International Journal of Performance & Organizations (IJPO)
Volume: 2 Issue: 1 Page: 30-36 ISSN: 2824-7116
Doi: 10.55897/ijpo.2023.01.04 Received: 20/02/2023 ; Revised: 01/03/2023 ; Accepted: 12/03/2023

International Journal of Performance & Organizations (IJPO)

Homepage: https://www.ijpo.org

IMPACT OF DIGITAL TRANSFORMATION ON COOPERATIVES' RESILIENCE IN THE FACE OF THE HEALTH CRISIS: CASE OF COOPERATIVES IN THE AZILAL PROVINCE

Nabil El Alami [a] , Aicha El Alaoui [b]

[a] Sultan Moulay Slimane university, Beni mellal, Morocco, nabil.elalami@usms.ma
[b] Sultan Moulay Slimane university, Beni mellal, Morocco, a.alaoui@usms.ma

ARTICLE INFO

Keywords

Organizational resilience
Cooperatives
Health crisis
Digital transformation
Azilal province
Morocco

ABSTRACT

Moroccan cooperatives and like any other economic actors have suffered adverse repercussions from the health crisis, mainly in terms of sales volumes following the measures imposed by Morocco to stem the spread of the Coronavirus, such as the ban on gatherings, which has complicated the situation of the cooperatives which have found themselves faced with the difficulty of promoting and selling their products knowing that their practices for selling them revolve around gatherings, namely trade fairs and other ways such as "Dlala". Persuaded by the importance of digital, cooperatives have opted for digital transformation, namely online sales, as an adequate solution to the health situation. In this regard, this work aims to assess the role of the digital transformation of the sales process in the resilience of cooperatives in the face of the health crisis. To do this, we adopted an approach of exploring the case of the cooperatives through a field survey conducted in May 2022 at the level of the BZOU commune / Province of Azilal. The population studied is composed of fifteen (15) cooperatives, meaning 50 members/employees an average.

INTRODUCTION

Cooperatives have emerged as a collective response to crises, especially the hard times in England after the industrial revolution. They have demonstrated their resilience against economic and financial crises. They represent an investment in human capital. They are by nature a sustainable and participatory form of activity.

Indeed, they have withstood the most severe crises, such as the Covid19 health crisis, by guaranteeing security to its members through the conversion of individual risk to collective risk, and also through their values and principles. The health crisis disrupted cooperatives' activities and threatened their continuity by challenging their resilience mechanisms.

On the other hand, digital transformation is becoming an indispensable element for the prosperity of modern economies, either to withstand market disruptions, to adapt to new customer behaviors, or to benefit from new technologies in terms of innovation and performance. For this to happen, organizations must move towards digitalization and rethink their operations.

Digital transformation is a way to rebound and revolutionize organizations as a whole. This affects all dimensions, such as the business model, the corporate culture and the work organization. Today, all organizations have no choice but to accept this change to stay alive. As a real development lever for organizations, digital transformation also represents a solid means of agility and resilience in the face of crises.

The aim of this work is to try to answer the following question: to what extent does the digital transformation of the sales process contribute to cooperatives' resilience in the face of the health crisis?

This paper is organized in four parts. The first presents the literature review. The second is devoted to the methodology followed. The third part discusses the results of this study. And the last part is to conclude.

International Journal of Performance & Organizations (IJPO)
Volume: 2 Issue: 1 Page: 30-36 ISSN: 2824-7116
Doi: 10.55897/ijpo.2023.01.04 Received: 20/02/2023 ; Revised: 01/03/2023 ; Accepted: 12/03/2023

I. LITERATURE REVIEW

This section tries to define some concepts, namely digital transformation and organizational resilience by exploring the link between them.

A. *Digital Transformation*

Digital transformation implies considering new information technologies as a real strategic issue and not a simple choice of tool. This challenge translates into the fact that digital technology allows people to solve their traditional problems and that they prefer this digital solution [1].

1) Definition

The digital transformation stage means the transition to a digital solution that enables innovations and creativities in a particular area, rather than trying to improve and sustain traditional methods [2]. However, this transformation will raise different issues that organizations must take into account in order to anticipate them at the human, technical, economic, and societal responsibility levels.

2) Challenges of Digital Transformation

The challenges of digital transformation are multiple and can be summarized as follows:

- Human issues: Anticipating the rise in skills and the acquisition of digital abilities of employees through training and continuing education.
- Societal responsibility issues: Establishing a climate of trust in the digital environment, with particular regard to the protection of personal data.
- Technical and economic issues: Implementing a digital solution requires resources to finance it as well as the infrastructure necessary for its operation.

B. *Organizational Resilience*

The concept of resilience is often used in relation to individuals, but it is also applied to medicine, physics and organizations.

In the economics and management sciences, the concept of organizational resilience first appeared in the context of research on crisis management by shifting the analysis from the individual level to the organizational and collective level. This transposition of analysis studies "the mechanisms that make the group less vulnerable to breakdowns". [3]. this involves studying a firm's ability to absorb, respond to and capitalize on disruptions resulting from changes in the environment [4].

1) Definition

The definition of organizational resilience remains complex and multidimensional. It is a priori difficult to measure organizational resilience, despite the efforts that have been made in this direction [5]. On the other hand, the study of the reactions of companies that have overcome shocks or unexpected events and thus survived is the means that sheds light on the mechanisms of resilience. [6].This study leads to an in-depth analysis of the factors that allow the organization to pass the tests and eventually emerge stronger, and shows how the organization builds its resilience capacity over time [7]. Organizational resilience then represents a collective or overall process that "allows the organization to move dynamically from one period to another" as serenely as possible [8]. It can only be understood through a multidisciplinary approach that goes beyond management sciences. Resilient organizations then demonstrate a great capacity to successfully adapt to disruptions that threaten their sustainability.

2) Organizational Resilience Components

To be resilient, an organization must take both a defensive approach by taking precautionary measures against risks and a proactive approach with the ingenuity and creativity to find solutions to regenerate itself. Beyond these reactions, the organization must also learn from the experiences and draw lessons from them by identifying its weaknesses and remedying them.

Resilience therefore involves three interlocking components:

Absorptive capacity: It allows an organization not to collapse in the face of the unexpected and for that it is necessary to know how to mobilize the resources available internally and externally to ensure its continuity.

- Ability to renew: After resisting, the company rethinks its existing activities by experimenting with new ways of doing things or developing new activities.
- Ownership: Benefiting from the experience and becoming stronger [9].

II. METHODOLOGY

Through a field study, we will try to assess the impact of the adoption of the online sales process by the cooperatives of the BZOU commune (AZILAL province) on their resilience in the face of the health crisis.

Knowing that, the members of these cooperatives can only have income if their organizations continue their activities and that any discontinuity of activity leads to the loss of their income. The objective is therefore to assess the resilience of the cooperatives during containment.

A. *Link between Digital Transformation and Cooperative Resilience*

International Journal of Performance & Organizations (IJPO)
Volume: 2 Issue: 1 Page: 30-36 ISSN: 2824-7116
Doi: 10.55897/ijpo.2023.01.04 Received: 20/02/2023 ; Revised: 01/03/2023 ; Accepted: 12/03/2023

Digital transformation allows for organizational resilience, provided that the transformation is effective in overcoming the challenges it raises. In this respect, we can formulate the following hypotheses:

- H1: The financial and technical means allow the digital transformation to be successful and consequently the cooperatives to be more resilient.
- H2: customer confidence improves digital transformation performance, and enables cooperatives to be more resilient.
- H3: Digital transformation built on skilled human resources makes cooperatives more resilient.

B. *Data Collection Method*

1) Methodological approach

The methodological approach adopted in this study is hypothetical-deductive, which allows to verify the existing relationship between digital transformation and resilience of cooperatives according to the hypotheses formulated on the foundation of the literature review. The data collection is based on a questionnaire sent to a population of fifteen (15) presidents of cooperatives located in the town of BZOU, AZILAL province, BENI MELLAL KHENIFRA region, selected according to the sampling mode by reasoned choice.

The choice of this sampling method in relation to the specificity of this study is based on the fact that the sample is selected in such a way as to constitute the most faithful image possible of the population. It is also based on the hypothesis of the existence of correlation between the different characteristics in the population.

And to be able to apply this method, it is necessary to know the distribution of the population and to make sure that the sample will have the same structure as the population and this is what answers our case.

Thus, this mode has the following advantages:

✓ Does not require the existence of a sampling frame
✓ Less expensive than probability sampling

2) Questionnaire

The questionnaire has two main components:

✓ The first component is designed to collect data related to the socio-demographic situation of cooperative leaders.
✓ The second part concerns the variables studied (human resources, financial and technical resources, client confidence and resilience) and their valuations by the respondents.

In this study we measured three components of digital transformation across eight (8) items in total. Resilience is measured by three indicators (see Table 1). All items are evaluated according to the Likert scale: very weak (1), weak (2), medium (3), high (4), and very high (5).

C. *Multidimensional Analysis*

This section uses multiple correspondence factor analysis ("MCFA") to analyze the relationships between several variables without attributing dependencies to them.

The hypothesis of this factorial or multivariate analysis is that the existence of an association between several variables may be due to one or more main dimensions or factors that they share. The MCFA was performed on 11 variables using the SPSS software.

TABLE I
IDENTIFICATION OF THE STUDIED VARIABLES

Dimension	Variables actives
Human Resources	The level of training in relation to new technologies (5 modalities).
	Familiarization with IT tools (5 modalities).
	Continuous education. (5 modalités)
Customer Confidence	Access to the website for potential customers. (5 modalities)
	The level of customer confidence reflected in the number of requests and requests fulfilled. (5 modalities)
Financial and Technical Resources	The financing of the website (5 modalities).
	Financial reserves for the improvement and maintenance of the website (5 modalities).
	The level of the service provider who produced the website (5 modalities).
The Resilience	Continuity of activity (5 modalities).
	The income of the members realized via the website (5 modalities).
	The number of jobs maintained thanks to the sales of the site (5 modalities).

Source : The Authors

D. *Test and Reliability of Measurement Scales*

1) Reliability of scales

To measure the reliability of the scales, we opted for Cronbach's Alpha where the threshold used to determine whether a scale is reliable is 0.70.

International Journal of Performance & Organizations (IJPO)
Volume: 2 Issue: 1 Page: 30-36 ISSN: 2824-7116
Doi: 10.55897/ijpo.2023.01.04 Received: 20/02/2023 ; Revised: 01/03/2023 ; Accepted: 12/03/2023

The results indicate 0.907 and 0.770 as Cronbach's Alpha values for the determined dimensions.

2) The inertia

The inertia is calculated as follows: I= (M-V)/V

Where: M is the total number of modalities and V is the number of active variables. In this study, M is equal to 55 and V is equal to 11, so I = 4.

Generally, the dimensions that have an eigenvalue greater than 1 or the inertia value greater than 1/V are the dimensions that are retained. In our case, this value is equal to 1/11, i.e. the threshold corresponds to 0.090. The table below has retained 2 dimensions based on these criteria. The average inertia (0.922/2=0.461), accounts for 46.1% of the information deduced from the set of variables, which represents an important proportion within the framework of the MCFA.

TABLE III

SUMMARY TABLE OF THE MODEL

Dimension	Cronbach's Alpha	Explained variance	
		Total (Equity value)	Inertia
1	.907	5.105	.569
2	.770	3.193	.353
Total		8.298	.922
Average	.838a	4.149	.461

Source : The Authors

The total inertia is 0.922. This is a fairly satisfactory result, which implies that the two factors identified summarize 92.2% of the information given by all the variables.

In addition, the average value of Cronbach's Alpha measures the reliability of the model. This value corresponds to 0.838 almost 84%. We can say that all the variables measure the same construct.

3) The measure of discrimination

The discrimination measure is presented in the following figure.

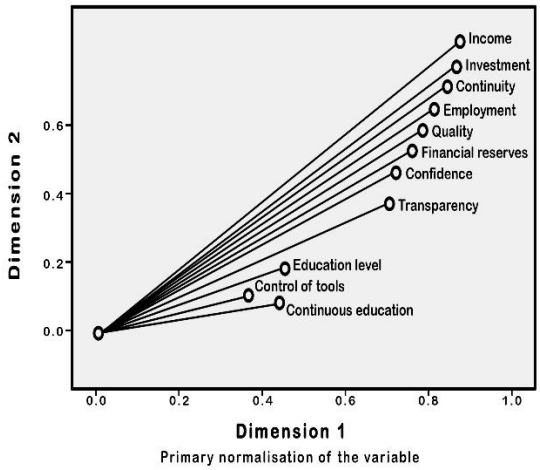

Fig. 1 Discrimination measurement

Figure 1 shows that the correlation was detected (i) on the top and right, and (ii) on the bottom and left.

(i) En haut et à droite entre les variables suivantes :

✓ The financing of the website (investment).

✓ The financial reserves for the improvement and maintenance of the website (financial reserves).

✓ The level of the provider who produced the website (quality).

✓ The access of potential customers to the site (transparency).

✓ The level of customer confidence expressed by the number of requests and the number of completed requests (confidence).

✓ The activity continuity (continuity).

✓ The income of the members realized by the website (income).

✓ The number of jobs maintained due to the sales of the website (employment).

The respondents are similar on these variables, i.e., co-ops that have dedicated more funding to digital transformation and their digital solutions demonstrate more professionalism and trustworthiness are more satisfied with the transformation.

(ii) At the bottom and left, between the following variables:

✓ The level of training in relation to new technologies (education level).

✓ The familiarization with the IT tools (control of tools).

✓ Continuous education (continuous education).

These results show that the cooperatives do not have problems with customer confidence in the products offered for sale on the Internet and that the training of members in relation to the information technology tool is not a necessary condition for the successful adoption of the digital solution as a sales process.

Volume: 2 Issue: 1 Page: 30-36 ISSN: 2824-7116
Doi: 10.55897/ijpo.2023.01.04 Received: 20/02/2023 ; Revised: 01/03/2023 ; Accepted: 12/03/2023

III. RESULTS AND DISCUSSIONS

According to the results obtained, we can deduce the following:

✓ Almost 67% of the cooperatives surveyed have opted for digital transformation by adopting online sales through the creation of a website.

✓ The members of the cooperatives that continued with the traditional methods in their sales and that represent almost 33% of the population studied realized on average a lower income than the other cooperatives with almost -40%.

✓ 23% of cooperative members who have not adopted digital transformation have left their cooperatives to seek other jobs

Regarding the hypotheses of this study, we find that:

✓ For the first hypothesis: Financial and technical means have a very important impact on the performance of the website. Therefore, the adoption of digital transformation through the online sales process based on significant financial and technical means is a necessary condition to build the resilience of cooperatives. Statistically, cooperatives that have invested in the creation of their websites and in their maintenance have achieved more sales transactions. Hypothesis H1 is therefore accepted.

✓ For the second hypothesis: Trust is a decisive factor for digital transformation to have its role in improving the resilience of cooperatives. Statistically, cooperatives that opted for securing their sites and demonstrated a sense of responsibility conducted more sales transactions during the health crisis. Therefore, hypothesis H2 is accepted.

✓ For the third hypothesis: Digital transformation in this study refers to the adoption of online sales, and for all the cooperatives that opted for this solution, outsourcing this service was the only choice since the educational level and also the level of training in relation to new technologies are too low knowing that 90% of the members of the cooperatives surveyed are illiterate. Statistically, the level of training of human resources has no remarkable influence on the performance of digital transformation and therefore the resilience of these cooperatives. Hypothesis H3 is therefore rejected.

CONCLUSION

Cooperatives are by nature resilient organizations. They have an associative aspect, which implies that in the short term, rather than eliminating the workforce, they look for new solutions or even other activities. The collective consciousness of their members of the imminence of the health crisis has enabled them to prepare for it, with democratic structures allowing for the sharing of information in real time. The decisions taken by the cooperatives are considered legitimate since they are taken in a participatory manner. Thus, income differences between members are low. All these factors represent necessary elements for resilience in the face of crises; this has resulted in the adoption of digital transformation by the majority of these cooperatives, substituting the traditional sales model with online sales. This digital transformation represents a relevant and necessary solution for the continuity of living cooperatives. It is no longer a choice, but a decisive necessity for survival. Of course, the adoption of such a transformation requires resources such as financial means, technical means, human resources, etc. At the end of this research, we found that the level of education or training of cooperative members does not impact the improvement of their resilience even though a minimum of training in relation to new technologies will allow these cooperatives to make economies in terms of updating the content of their websites. For this reason, it is advisable for these types of organizations to focus on continuous education and training, even though this factor does not have enough impact on the performance of the digital transformation and therefore on the resilience of the organization.

The nature of the distribution of financial surpluses by cooperatives allows them to build up reserves, so they receive assistance from the state as well as the private sector. These aids and reserves protect the cooperatives against any shocks and guarantee their financial stability, and this is what this study was then able to deduce, that the financial reserves helped the cooperatives of the BZOU commune to create their websites to sell their products and thus guarantee the income of its members and their continuity and thus be more resilient. The learning from this experience will help these organizations to learn and improve their digital solutions to better benefit in the future and ensure territorial development.

REFERENCES

[1] C. Jo and P.D Van, *Digital Transformation: What you should have done yesterday*, Esign, 2014.

[2] S. Khan “Leadership in the digital age –A study on the effects of digitalization on top management leadership,” School Master Thesis 30 HP, Stockholm Business, spring semester.2016.

[3] K. Weick, “The collapse of sense making in organizations: the Mann Gulch Disaster”, *Administrative Science Quarterly*, vol. 38, pp. 628-652, Dec. 1993.

[4] C. Lengnick-Hall, and T.E Beck, “Adaptive fit versus robust transformation: how organizations respond to

Volume: 2 Issue: 1 Page: 30-36 *ISSN: 2824-7116*
Doi: 10.55897/ijpo.2023.01.04 *Received: 20/02/2023 ; Revised: 01/03/2023 ; Accepted: 12/03/2023*

environmental change", *Journal of Management*, vol. 31, n° 5, pp. 738-757, Oct. 2005.

[5] S. Somers, "Measuring resilience potential: an adaptive strategy for organizational crisis planning", *Journal of Contingencies and Crisis Management*, vol. 17, n° 1, pp. 12-23, Feb. 2009.

[6] K. Weick and K. Sutcliffe, *Managing the Unexpected. Resilient performance in an age of uncertainty*, 2nd ed, John Wiley & Sons, Inc., Hokoben, NJ, 2007.

[7] E. Hollnagel, B. Journé, and H. Laroche, "Fiabilité et résilience comme dimensions de la performance organisationnelle : introduction ",*M@n@gement*, vol. 12, n° 4, pp. 224-229. 2009.

[8] Y. Trousselle , " les mécanismes de la résilience organisationnelle," thèse de doctorat, Université François – Rabelais de tours, Jan. 2014.

[9] S. Frimousse, and J. Peretti, "Comment renforcer durablement la résilience organisationnelle ?", *Question(s) de management* , n° 35, pp 127-174, Mai.2021.

International Journal of Performance & Organizations (IJPO)
Volume: 2 Issue: 1 Page: 30-36 ISSN: 2824-7116
Doi: 10.55897/ijpo.2023.01.04 Received: 20/02/2023 ; Revised: 01/03/2023 ; Accepted: 12/03/2023

APPENDIX

Questionnaire

Component 1:

Socio-demographic situation of cooperative leaders.

Q1:	First and last name of respondent
Q2:	gender
Q3:	age
Q4:	The cooperative name
Q5	Date founded
Q6:	Activity of the cooperative
Q7:	Number of employees or members

Component 2: **Variables studied**

Respondent must check the corresponding box

Very weak (V.W), Weak (W), Medium (M), High (H) and, Very high (V.H).

Axis 1: Digital transformation

Dimension 1: Human Resources

Question	V.W	W	M	H	V.H
What is the academic level of the cooperative members?					
What is the level of familiarity of the cooperative's members with the computer tool?					
what is the level of training in e-commerce					
the frequency of use of computer tools by the members of the cooperative					
the frequency with which continuous training is organized					
at what level the members of the cooperative try to train or self-train					

Dimension 2: Customer Confidence

Question	V.W	W	M	H	V.H
how do you feel about the operation of your website?					
how do you find the number of visitors to your website?					
the number of orders from your website?					
how do you find the number of completed purchases from your website?					
regarding customer complaints, how do you find their frequency?					
Are you satisfied with your website in terms of your relationship with your customers?					

Dimension 3: Financial and Technical Resources

Question	V.W	W	M	H	V.H
how do you value the price with which you have created your website?					
compared to other cooperatives using a website. how do you estimate the budget for creating yours?					
the budget dedicated to the update and maintenance of your website?					
among the offers of the providers of creation of Web site. to which you opted?					
How do you find the quality of this provider?					
Is this provider recognized in the market?					

Axis 2: Organizational Resilience

Question	V.W	W	M	H	V.H
How do you find the production during the health crisis?					
Are the orders you receive satisfactory to continue the activity?					
sales through the website guarantee an income for the members?					
compared to the period before the crisis, is the income realized through the website satisfying?					
compared to the period before the crisis, is the income realized through the website satisfying?					
the number of members continuing to work in the cooperative thanks to the sales made from the website?					