sharing within Moroccan companies, through the adoption of teleworking, we carried out a quantitative survey through the elaboration of a questionnaire in which the factors are translated into multi-item scales. This survey was carried out among 210 teleworkers operating in various clusters in the Casablanca-Settat region (Morocco).

The choice of clusters as a field of study is in line with the KBVC (Knowledge-Based View of Cluster) (Maskell, 2001), which assimilates the cluster to a spatial configuration of activities conducive to the creation, the transfer and exploitation of knowledge. The Casablanca-Settat region is characterised by its economic influence, given its position on a national and continental scale, and includes a high number of clusters operating in the industrial and offshoring sectors. The questionnaire was validated after being tested with a group of teleworkers. It was administered online via Google Forms and the work was carried out during the first half of 2023.

The questionnaire was based on the criteria of gender, age, level of education and training, as well as professional status and seniority. It also included a set of data aimed at assessing the level of adherence and adaptation of employees to teleworking to identify the determining factors that could impact the quality of knowledge sharing within Moroccan clusters through the adoption of teleworking, in the Covid-19 and post-Covid era.

### Impact of teleworking on the quality of knowledge sharing

Out of 210 questionnaires administered, 166 usable questionnaires were submitted by the interviewees, confirming that they had all already teleworked, which set the rate of feedback to 79% of which 59.3% of the respondents were male.

### Assessment of the Level of Support for Teleworking

The sample is mainly made up of senior executives (77% representing Directors/Managers or Heads of Department/Division/Project) with an average age between 25 and 35 years (53.3%), with a high level of university education, corresponding to Baccalaureate +5 and above, thus representing 78% of the teleworkers interviewed. Regarding seniority in their jobs, 35.3% of the participants in our survey have been teleworking for less than 5 years and 41.3% for between 5 and 10 years, reflecting a fresh educated and active population.

The aim of the first section of the questionnaire is to assess how teleworkers adapted to and adapting this way of working, and how satisfied they were with it. This specific form of work, newly emerged in the field of work within Moroccan companies, has become the daily life of millions of people, emblematic of exceptional changes in the conception of work and its place, since the beginning of the spread of the Covid 19 coronavirus up to now.

The aim of the first section of the questionnaire is to assess the extent to which teleworkers have adopted and adapted to this new way of working, and how satisfied they are with it. This particular form of work, which has only recently emerged in Moroccan companies, has become the daily routine of millions of people, emblematic of the exceptional changes in the way work is conceived and where it takes place, from the start of the spread of the Covid 19 coronavirus to the present day.

All the respondents confirmed that they used teleworking for the first time and were forced to do so by the exceptional circumstances of Covid-19, and that 46% of our sample were fairly satisfied and 31% answered that they were very satisfied with the adoption of this way of working (Fig. 2).

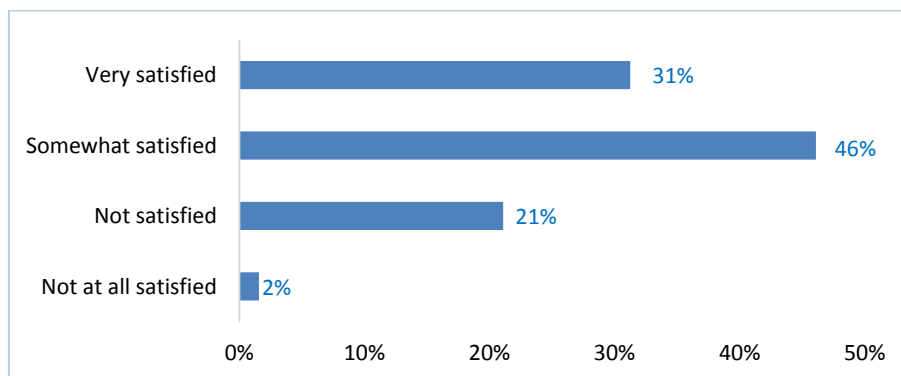
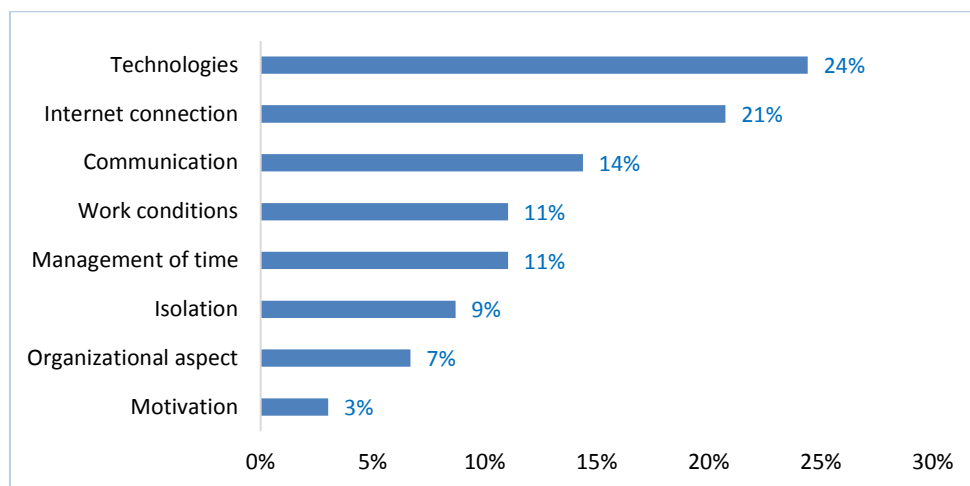


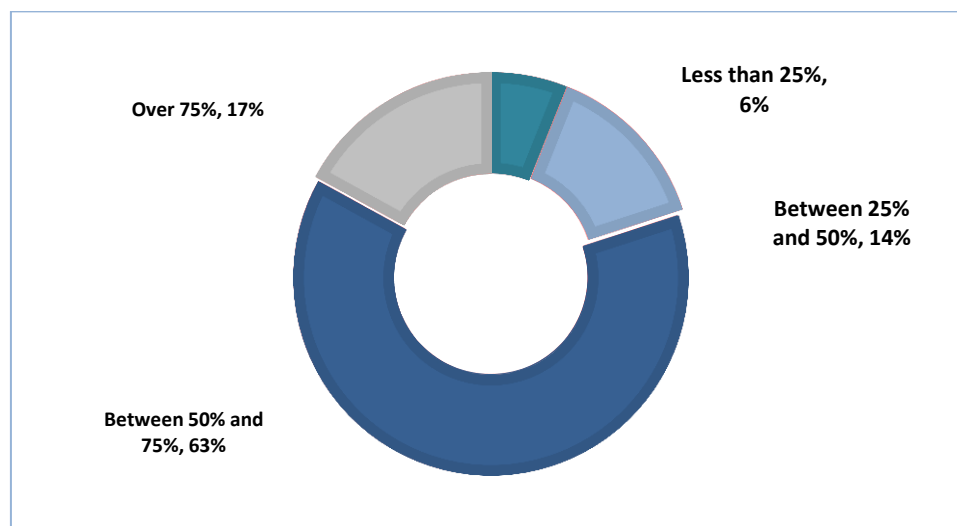
Fig. 2 Respondents' level of satisfaction with the adoption of telework

Nevertheless, 54% of the participants in our survey complained about technical difficulties, which could sometimes be a source of reduced productivity, poor interpersonal communication, wasted time and demotivation (Fig. 3).



**Fig. 3** Difficulties encountered by respondents when teleworking

The results gathered from the interviewees indicate that the level of productivity in teleworking was generally a little lower than in face-to-face work. 63% of respondents said that they were productive despite their recent experience of teleworking, but not to the same level as they would have been if they had worked in the traditional way, while only 17% of interviewees thought that teleworking could be as productive as face-to-face work (Fig. 4).



**Fig. 4** Moroccan teleworkers' productivity level

The results obtained from our study show that Moroccan employees have not yet been able to adapt more easily to teleworking, despite the fact that the nature of our sample is considered to be representative of a social stratum of Moroccans closest to the use of ICTs.

### ***Measuring the Quality of Knowledge Sharing***

The objective of this stage is to determine the explanatory factors of the variables and their impact on the quality of knowledge sharing in teleworking. We therefore constructed 24 items, 10 of which relate to human factors, 6 to technical factors and 8 to organisational factors.

### ***Principal component analysis (PCA)***

After applying the principal component analysis (PCA) method, 15 items were selected (Table 2), with a Cronbach's  $\alpha$  coefficient  $>0.5$  (Nunnally, 1978).

The items initially listed in the questionnaire and deleted by the PCA are as follows:

- Five human factors: Lack of knowledge sharing (0.429); Establishment of a communication process (0.394); Enjoyment of recognition (0.233); Improvement of professional status (-0.215); and Lack of confidence in skills (-0.223).
- A single technical factor: Lack of training (0.476).
- Three organisational factors: Respect for the organisational structure (0.454); Ease of changing staff behaviour and mentality (0.429); and mutual respect and use of a common language (0.414).

**Table 2** PCA of factors affecting the quality of knowledge sharing

<b>Extraction: PCA</b>	<b>ACP1</b>	<b>ACP2</b>	<b>ACP3</b>
Kaiser-Meyer-Olkin- Measurement of sampling adequacy with Varimax rotation Bartlett's sphericity test<0.001	<b>Human factors</b>	<b>Technical factors</b>	<b>Organisational factors</b>
Enjoying esteem by sharing knowledge	0.962		
Trust as an essential element in sharing	0.958		
Improving productivity	0.942		
Self-satisfaction	0.918		
Poor communication skills	0.899		
Use of collaborative technologies		0.938	
Mastery of the tools used		0.932	
Positive perception of tools		0.928	
Difficulty using technology		0.904	
Ease of sharing explicit knowledge		0.852	
Flat hierarchy			0.901
Flexible organisational structure			0.871
A climate of trust and care			0.829
Open and honest communication			0.792
Reinforcement of a knowledge-sharing culture through organizational support			0.680
% of variance explained	37.98%	81.26%	71.48%
Cronbach's Alpha	0.789	0.952	0.953

To ensure the validity of the model for measuring the quality of knowledge sharing in teleworking mode, we used convergent validity to test the degree of convergence between the items. The results show that the items in the variables linked to the three factors do indeed measure the quality of knowledge sharing, and they highly correlate with each other. The variance of the human, technical and organisational factors is equal to 0.88, 0.83 and 0.67 respectively, which confirms the convergent validity of the construct. Their reliability is also good (Table 3), since Cronbach's alpha and the concordance index are greater than 0.7 (Nunnally J. C. 1978, Darren & Mallery 2008).

**Table 3** Validity of the model constructed for the three factors

	<b>Items</b>	<b>AVE</b>	<b>Composite reliability</b>	<b>Cronbach's Alpha</b>
<b>Human factors</b>	Enjoying esteem			
	Trust as an essential element in sharing			
	Improving productivity	0.88	0.972	0.894
	Self-satisfaction			
	Poor communication skills			
<b>Technical factors</b>	Use of collaborative technologies			
	Mastery of the tools used			
	Positive perception of tools	0.83	0.96	0.952
	Difficulty using technology			
	Ease of sharing explicit knowledge			
<b>Organisational factors</b>	Flat hierarchy			
	Flexible organisational structure			
	A climate of trust and care	0.67	0.909	0.930
	Open and honest communication			
	Reinforcement of a knowledge-sharing culture through organisational support			

#### *Multiple linear regression (MLR)*

The objective of this stage is to study the quality of the causal relationships between the variable explained, namely the quality of knowledge sharing in telework, and the explanatory variables formulated in the research hypothesis. To this end, we carried out a multiple linear regression with the three categories of variables (human, technical and organisational factors).

The analysis of variance obtained by multiple regression (table 4) shows a correlation between the quality of knowledge sharing and the human and technical variables in teleworking mode; whereas the organisational variables explain less of the quality of sharing (40% of the variance explained).

The variables used to construct the model are presented in Table 5. Based on the results of the p-value and t-value coefficient tests, two human factor variables are retained with a P value below the threshold ( $p < 0.001$ ): the enjoyment of knowledge and trust as primordial elements for knowledge sharing. This proves that Moroccan workers enjoyed sharing their knowledge with those whom they trusted and with whom they could establish reciprocity, in a logic of give and take. The stakes of trust are particularly high when it comes to working and collaborating with people at a distance.

**Table 4** Analysis of variance for human, technical and organisational factors

		Sum of squares	ddl	Medium square	F	Sig.
Human factors	Regression	311.974	5	62.395	292.995	.000
	Student's t test	30.666	144	0.213		
	Total	342.640	149			
Technical factors	Regression	306.060	5	61.212	240.966	.000
	Student's t test	36.580	144	0.254		
	Total	342.640	149			
Organisational factors	Regression	311.836	7	44.548	205.360	.000
	Student's t test	30.804	142	0.217		
	Total	342.640	149			

The results of the regression concerning the technical factors confirm the positive effect of the mastery of the tools used and the fact of having a positive perception of these tools on the quality of knowledge sharing, in a context of teleworking induced by the health situation requiring measures of confinement and physical distancing. These results are in line with the findings of previous studies (Cheung & Vogel, 2013; Huang, 2015; Dasgupta et al., 2002) regarding the positive effect of the use of collaborative technologies on remote knowledge sharing.

**Table 5** Multiple regression results for the quality of knowledge sharing

	Items	R <sup>2</sup>	Beta	t	Sig.	p-value	Decision
Human factors	Enjoying esteem	92.7%	0.409	4.800	0.000	<0.001	Confirmed
	Trust as an essential element in sharing		0.349	4.398	0.000	<0.001	Confirmed
	Improving productivity		0.079	1.201	0.232	ns*	Asserted
	Self-satisfaction		0.175	3.219	0.002	ns*	Asserted
	Poor communication skills		-0.029	-0.598	0.551	ns*	Asserted
Technical variables	Use of collaborative technologies	90.1%	0.253	2.215	0.028	ns*	Asserted
	Mastery of the tools used		0.350	3.601	0.000	<0.001	Confirmed
	Positive perception of the tools used		0.436	4.017	0.000	<0.001	Confirmed
	Difficulty in using collaborative technologies		-0.134	-1.679	0.095	ns*	Asserted
	Explicit knowledge is easy to share		0.053	0.949	0.344	ns*	Asserted
Organisational factors	Flat hierarchy	88.6%	0.354	4.407	0.000	<0.001	Confirmed
	Flexible organisational structure		0.299	3.666	0.000	<0.001	Confirmed
	A climate of trust and care		0.334	4.015	0.000	<0.001	Confirmed
	Open and honest communication		-0.026	-0.653	0.515	ns*	Asserted
	Reinforcement of a knowledge-sharing culture through organisational support		-0.029	-0.823	0.412	ns*	Asserted

\*Not significant

From the results obtained for the organisational factors, three variables were selected as having a positive impact on the quality of knowledge sharing. These are: a flat hierarchy favouring the circulation of information between organisational entities; a climate of trust and attention as part of an organisational culture conducive to knowledge sharing; and a flexible organisational structure, encouraging interventions and interactions between workers, and improving communication between them.

## RESULT AND DISCUSSION

Before the Covid-19 pandemic, teleworking was not a widespread practice in Morocco. The vast majority of organisations, managers and workers coped with it for the first time in 2020. The spread of Covid-19 and the measures taken to combat the pandemic have caused major disruption to productivity and the traditional daily lives of workers. Among other things, this raises the issue of physical proximity in the workplace and its impact on knowledge sharing. One of the solutions adopted to ensure business continuity is the use of teleworking. The overnight shift to teleworking - mainly among white-collar workers - has been made possible by the rapid growth of digital solutions, such as videoconferencing, document-sharing tools and the expansion of web-based capabilities (Kathleen Boyle, 2020; Lund et al., 2021). Teleworking is thus overturning the way in which individuals usually communicated with each other and shared knowledge.

While research into knowledge sharing in traditional work contexts is rooted in the literature, research into remote knowledge sharing suggests a more complex process. This complexity is based on three main factors: technical, human and organisational. Because of their physical separation, workers used technological tools to work and communicate. The results of our study show that technical factors in a remote digital environment appear to have some potential for



facilitating knowledge sharing and hence the development of individual and collective knowledge within organisations. Collaborative technologies offer a digital environment enabling workers to share, discuss and debate their ideas remotely, creating a force offering increased flexibility, with no restrictions on time and space (Nguyen & Malik, 2020).

Indeed, the use of work technologies is one of the most frequently used methods (Nguyen et al., 2020). These technologies, such as instant discussion tools, collaborative project management tools, videoconferencing and tools for sharing and creating content and documents, were deployed on a large scale with the pandemic and have become, for many teleworkers, new everyday working tools (Ollo-López et al. 2021). Most of these tools are even becoming chargeable, whereas they used to be free. They would encourage greater participation in knowledge sharing by improving free communication between members of an organisation (Bhatt et al., 2005), despite their disparities (Sarker et al., 2005). They have the potential to recreate, in part, the relationship of interpersonal exchange, spontaneity and simultaneity between individuals (Bélanger & Allport, 2008; Van der Mullen et al., 2019). They, therefore, have the capacity to encourage the sharing of knowledge, despite distance.

Human factors are undoubtedly the most difficult factor to manage. According to Davenport & Prusak (1998), the success of a knowledge-sharing project depends entirely on the participation of the players, and knowledge sharing can only take place if the workers are willing and motivated to do so. In our study, the teleworkers are aware of the value of the knowledge they possess. In addition, for knowledge sharing to take place at all levels of the organisation, there must be mutual trust between staff members, and between superiors and workers. Strong communication skills are considered essential for this sharing. In addition, teleworkers, felt a certain enjoyment in sharing knowledge, which improved quality and was likely to enhance their productivity.

An organisation's culture must also encourage and promote knowledge sharing under the right terms and conditions. A flat hierarchy facilitates and reinforces knowledge sharing within the organisation. In addition, the organisational structure has an influence on knowledge sharing: a flexible structure encourages sharing through interaction between workers, and a culture conducive to knowledge sharing must be based on a climate of care and trust.

After the pandemic, as the economy began to recover and companies enticed their workers back to office and production units, many workers hope a "Hybrid Remote" job - combining home and office working options – could become the new norm (Narayan et al., 2021). Several research studies confirm that organisations in advanced economies have adopted a "hybrid work" (Bernstein et al., 2020; Kropp, 2021; Lund et al., 2021) and according to the Harvard Business Review, 90% of large companies have adopted a hybrid model.

According to a survey conducted by Rekrute, 62% of Moroccan companies have switched to teleworking, and more than half of Moroccans prefer to combine teleworking with face-to-face work. Despite the technical difficulties, 71% of Moroccans say they are more productive when working remotely.

Moreover, teleworking is still not regulated in Morocco, a situation that is being remedied by amendments to contracts and appropriate internal regulations. The Labour Code, which dates from 2003, makes no provision for teleworking, and the provisions in force do not specify the conditions under which this form of work organisation may be used, or how it is to be applied. Hence, today, it is common practice, which is why it is urgent to reform the Labour Code and legislate on teleworking.

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## CONCLUSION

Knowledge has been and will continue to be a key competitive advantage in organisational performance. New ways of working are forcing companies to rethink their approach to learning and knowledge management. The health crisis has forced many companies to create systems to shape the interaction between people and technology, improving the flow of information and increasing knowledge within the organisation. Collaboration platforms, messaging applications, content management systems, dedicated knowledge management systems and employee incentive schemes are often an important part of an organisation's knowledge sharing structure.

The aim of our study was to examine the impact of teleworking on the quality of knowledge sharing through a spectrum of elements linked to the human being, the organisation and the use of collaborative work technologies in a new and unprecedented context, that of remote working imposed by Covid-19. Our results have shown the positive impact of trust and the enjoyment of recognition as primordial elements for knowledge sharing. The findings have as well suggested that the mastery and perception that teleworkers have of technological work tools are determining factors for the quality of remote knowledge sharing. Furthermore, in view of our study results, a flat hierarchy, a climate of trust and attention between teleworkers and a flexible organisational structure have a positive effect on the quality of knowledge sharing.

Nevertheless, in adopting this way of working, many teleworkers seem to worry about the risks associated with shared data. This concern is generally linked to worries about the security and confidentiality of data shared remotely. This means protecting the organisation's assets and sensitive information about the company and its customers which, in the new paradigm of the Cloud, is now shared well beyond the company's borders. Employees, for their part, fear that the additional security used to track and monitor the flow of data will also be used to track and monitor their activity. Finally,

one question that will arise in the future hold on the sustainability and predominance of teleworking as a means of sharing knowledge. Equally insisting is the question whether clusters will succeed in exploiting the full potential of knowledge shared in a hybrid environment between different teleworkers and non-teleworkers.

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## DECLARATION OF CONFLICT

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