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# The Necessity Of Activating The Foresight To Improve The Image Of The Institution Through The Duffy Approach To Knowledge Management: A Field Study For A Sample Of Banks In Algeria

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## Abstract:

The study looked at the effects of foresight on the organization's image through the Duffy approach to knowledge management (Strategy, Tools, Individuals, Operations). To test the field framework, and using techniques for modelling structural equations (route analysis) have been applied to data collected from 154 individuals at the management levels of a group of banks in banking. The results of the study indicate that the relationship between the outlook and the organization's image is positively linked through the knowledge management approach, which has a more substantial impact on the organization's image, and the study concluded that the strategic foresight of the institutions under consideration in the increased interest in managing their intellectual skills would improve the image and impact of their brands.

**Keywords:** Strategic Foresight, Knowledge Management, Corporate Image, Bank.

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## INTRODUCTION

The world has gone through many rapid and successive changes, foremost among the technological and cognitive revolution. The process of producing, generating, acquiring, disseminating and benefiting from knowledge has become the main feature of the success of business organizations. One of the most important indicators to measure their progress and capacity to contribute effectively to improve their image is to anticipate changes and shifts in a knowledge-based world. Institutions are faced with the problem of being able to speed up the continuous changes of the ocean, which has made the speed of adaptation to the ocean more necessary for the enterprise to maintain its economic performance and reach, so strategic planning has often come to collide with changes in the ocean. It requires looking for a new approach to strategic direction, based on its knowledge skills and competencies, where knowledge management approach can provide an essential input for improving the organization's image, through which it can contribute to

improving the processes associated with strategic direction, responsiveness and flexibility with ocean changes. As technology competition converged, success depends on how well organizations can leverage and invest in their knowledge resources in a way that can anticipate the ocean and adapt to its benefits.

With the economic opening of the market to several private banking institutions, the Algerian public banking institutions must move from the traditional thinking of strategic planning and adopt strategic supervision based on the knowledge and skills of their intellectual capital.

### **To what extent does strategic foresight contribute, by adopting a knowledge management approach, to improving the image of national banking institutions?**

Business organizations today work in an unstable and dynamic environment, which forces them to create mechanisms that enable them to adapt to new developments to ensure growth and continuity through the acquisition of a significant position based on marketing studies based on the cognitive capabilities of competencies and individuals, and this can only happen through strategic foresight based on knowledge management.

we are attempting to theoretically gain knowledge of the strategic foresight process and clarify its relationship to improving the image of the institution through the application of knowledge management principles, in addition to finding the effect of the relational relationship of knowledge management as an administrative philosophy between strategic foresight and building and strengthening a correct image of the banking institutions under study.

this study was divided into five parts. first, introduction, second, literature review and hypotheses, third, methodology. fourth, results. In the last, discuss findings and recommendations.

## **LITERATURE REVIEWS AND HYPOTHESES**

Previous studies that have been reviewed have focused on each variable individually and linked it to one of the other variables. We did not find through what we have researched in several previous studies of the introduced knowledge management as an intermediate variable between the relationship of strategic foresight, which is somewhat small and the image of the institution, where we can divide it as follows:

### **Studies on knowledge management**

We found several studies focused on the impact of knowledge management and innovation both as an independent variable and as an intermediate variable, including a study (**Santoro et al., 2018**), which touched on the building of knowledge management system for innovation and open knowledge management, where the study aimed to explore the relationship between the knowledge management system and open innovation using structural equation modelling on a sample of 298 Italian companies from different sectors. The results indicated that the knowledge management system facilitates the establishment of open and cooperative ecosystems, and the exploitation of internal and external flows of knowledge, through the development of the capacity of internal knowledge management, which in turn increases the capacity of innovation, which is a good starting point for our current study of the logic of the importance of the management of knowledge in the development of creativity and innovation in the organization where it can be linked in the field of foresight. A study (**Obeidat et al., 2017**) touched on the existence of knowledge management as a medium. Between intellectual capital and innovation using a self-managed questionnaire of 498 employees working in three telecommunications companies in Jordan. The results confirmed the mediation model as intellectual capital that had no direct impact on

innovation, in addition to studying (Shujahat et al., 2019), where previous studies can be used by the fact that knowledge management influences innovation, which in turn is a critical factor in the outlook or in building an image of the organization, as well as studies on knowledge management from information systems (acquisition, exchange, application) including the Study (Al-Emran et al., 2018) and study (Salloum et al., 2018), we find that most of the studies that have ceded knowledge management focused on the processes of exchange and acquisition. What distinguishes our current study in this variable is that knowledge management was studied through the (Duffy, 2000) model (strategy, system, tools, personnel).

### **Studies on Strategic Foresight**

Study (Gentner et al., 2018) The topic of foresight was addressed in several respects where the study of foresight focused on the perspective of focusing on machine learning in customers and finding out how the forward-looking team can benefit from these ideas related to customers and product, and this study is consistent with the Study (Ameri&Dutta, 2005), as this study clearly demonstrated the obstacles to the application of machine learning in the indirect business departments of manufacturing companies, as well as studies focused on the shortcomings and sufferings of companies in their ability to look forward to, where they tried to study (Dadhh et al., 2018) To demonstrate weaknesses in corporate forward-looking models and suggest a framework that combines corporate outlook and strategic planning approaches based on models and forward-looking theories, while some studies have carried out scenario-forwarding approaches and methods (Mietzner&Reger, 2005) as well as bezold, 2010 by focusing on advantages, disadvantages and differences in forward-looking approaches.

### **Studies on Corporate Image**

From previous studies, we find that the variables presented in our current study were addressed individually about each variable or by focusing on different aspects of the correlation between the variables of our study, and this is what we sought to reach results through this study.

### **Hypotheses:**

The research hypotheses are as follows:

**H1:** Strategic foresight is an intellectual practice that opens up to the future in the form of a knowledge vision that takes full advantage of the available opportunities to improve competitive advantages.

**H2:** The interest in strategic foresight in light of adopting a knowledge management approach leads to improving the image of the institutions under study.

**H3:** The null hypotheses of the research are included in the field study methodology.

## **METHODOLOGY**

### **Study limits:**

**Spatial and temporal field:** This study was conducted under the framework of 5 banks (CPA, BADR, BNA, BDL, CNEP) in Algeria, as the study was extended during the period 2018-2019.

**Human field:** The study sample included a number of the bank above ings, directors, deputy directors and heads of interests.

**Knowledge field:** This study touched on the strategic outlook in general without detailing its tools, including scenarios and expert approaches and focusing only on competencies because of their direct association with the subject of the study, as well as for the management of knowledge, where the focus was on the explicit and implicit introduction.

## The variables of the study and the relationship between them

### Definition of study variables

**Strategic Foresight:** The ability to think systematically about the future, in order to inform the action and provide the information necessary for decision-making in the present, reflects the proactive direction of the market, which is the next major evolutionary step for most corporate systems (Gentner et al., 2018).

**Knowledge Management:** is an institutional process aimed at coordinating and integrating data processing, information, the technology used, human resources and factors surrounding the organization (DeLong, 2004)

**Corporate image:** it is a mental, personal, biased, stable, as well as a selective and straightforward conclusion concerning an individual's perception of an institution (Kotler & Dubois, 2001).

### Approaches to the knowledge management system

In order to apply knowledge management, the four basic approaches to knowledge management must be provided:

**Strategy:** Which must interact with each other in order to build knowledge management in the organization, where the strategy is through which the strategy can determine the direction of the organization in the future as well as analysis of strengths and weaknesses and opportunities and threats, the development of programs, the development of knowledge networks and the identification of policies for building intellectual capital (Duffy & Laura, 1989) and (Greiner et al., 2007).

**Tools:** These are the means and equipment, whether office, documentary or technological, through which knowledge management practices can be achieved (Ruggles, 2009).

**Individuals:** Individuals are the element that generates and walks knowledge through knowledge makers or knowledge managers by focusing on knowledge sharing (Hung et al., 2011).

**System:** This perspective indicates that infrastructure knowledge consisting of technology, structure and culture, as well as the knowledge process structure for acquisition, transformation, application and protection, is an essential organizational capability or 'preconditions' for effective knowledge management for knowledge management where knowledge management can be controlled, controlled, regulated and structured through expert systems, decision support systems or other systems, as well as problem-solving and treatment (Liao & Chi-chuan, 2010).

**Sample of study:** The research community has been represented in several public banks in the Algerian (CPA, BADR, BDL, CNEP). As for the sample of the study, the researcher chose the sample of intent and consisting of the tires of these banks, and this is in line with the nature of the study and is distributed according to the following Table (1):

**Table 1. Distribution of study sample members**

Bank (director, deputy or assistant manager, head of the department)	Distributed forms	Recovered and valid forms	Total
BADR	52	50	154
CPA	36	33	
CNEP	50	47	
BDL	34	24	

Source: Researchers

**Study tool:**The form is the primary tool in collecting data from the study sample, where (172) forms were distributed to a group of banks and frames operating in the previous banks, and the reference dissented forms (154) reached the forms. The form included three parts as follows:

**Part 1: Personal information:** This section is devoted to obtaining personal information for employees: gender, age, level of study, career level, years of experience.

Part 2: The independent variable includes: strategic foresight, with questions regarding its procedures and including this part (4)

**Part 3: The intermediate variable includes:** Knowledge Management, where eight questions are included.

**Part 4: The child variable includes** the organization's image where it contains (8) questions.

**Part5:** will be used in the form and the salary of the highly agreeable phrase that took the weight (5), the words OK by weight (4), neutral (3), disagree (2), and finally not strongly agree (1).

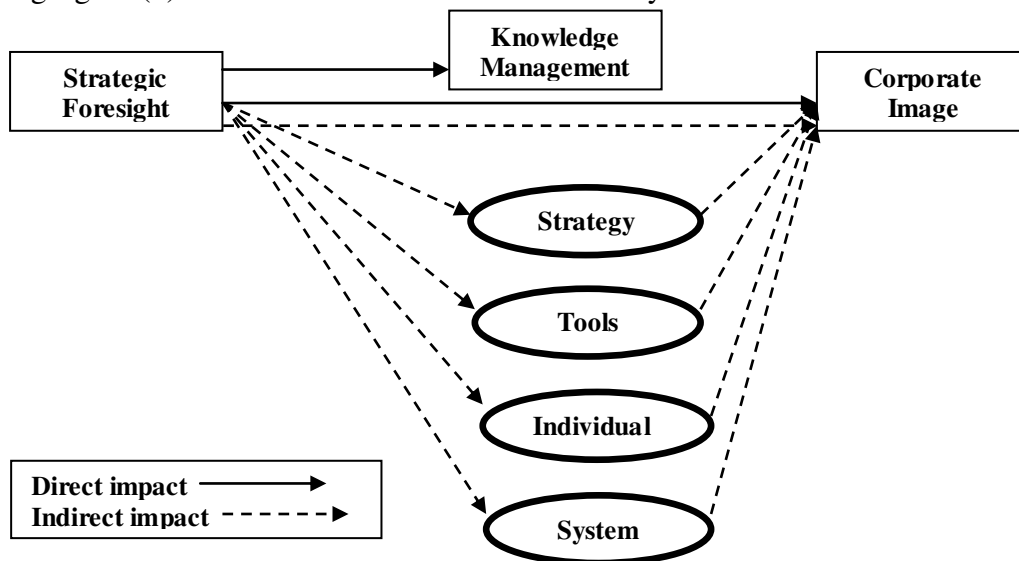
**The authenticity of the form and the method of statistical analysis**

The tool's authenticity was confirmed by the presentation of the questionnaire to a group of specialized professors where some paragraphs were changed and added, some of which were reworked and added to others. Thus the survey took its final form, and to verify the stability of the research tool was used by the alpha Cronbach's factor where it reached its value (0.90) and because this value is higher than the value at which the credit score of 0.60 is accepted, and this percentage is acceptable for scientific research purposes. As for the statistical methods used, the SPSS was used to perform the required statistical analyses, using the following statistical tools:

- Natural distribution test, where the results showed that the sample is approaching normal distribution, in addition to the sample size exceeding 30 individuals.
- Arithmetic averages and standard deviation.
- Correlation factor in determining and explaining factor.
- AMOS 20 program for track analysis and direct and indirect impact identification.

**Field study model:**

The following figure (1) shows us the model of the field study.



Source: Researchers

**Figure 1.** The field study model

This model was developed based on Independent Variable: Strategic Foresight, Intermediate Variable: Knowledge Management, Affiliate Variable: Corporate Image.

## RESULTS

**Sample answers about the extent of awareness and availability of study variables:** This can be explained by the following Table (02)

**Table2. Sample vocabulary answers to study variables**

	N	Minimum	Maximum	Mean	Std. Deviation
<b>Strategic Foresight</b>	154	1	5	36,073	0,00474
<b>Knowledge</b>	154	1	5	34,540	0,88998
<b>Corporate Image</b>	154	1	5	32,882	0,01384
<b>Strategy</b>	154	1	5	33,365	0,18645
<b>Tools</b>	154	1	5	34,565	0,09356
<b>Individuals</b>	154	1	5	35,115	0,85576
<b>System</b>	154	1	5	35,115	0,85576
<b>Valid N (listwise)</b>					

Source: Output SPSS

Through table 3 data, we find that the computational average of respondents' trends towards study variables exceeds 3, a value that indicates that it is positive and to a medium-term degree, as well as for deviation and standard deviation of less than 1, indicating that the dispersion is weak in the answers to the study sample.

### Testing the validity of hypotheses

The validity of hypotheses has been tested as follows:

**H1.0 :** hypothesis: there is no statistically significant effect between foresight and knowledge management.

**H1.1:** There is a statistically significant effect between foresight and knowledge management.

**Table 3. Examination of the first hypothesis**

Correlation coefficient	The coefficient of determination	Calculated F value	The level of $\alpha$ significance	Regression coefficient
0.739	0.547	59.222	0.001	0.43

Source: Output SPSS

The above Table shows that the correlation coefficient reached 0.739, indicating a beneficial and direct correlation between the independent variable (foresight) and between the mediating variable (knowledge management). The determination coefficient R<sup>2</sup> estimated at (0.547) indicates foresight explaining its value of 54.7% of the change in the Knowledge management approach (strategy,

system, tools, people) in the organization, and the significance level reached 0.001, which means rejecting the null hypothesis and accepting the alternative hypothesis, which states that: There is a statistically significant effect between strategic foresight and knowledge management.

**H2.0:** There is no statistically significant effect between foresight and improving the image of the institution.

**H2.1:** There is a statistically significant effect between foresight and improving the image of the institution.

**Table 4. Examination of the second hypothesis**

Correlation coefficient	The coefficient of determination	Calculated F value	The level of $\alpha$ significance	Regression coefficient
0.91	0.83	68.784	0.001	0.47

Source: Output SPSS

The above Table shows that the correlation coefficient reached 0.91, indicating a beneficial and direct correlation between the independent variable (foresight) and the dependent variable (the institution's image). The coefficient of determination R<sup>2</sup>, estimated at (0.83), indicates foresight explaining the value of 83% of the change in the image of the institution and the level of significance reached 0.001, which means rejecting the null hypothesis and accepting the alternative hypothesis, which states that: There is a statistically significant effect between foresight and improving the image of the institution.

**H3.0:** There is no statistically significant effect between foresight and the institution's image through knowledge management.

**H3.1:** There is a statistically significant impact between strategic foresight and the institution's image through knowledge management.

**Table 5. A path analysis of the impact of strategic foresight on the image of the institution through the knowledge management approach**

hypothesis	Chi2 value	CFI	GFI	RMSEA	Direct effect	Indirect effect
<b>H0.3</b> -	<b>123.182</b>	<b>0.972</b>	<b>0.974</b>	<b>0</b>	<b>0.83</b>	<b>0.752</b>

Source: Prepared by the researcher based on an extract from the Amos20 program

### Sub-hypotheses of the third central hypothesis

**H3.1.0:** There is no statistically significant impact of foresight on improving the institution's image through the strategy in the institutions under study.

**H3.1.1:** There is a statistically significant impact of foresight on improving the image of the institution through the strategy in the institution's understudy

**H3.2.0:** There is no statistically significant impact of the outlook on improving the institution's image through the tools approach in the institutions under study.

**H3.2.1:** There is a statistically significant impact of the outlook on improving the image of the institution through the tools in the institution's understudy

**H3.3.0:** There is no statistically significant effect of improving the institution's image through individuals in the institutions under study.

**H3.3.1:** There is a statistically significant impact of foresight on improving the institution's image through individuals in the institutions under study.

**H3.4.0:** There is no statistically significant impact of the prospecting to improve the image of the institution through the system in the institution's understudy

**H3.4.1:** There is a statistically significant impact of foresight on improving the institution's image through the system in the institutions under study.

**Table 6. Test the validity of the model**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	17	0.002	11	0.000	0.001
Saturated model	28	0.000	0		
Independence model	7	0.016	21	0.000	0.005

**Source:** Prepared by the researcher based on an extract from the Amos20 program

**Table 7. Correlations coefficients between variables**

	foresight	material	system	human	strategy	knowledge	img
foresight	1,000						
material	0,626	1,000					
system	0,984	0,615	1,000				
human	0,949	0,657	0,933	1,000			
strategy	0,845	0,529	0,831	0,802	1,000		
knowledge	0,859	0,538	0,845	0,815	0,726	1,000	
img	0,685	0,206	0,678	0,631	0,602	0,799	1,000

**Source:** Prepared by the researcher based on an extract from the Amos20 program

**Table8. Test the quality of the model**

Model	RM R	GFI	RMSEA	CFI
Default model	0,003	0,978	0,042	0,952
Saturated model	0,000	1,000		
Independence model	0,760	0,205	0,060	0,154

**Source:** Prepared by the researcher based on an extract from the Amos20 program



**Table 9. Comparison of the model with the basis**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0,974	0,945	0,986	0,978	0,972
Saturated model	1,000		1,000		1,000

**Source:** Prepared by the researcher based on an extract from the Amos20 program

**Table 10. Impact and Total Mediation**

	foresight	stratigy	system	human	material	knowledge
stratigy	0,772	0,000	0,000	0,000	0,000	0,000
system	0,995	0,000	0,000	0,000	0,000	0,000
human	0,919	0,000	0,000	0,000	0,000	0,000
material	0,461	0,000	0,000	0,000	0,000	0,000
knowledge	0,653	0,629	0,000	0,000	0,000	0,000
img	0,614	0,648	0,113	0,039	-0,447	1,030

**Source:** Prepared by the researcher based on an extract from the Amos20 program

## DISCUSS FINDINGS AND RECOMMENDATIONS

The statistical results indicate that the trends of the banks' frameworks in the study sample in Batna towards the study's variables are positive (Table 2). It is in agreement with a study. Accordingly, it can be said that the level of perception and awareness of the need to adopt strategic foresight in banks has become a reality and tangible in several procedures and processes. In which the corporation operates in the framework of its endeavour to provide a service that guarantees market share in light of competition from private banks;

As for hypothesis 1, according to Table (3), which showed the validity of the effect between supervision and knowledge management, this is in agreement with studies (**Bootz et al., 2019**) to explore the effects of insight on knowledge management and understand its cognitive dimensions. **Boe-Lillegraven&Monterde, 2015**) pointed out that some works are also interested in the impact of scenarios or foresight techniques on cognitive processes. On the knowledge model methodology. About hypothesis 2, according to Table (4), the validity of the effect appeared between foresight and improving the institution's image. However, the previous studies that were surveyed did not indicate the nature of the relationship between foresight and the institution's image. Hence, the analytical reading shows that the level of perception and awareness of the importance of foreseeing improving the institution's image can manage the expected scenarios in light of the private sector's competition with banks. And economic openness.

For the third hypothesis and its sub-hypotheses, Tables 5, 7,6, 8, 9, 10 indicate the mediation effect of knowledge management on the institution's image.

The results indicate the percentage of reasonable matching of the model with the data (**Nies et al., 2004**).

Table (05) shows the results of the path analysis of the impact of strategic foresight on the institution's image through knowledge management as an intermediate variable. The value of the GFI: the Good Conformity Index was 0.974, which is close to the value of the one is natural (perfect fit), and in the same context, the CFI index: the comparative conformity index reached 0.972, which is close to the value of the one true. Institutions subject to study.

The results also showed that the value of the indirect impact of strategic foresight on improving the image of the institution through the knowledge management approach as a mediating variable of 0.752, which confirms that the knowledge management approach plays a role of mediation in the effect of strategic foresight on the image of the institution. Therefore, the null hypothesis was rejected, and the alternative hypothesis was accepted that states: There is a statistically significant effect of foresight. To improve the institution's image through a knowledge management approach in the institutions under study.

As for the sub-hypotheses of the third central hypothesis, the tables indicate the excellent fit of the model, as the smaller the RMR, the better. An RMR equal to zero indicates a perfect fit (**DiStefano, 2002**). Practical experience has made us feel that an RMSEA value of about 0.05 or less will indicate a close agreement of the model concerning degrees of freedom. This figure depends on autonomy. It cannot be considered infallible or correct, but it makes more sense than the requirement for exact compatibility with RMSEA = 0.0. We also see that a value of about 0.04 or less for RMSEA indicates a reasonable approximation error, and we would not want to use a model with an RMSEA greater than 0.1. (**Browne et al., 1993**). Most of the studies did not address. The relationship between variables except for a study (**Lesourne et al., 2001**) clarifies the relationship between foresight and knowledge management from a strategic perspective.

Based on the results reached through this study, it will be possible to present some proposals and recommendations that we see that may mitigate the negatives and shortcomings recorded, which are as follows:

- Banks should activate strategic foresight in building their strategies and spread awareness of the need to adopt a knowledge management approach and give an idea of its advantages and advantages.
- The organization should seek to focus on designing service processes through customer relationship management.
- They are motivating workers and tries to contribute to finding management methods that take care of customers' complaints to build a strong positioning of their customers.

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