Journal of Information Technology Management

Print ISSN: 2008-5893

Online ISSN: 2423-5059

The Impact of Strategic Vigilance on E-management in the National Railway Transport Company (SNTF)

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Abstract

This study aimed to identify the impact of strategic vigilance (SV)on the useful application of electronic management in the National Railway Transport Company (SNTR), and to achieve the objectives of the study; a survey was designed and distributed to a simple random sample of 200 individuals from the National Railway Transport Company (SNTR)), From which 180 questionnaires were retrieved, The results obtained indicate Spanish the respondents' perception of both strategic vigilance with its dimensions (competitive vigilance and technological vigilance, commercial vigilance and environmental vigilance) and electronic management in the researched company, The findings also revealed positive effect of strategic vigilance in the practical application of electronic management in the company National Rail Transport (SNTR).

Keywords: Vigilance strategy, Commercial Vigilance, Competitive vigilance, Technological vigilance, Environmental vigilance, Electronic management, The company National Rail Transport (SNTR)

DOI: 10.22059/jitm.2021.80364

Introduction

In strategic management, strategic vigilance arises as an essential practice since it enables Companies to capture information from the organizational environment, which has been affected by the sustainability revolution (Salguero et al., 2019).

An international comparison of practices in terms of the strategic watch allows us to understand that the latter is developing on historical and cultural bases in different forms. It is a concept that is based on and nourished by the culture of each country. It is because monitoring is more of a culture than a methodology that certain countries such as Japan or the United States have more developed and more efficient monitoring practices. The transposition of foreign methods (Anglo-Saxon or Japanese) cannot be done without difficulties because, in essence, monitoring is cultural. (Smida & Romdhane, 2001).

A better business climate is generated by e-management, with clients whose time is valued and the details' quality. One of the necessary conditions for proper functioning is strengthening good governance and greater involvement of people (Vuletic, 2017).

Crises that arise unexpectedly, even though sure early warning signs are detectable, cannot always be expected or predicted. They are triggered either by internal or external forces. They have taken many forms, such as natural disasters (i.e., earthquakes, fire), technology failure, labour strikes, extremism, manipulation of goods and corporate spying (Priporas & Poimenidis, 2008).

E-managements allow to be administrative renewal with quicker and more effective bureaucracies, digital access to government records, programs to encourage information (setting up social information databases), tax reporting, payment processing, etc. The instruments provided by ICTs are predominantly e-procedures and databases. We may anticipate the importance of improving Citizen Relationship Management in the public sector with Customer Relationship Management's growth in the private sector (Michel, 2005). Besides, stress (Huber, 1991) that information or expertise is intended for many structured organizational activities. Customer surveys, research and development programs, performance evaluations, and competitor product assessments are examples. Besides, (Frías-Aceituno et al., 2014) argue that the digital government would provide governments with an efficient and effective way of promoting their internal administrations and enhancing their external services, thus increasing transparency greater degree of confidence.

Nevertheless, stress Anggunia (2001) the implementation of e-Management is not as easy as planned. In most developing countries, there are three significant challenges: political and political will; lack of resources; procurement and internal cooperation. The best practices in developed countries, i.e. e-leadership; management of resources; outsourcing and productive collaboration, may address these challenges.

The researchers (AlSayegh et al., 2017; Fadhiela & Dawood, 2018; Mahmoud & Mahdi, 2019) point out the importance of having a Strategic Vigilance a mechanism for monitoring, following up and obtaining information for decisions that enhance the competitiveness of institutions and achieve the satisfaction of their customers. while (Gretry et al., 2013) reached by questioning 81 of my managers' SMEs, most of Walloon SMEs do not have recourse to a strategic watch process. , and the impact of the organizational context on the monitoring process, we have demonstrated that a formal structure, the involvement of the staff as well as a corporate culture oriented towards strategic monitoring. Brouard (2012) suggest that more particularly the prototyping of expert systems. to make the leaders of an organization aware of strategic and help them to advance of companies, through the monitoring context, the monitoring organization, the monitoring process, and information security.

Moreover, The researchers (Frías-Aceituno et al., 2014) :Naser et al., 2017:Al Shobaki et al., 2018) focused on the analysis of the importance of electronic management, to reach the highest possible level of transparency in the institution, and to rely on robust information systems that help in making administrative decisions as quickly as possible and at the lowest cost, to achieve organizational development and is considered a mechanism for this development by attaining speed in finishing the work; however, the relationship between Strategic Vigilance and e-Management is not discussed in my knowledge Therefore, this study focuses on the new mechanism of testing the relationship and analysis of how this relationship can better understand the e-Management process.

The Study Problem

Business organizations face many environmental pressures and increased competitiveness in the context of globalization and the knowledge-based economy based mainly on information, strategic vigilance is one of the main entrances in the application of e-management in Algerian institutions, primarily to monitor everything related to their environment, exploit opportunities and avoid threats that can affect them to ensure the sustainability of competitive advantages in the sector in which they operate. On this basis, we raise the following problem:

To what extent does strategic vigilance contribute to the useful application of e-management in the National Railway Transport Company (SNTF)?

Sub Questions

To be aware of all aspects of this problem, we have raised the following sub-questions:

- What level of awareness of the study variables (strategic vigilance, e-management) in the National Railway Transport Company (SNTF)?

- What is the relationship's nature at a moral level (a≤0.05) between strategic vigilance and e-management in the National Railway Transport Company (SNTF)?

- Is there a statistically significant effect relationship at a moral level (a≤0.05) between strategic vigilance in its dimensions in the study (competitive alertness, technological attention, commercial vigilance, environmental vigilance) and e-management in the National Railway Transport Company (SNTF)?

Hypotheses of the Study

Hypothesis 1: there is no awareness of the study variables (strategic vigilance and e-management) among the National Railway Transport Company (SNTF).

Hypothesis 2: There is no correlation between strategic vigilance and e-management in the National Railway Transport Company (SNTF).

Hypothesis 3: There is no effect between the strategic vigilance variables (competitive vigilance, technological vigilance, commercial vigilance, environmental vigilance) and of electronic management in the National Railway Transport Company (SNTF).

The Importance of Studying

The importance of the study lies in the fact that it highlights a critical topic, which is the impact of strategic vigilance in the application of e-management, through a field study on the National Railway Transport Company (SNTF), and the study derives its importance through

- Strategic vigilance and e-management are an essential and new topic, which impacts finding sound and practical solutions to the current and future problems facing institutions. It is a framework for creativity, innovation and institutional excellence.

- The importance of the study lies in highlighting the importance and position of strategic vigilance as one of the entry points of the application of e-management with its integrated perspective in a complex contemporary business environment that allows organizations to exploit opportunities, avoid potential threats, optimize the exploitation of the information, provide the best services to their customers and enhance organizational performance.

- We try to draw managers' attention in the research institution and institutions to the importance of strategic vigilance as a new entry point. Its role in implementing the administration with its integrated perspective in light of Algerian economic institutions' problems.

- Enriching the Algerian and Arab library with two essential topics - to the knowledge of the researchers did not receive the desired importance is the subject of strategic vigilance is one of the issues that the Algerian Library suffers from the least, research and scientific studies are few, to the knowledge of the researchers .

Study model

The study model consists of independent variable strategic vigilance with dimensions (competitive vigilance, technological vigilance, business alertness, environmental vigilance) and variable e-management. Figure (1) illustrates this as follows:

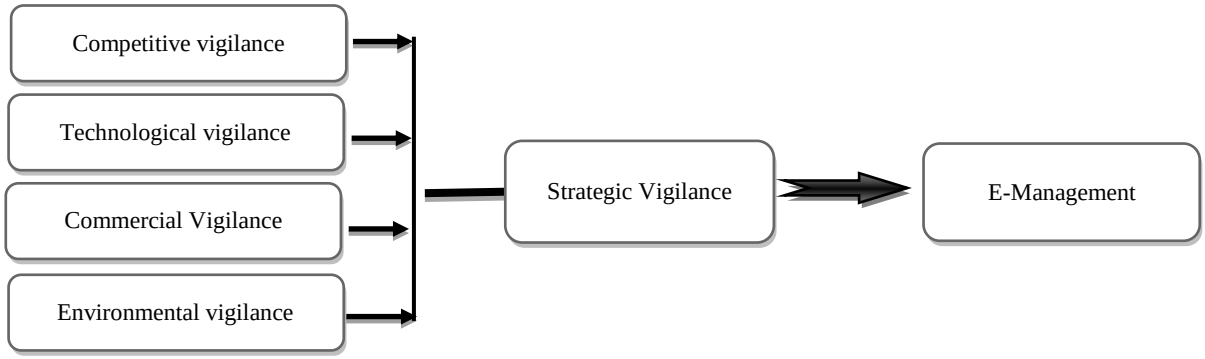

Figure 1. Conceptual Framework

Source: Developed by the author based on the data available.

Literature Review

The first axis: strategic vigilance

1. Concept of Strategic Vigilance

The term 'Veille' originated from the Latin word 'vigilant' which, according to the Encyclopedia, means 'Larousse' to observe, guard, pay attention to something, observe. This term means precisely to remain awake instead of inattentiveness and sleep, that is to be in a state of reception And receiving things. Being ready to discover something can happen without knowing precisely what it is and where? (Sauvannet, 2000).

Aguilar is known as collecting information about events and relationships in the company's external environment, whose knowledge will help senior management in its mission of charting the course of the company's future business (Audet, 2012).

Lesca (2003) also defines it as a means of the Organization's environmental changes to enhance its sustainable competitiveness.

Khalifa (2016)Strategic vigilance is that it is a continuous collective process that is carried out by a group of individuals voluntarily tracking and using proactive information related to changes that are likely to occur in the external environment of the company, to create business opportunities and reduce risks and uncertainty in general. The goal of business intelligence is to allow you to act very quickly and at the right time.

Based on the above definitions, we conclude that strategic vigilance is an integrated monitoring and monitoring process system for searching for information from various parties related to the Organization (commercial, competitive, technological, environmental... And addressing them, which enables the organization to make strategic decisions and achieve long-term excellence.

2. Kinds the Strategic Vigilance

- **Competitive vigilance:** It is a discovery method the threats and the opportunities, For the sake of getting information and knowledge and to help towards the decision making and to improve the competitiveness of the enterprise(Chafik, 2007).
- **Technological vigilance**: is the activity through which the institution monitors the associated scientific and technical environment, i.e. the various efforts made by the institution and the means used to know the developments and all that is new in the fields of technology and related to the activity of the institution now or in the future (Moncef, 2010).

Fadhil and Dawood (2018)suggest that vigilance technology has become an essential strategic variable and a constant element of excellence. The Organization must know its strengths and weaknesses due to its technology and its knowledge of its competitors. It must look for a way to monitor its technological environment to achieve a sustainable experience. Therefore, a technical vigilance mechanism must be put in place to follow the various technological changes.

Technological vigilance relates to the search for: (Ben Ali, 2017)

- Full knowledge of scientific developments from theoretical models and experiments.
- Know the current production process and the possibilities of modifying and developing it in terms of the costs and quality of raw materials and efficiency.

- Monitor new equipment that is not owned by the Organization, and expects its first use.

- Tracking developments in the field of information and communication systems.

- **Commercial Vigilance:** This activity through which the business organization studies everything related to its relations with processors and customers, new market skills, and market growth rates to collect, processing and disseminate outstanding knowledge to serve its business and achieve the organizational, marketing and strategic development based on optimal business control that brings together a range of research and development activities and the exploitation of information related to the environment and the commercial market, allowing it to anticipate the development of the market and processors. Reduce customer fears and outperform competitors (Hassen, 2014).

- **Environmental vigilance** includes the remaining elements in the institution's environment that did not consider the previous types, such as legislative, financial, political, geopolitical vigilance, ecology vigilance, and cultural vigilance (Abed & Alloti, 2017).

According to Sauvannet (2000)the company’s needs an adapted and relevant information system which allows to inform the strategic decision. Indeed, versatile and comprehensive, strategic watch aims to forecast what concerns the near and distant environment of the company. Information cycle, it establishes links and "intelligences" between information fragmented in time and space .

Characteristics of strategic vigilance

Lesca (1997) propose Strategic vigilance is characterized by a set of characteristics:

- **Strategy:** Relates to one-time decisions that do not have any valuable model by experience, taking into account incomplete information but at the same time can reflect decisions that have a very significant impact on the competitiveness and viability of the Organization.

- **Volunteering**: Vigilance is a voluntary process given the expected information with acute attention and all senses' activation. It is not a passive act limited by the simple monitoring and observation of the ocean as a creative goal .

- **Collective intelligence**: A group of individuals observe signs or signals in the ocean and compare them to give them a particular meaning, which is to achieve the group's goal of communication and interaction between its members and under all appropriate forms while respecting the behavioral rules of the work of the group or team.

- **The environment:** The environment of the Organization is not an abstract concept or something statistical, it is a group of factors that influence it, so it will be useful in a practical way, especially when targeting strategic vigilance.
- **Creating creativity**: Includes the interpretation of early warning signals that can be derived from the information obtained and which are linked to the element of the invention, the information does not describe any of the events and works previously carried out, but allows for the formulation of hypotheses for a creative future vision.
- **Expectation:** Information is the search for intuitive features as the Organization must provide clarifications as a light on the future, not just the past or the present.

3. Objectives of Strategic Vigilance

Many studies on Algerian institutions have confirmed that intangible investments and information-related research remain modest. Some studies have also found that about 70% of Algerian institutions do not have the financial, material and human resources to build a vigilance system. Most of the Algerian institutions' management does not realize the magnitude of the challenges they will address in the future. (Boukalkoul, 2014, p. 110)

The objectives of strategic vigilance lie in the following elements (Dawood & Hussein, 2017):

- Predicting opportunities and working to improve their exploitation and avoiding threats and their effects.
- Diagnosis and identification of best practices that serve the Organization and its strategies and ensure competitors' superiority in its field.
- We are achieving the overall efficiency of the strategic information system in the field of marketing.
- Analysis of the practical environmental, technical and technological Organization.
- Objective evaluation of its current and future competitive position.

Vigilance allows the Organization to: (Kadrii, 2017)

- Take strategic decisions safely and confidently, and study what is happening around them

- Proactively monitors, predicts and anticipates events, without surprises in environmental changes from technology and other factors, which detect opportunities and threats
- Objectively evaluate its current and future competitive position compared to its competitors
- Increase its profits by marketing its products better and better
- Introducing and offering new products, entering or positioning in new markets
- Have a good and forward-looking view and vision about the current and future activities of competitors, and anticipate their intentions

The second axis: e-management

1. The concept of e-management:

A definition for electronic management or E- management refers to of number of mechanisms that transform what in are paper processes into electronic processes(Pólkowski & Radu, 2014)

E-management is The process of using advanced information and communication technology, especially the Internet, to accomplish the establishment's work to ensure increased efficiency and effectiveness of performance and build and strengthen its relationships with other organizations and customers and reduce costs .(Ahmed, 2019)

Muslim (2015)defines it as the process of converting all traditional business and administrative services into electronic business essays and services carried out at high speed and accuracy, without the use of paper. (Muslim, 2015)

Pólkowski and Radu (2014) define E-management as an information and communication technology tool through a set of mechanisms that transform paper-based processes into electronic ones, aiming to improve productivity, performance, and decision-making with maximum effectiveness.

The two researchers also defined it (Pólkowski & Radu, 2014) as a tool for information technology and communications utilizing a set of mechanisms that transform paper-based processes into electronic ones, aiming to improve productivity, performance and decision-making with maximum effectiveness vigilance technology has become an essential strategic variable and a constant element of excellence. The Organization must know its strengths and weaknesses due to its technology and its knowledge of its competitors. It must look for a way

to monitor its technological environment to achieve sustainable experience. Therefore, a technical vigilance mechanism must be put in place to follow the various technological changes.

Kafi (2011) emphasized That electronic management consists of three essential elements:

- Hardware
- Software
- Communication Network

In this regard, the status of the information capital - knowledge - in enhancing the efficiency and effectiveness of administrations in general, and electronic management is what is to manage information resources based on advanced information and communication technology, especially the Internet, in the administrative processes and practices of institutions.

A distinction can be made between the following terms:

- **E-commerce** :It is a set of real or virtual practices used in the buying and selling process through its internal and external channels over the Internet to ensure customer participation. (Amami & Rowe, 2000)
- **E-Government**: It refers to how governments use ICT to improve transparency and accountability and provide people with opportunities to engage in the democratic process by offering greater access to government information and services for citizens and businesses. (Nengomasha, 2009)
- **E-Business** :IBM defines e-business as a safe, integrated and flexible gateway to delivering business value by combining systems and processes through which core business activities can be achieved quickly and flexibly through Internet technology. (Wirtz, 2019)

2. Objectives of electronic management

E-management objectives are based on the following points: (Muslim, 2015)

- The ease of managing and following up the Organization's various departments was a central unit.
- We are providing data and information to the beneficiaries immediately.

- Simplifying procedures, speeding up delivery and raising the level of service management.
- Swiftness in taking appropriate decisions based on accurate and direct information to expand the database supporting senior management.
- Ease of monitoring and managing all resources.
- Rationalizing financial costs and following up on various departments' operations, this leads to enhancing economic efficiency.

3. Modern e-management methods

Electronic management has several methods, which we list as follows:

- **Customer Relations Management(CRM):** that a customer database management system relies on information and communication technology by collecting and analyzing all information related to its customers, in addition to protecting the privacy of customer data, in order to establish, care and sustain customer relations in the long term and improve customer interaction with the products and services of institutions(Macnish & Ana, 2019)
- **Partner Relations Management (PRM):** A total of activities and strategies that build and strengthen the business's relationships with its distributors, suppliers and partners. It is critical to the distributors' and suppliers' effectiveness, utilizing means to help exchange information and communication between the enterprise and its partners .(Storey & Kocabasoglu-Hillmer, 2013)
- **Digital Rights Management (DRM):** claim Subramanya (2006) that the process of creating a company website on the Internet. Transferring the traditional business model of selling digital goods linked to physical media to the online world creates the need for a system to protect digital intellectual property. It is a set of policies, technologies, and tools that guide the proper use of digital content. High-level presentation of content flow from the creator to the consumer by the producer
- **the supply chain management (SCM):** It is a group of processes (decision-making and implementation) and flows (materials, information, and funds) aimed at meeting ultimate customer requirements.(Vorst, 2004), Researchers also emphasized Mithas et al (2015) the extent to which the company shares relevant information about its customers with its partners in the supply chain by coordinating products and services provided by different organizational units and suppliers to provide a better experience,

identifying and responding to dynamic customer needs, and creating a structure An integrated infrastructure in information technology enables organizational units to utilize their resources effectively to meet evolving client needs.

- **Enterprise Resource Planning (ERP)**: ERP Refers to a comprehensive software package that seeks to integrate all business processes and functions to provide a full view of the IT architecture that allows the integration of the Organization's various business processes to increase its efficiency, profitability, using a single database that seeks to integrate all operations, financial business functions, human resources and inventory. (Aboabdo et al., 2019)

4. Business intelligence (BI)

Researchers Argue Zheng et al (2014)on the extent to important BI or SV as a system that includes a set of methods, processes, structures, applications, and technologies that transform raw data into useful and meaningful information through data collection, data storage, data integration, knowledge management with analysis and dissemination to all organizational levels to support strategic decision-making, support the business process, and enhance the competitiveness of business organizations. Requirements for Electronic Management.

The success of e-management in the Algerian institution, whether in the public or private sector, must be based on the elements and requirements, and it is summarized as follows:

- **Eligible human requirements**: The human element is one of the essential elements in the organizations, because without this element will not be able to achieve its objectives even if it has the most extensive equipment, machinery and devices, so it is necessary to qualify the human elements well and a high level of efficiency, and can prepare specialized technical human resources with links to the information structure and work systems on electronic communication networks, through the implementation of a set of training programs, which help in preparing the technical human resources required to keep up with the technological development and achieve efficiency when implementing applications of electronic management .(Al-Hassanat, 2011)

- **Political requirements**: translated by the presence of political will to support the strategy of electronic transformation, and supporting e-management projects, by providing material and moral assistance to overcome obstacles and develop electronic transformation programs and e-management .(Ashur, 2010)

- **Legislative and legal requirements**: There must be legislation and legal texts that facilitate electronic management work and give legitimacy, credibility and all legal consequences (Hamed, 2015).

- **Administrative requirements**: It includes the availability of three major technological systems: (Ahmed, 2019)

  - Human Resource Management (HRM)
  - Financial Management System (FMS)
  - Enterprise Asset Management (EAM)

Materials

The materials used and methods followed during the experiment should be listed in the Materials and Methods section. This section should be reasonably transparent and provide a detailed procedure on how the experiment was done, both methodologically and objectively. The investigation can be followed and duplicated by another qualified researcher. The Materials and Methods section is vital for the reader to understand the author's experimental design and how data will be analyzed. The section on Materials and Methods enables the reader to position the work in its environmental context. Scientific papers must be reproducible; the Materials and Methods portion is, therefore, essential to the work's integrity.

Vital data, experimental design, and statistical analysis should be provided in the materials and methods. For all biological, analytical, and statistical procedures used in the investigation, a specific description or original reference is needed. All process modifications must be clarified. It is essential to explain the treatments and measurements clearly. Statistical models and research methods should be explicitly and thoroughly explained.

Methods

First: Identify the study community, sample testing and data collection method

1. **Community and sample study:** Our study community may be of all directors and employees of the National Railway Transport Company (SNTF) with 1,800 employees, according to our provider's statistics and organization levels (senior management, middle management, lower management).

2. **Sample study**: A random sample of all employees at different organizational levels (senior management, middle management, lower management) and (128) employees, representing 7.11% of the study community, were selected.

3. **Tool and method of data collection**: The tools adopted in this study were mainly the questionnaire, which contains three parts. The first part includes the personal and job data represented in gender, age, educational level, experience, job position, and the second part: it contains strategic vigilance variables. The third part: includes the reality of the application of electronic management. Also, and to find out the degree of respondents' agreement with the questionnaire's statements, the five-point graded Likert scale was used, where we were given weights measuring that score, and the consequences were determined with five points from 1 to 5. Where the answers range between strongly agree (5 points), Agree (4 degrees), neutral (3 degrees), disagree (2 degrees), and strongly disagree (1 score). The answers will be interpreted through the following table:

Table 1. The weighted averages and the corresponding trend

Weighted average	Description	Difference
{0.1- 1.8}	Strongly disagree	0.79
{2.6 – 2.6}	Disagree	0.79
{3.4 – 2.6}	Neutral	0.79
{4.2 – 3.4}	Agree	0.79
{5-4.2}	Strongly agree	0.80

Source: (Pimentel, 2019, p. 188)

In this regard, the values of the arithmetic mean invoked in the study will be dealt with to interpret the data as follows:

Table 2. weighted averages for the dimensions and the corresponding levels

The level	Weighted average
low level	1-2.33
moderate level	2.34 – 3.67
High level	3.68 - 5

Secondly: Statistical Analysis Tools

To achieve the objectives of the study, SPSS version (26) was used through the following statistical methods:

- **Descriptive Statistic Measures:** This is to describe the study population and show its characteristics, using percentages and frequencies, as well as using the analysis of the respondents' response to the expressions contained in the Surveylist and arranging

their variables according to their relative importance depending on arithmetic means and standard deviations.

- **Reliability Analysis Cronbach's Alpha**: This is to know the stability of the study.
- **Pearson Correlation Coefficient**: To measure the correlational relationships between paragraphs, dimensions and variables.
- **Variance Inflation Factor The permissible variance test**: to ensure no high correlation between the independent study variables.
- **Skewness test**: to ensure the normal distribution of the data.
- **Simple Linear Regressions** analysis: to test the impact of the leading independent variables: Competitive vigilance technological vigilance, commercial vigilance, environmental vigilance) on the practical application of e-management.

Third: Validation of the study instrument

To verify the apparent validity of the study tool, it was presented to specialized arbitrators, to assess their opinions and observations and assess the validity of the Survey statements and their suitability for the proposed axes of the study, which makes the study tool of high reality for application to individuals of the study sample.

Table 3. Results of Cronbach's Alpha Stability Test (Internal Consistency of Survey Statements)

Axis	Dimensions	Number of paragraphs	Number of phrases	Alpha	
The Strategic Vigilance	Competitive vigilance	4	4	0.89	**0.912**
	Technological vigilance	4	4	0.87	
	Commercial Vigilance	4	4	0.87	
	Environmental vigilance	4	4	0.89	
e-management		10	10	**0.94**	
Cronbach's Alpha Total		26	26	**96%**	

Source: Prepared by researchers in light of the outputs of SPSS

It is evident from Table (3) that the total Cronbach's Alpha coefficient reached (96%), which indicates the stability of the resolution at a high degree, and it is also clear that the Alpha Cronbach for the axis of strategic vigilance reached (94%) and this indicates the stability of the independent variable. The dependent variable is α Cronbach (94%), and in this regard, it shows. (Sarr & Ba, 2017)That the degree of consistency of the Cronbach coefficient

with more than (70 °) are acceptable values, which indicates the consistency and reliability of the study tool and its suitability for statistical analysis and scientific research.

Fourth: Diagnosis and analysis of the characteristics of the study sample

Table 4. Illustrates the descriptive analysis of demographic variables using frequencies and relative frequencies

Pointer Variable	Category	Repetition	Per cent (%)
Gender	Male	117	91.4%
	female	11	8.5%
	Total	**128**	**100%**
Age	Less than 30	24	18.8%
	from 30-39 years old	81	53.3%
	from 40-49 years old	17	13.3%
	50 years or more	8	4.7%
	Total	**128**	**100%**
Educational level	Secondary and lower	7	5.5%
	Secondary	25	19.5%
	Collectors	68	53.1%
	Postgraduate	22	17.2%
	Is that	6	4.7%
	Total	**128**	**100%**
Job experience	From5 years or less	49	38.3%
	from٦-10 years	49	38.3%
	from11- 15 years	15	11.7%
	years or more.	15	11.7%
	Total	**128**	**100%**
functional centre	Higher Management	10	7.8%
	Middle management	56	43.8%
	Executive management	62	48.4%
	Total	**128**	**100%**
Total		**128**	**100**

Source: Prepared by researchers based on SPSS outputs

The above table indicates that the males' percentage reached 91%, while females' share was 8%. Simultaneously, the age group was the largest percentage for the 30-39-year-old group. Their rate was 53%, and the lowest percentage was for the group (50 years and over) as the table indicates that the most considerable portion of the educational level. The university graduates had a percentage of 52%. Finally, the table suggests the most significant amount of the years of experience category, which is defined between 5 years and less, and 6-10 years with a percentage of 38%. As for the respondents' job position, we notice executive management, whose rate was 48, followed by middle management and higher management. Which is what the following figure shows:

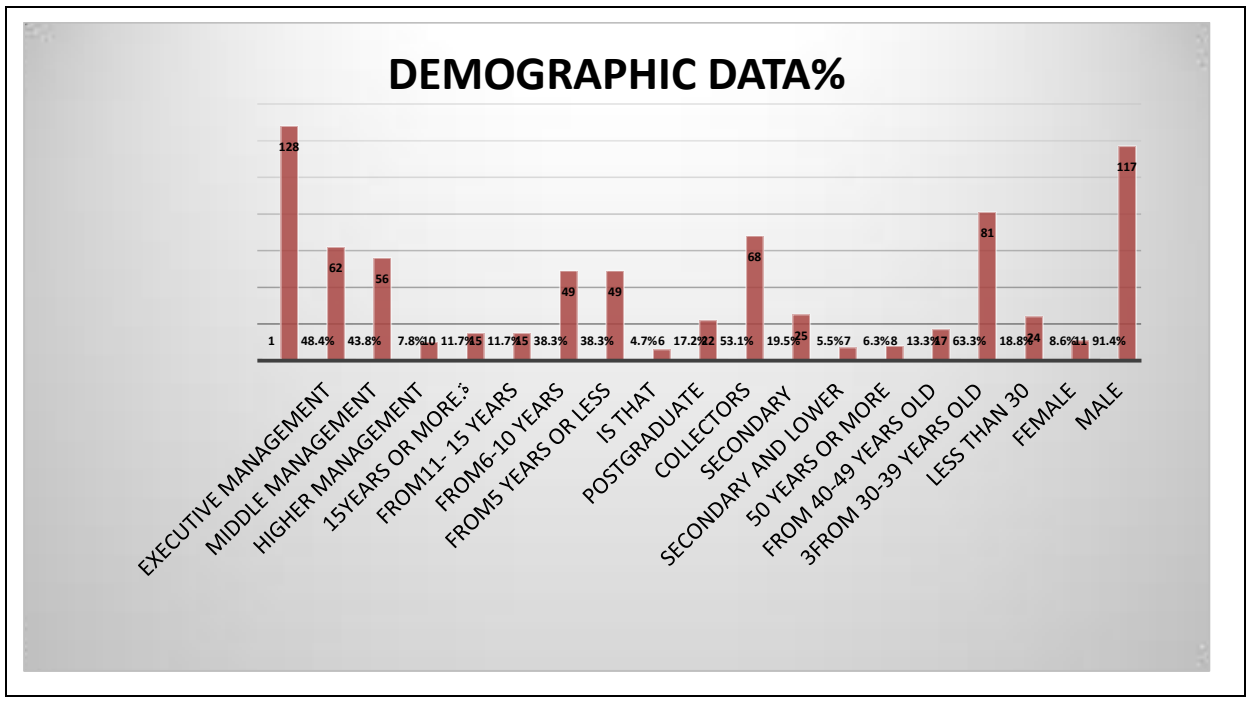

Figure 2. Graph the results of the analysis of demographic variables

Fifth: Statistical analysis of the study axes

1. Analysis of the level of awareness of the strategic vigilance dimensions of the National Railway Transport Company (SNTF)

To describe the National Railway Transport Company (SNTF), researchers resorted to mathematical averages and standard deviations, and the importance of each paragraph.

Table 5. Responses of study members to measure strategic vigilance dimensions

	Strongly Agree	Agree	Neutrally	Disagree	Disagree Agree	Mean	Std. Deviation	Relative importance
Competitive vigilance						3.1	1.09	4
The company works according to a clear strategy based on reducing travel time at the lowest cost and the lowest possible duration and in the best conditions	30	52	16	24	8	3.59	1.17	1
The company continually collects information from its competitors and those who are likely to enter later.	14	24	31	37	22	2.77	1.24	4
The company collects information and monitors changes in competitors' strategies.	16	30	26	34	22	2.87	1.29	3
The company seeks to partner with competing companies in neighbouring countries and connect land transport lines with them	26	36	17	34	15	3.18	1.34	2
Technological vigilance						3.71	0.96	1
The company works on the use of advanced systems and mechanisms that help to collect, manage information effectively and benefit from it	31	49	13	27	8	3.53	1.24	3
The company is working on the acquisition of advanced and modern equipment for the transportation of personnel and goods	52	67	3	4	2	4.27	0.79	1
The company is working to follow the technology of technologically advanced companies in the transportation communication and media sector	32	46	17	29	4	3.57	1.18	2
The company follows the new methods in providing the best services to its customers	32	43	18	27	8	3.5	1.24	4
Commercial Vigilance						3.38	0.93	2
The company follows the bargaining power of suppliers and suppliers of equipment	14	54	39	18	3	3.45	0.94	3
The company works to meet the needs of its customers and provide good services	27	54	15	28	4	3.56	1.14	1

	Strongly Agree	Agree	Neutrally	Disagree	Disagree Agree	Mean	Std. Deviation	Relative importance
The company promotes its services through social media and media networks.	26	54	16	24	9	3.48	1.2	2
The company works to attract the best workers in the labour market	23	32	19	37	17	3.05	1.34	4
Environmental vigilance						3.35	0.9	3
The company monitors its surroundings by collecting data	15	45	22	38	8	3.16	1.16	3
The company relies on monitoring its surroundings and obtaining information about the external environment such as interviews and the Internet	14	39	32	36	7	3.13	1.11	4
The company deals positively with social values and beliefs and is compatible with them, such as holidays and religious occasions	36	65	9	15	3	3.9	1.01	1
The company works using the right methods of waste disposal and follow modern techniques in eliminating or reducing environmental pollution resulting from its work	23	39	22	32	12	3.22	1.26	2
Total						3.39	0.86	

From the table above, it is clear that the overall average for the strategic vigilance variable was (3.39) with a standard deviation of (0.86). It is also clear that after technological vigilance it received the highest computational average (3.71), followed by after commercial vigilance (3.38), followed by after environmental alert (3.35), and finally after competitive vigilance (3.1).

- **Competitive vigilance**: From table 5, the area of competitive alert was average, with average arithmetic (3.1), a high (1) with an estimated arithmetic average (3.59), while phrases (2), three and (4) were average and the arithmetic averages (2.77, 2.87 and 3.18) were high, respectively.

- **Technological vigilance**: From table 5, the field of technical attention was high, with a mathematical average of 3.71, and all phrases came at high levels, with mathematical standards (3.53, 4.27, 3.57 and 3.5), respectively.

- **Commercial vigilance**: Note from the table (5) that the area of commercial alert was average, with the arithmetic average (3.38), the term (2) came in first place with a

mathematical average (3.56), phrases (1), 3 and 4 at intermediate levels, with standards of 3.45, 3.48 and 3.05, respectively.

– **Environmental vigilance:** It is noted from the table (5) that the field of ecological alertness was average, with a mathematical average of 3.35, and the term (3) was high and came first with an average of arithmetic (3.90), ferries (1), 2 and 4 at intermediate levels, with standards ranging from 3.16, 3.13 and 3.22, respectively.

1. Results related to the level of awareness of e-management interrogators in the National Railway Transport Company (SNTF)?

To describe and clarify the importance of e-management in the National Railway Transport Company (SNTF), researchers resorted to mathematical averages and standard deviations and the importance of each paragraph in the e-management section. The following table shows the analysis of the e-management variable in the research company, and the answers appeared as follows:

Table 6. Responses of study members to e-management hub phrases

	Strongly Agree	Agree	Neutrally	Disagree	Disagree Agree	Mean	Std. Deviation	Relative importance
The company provides high-quality services through the transparent application of computer systems and networks	12	35	19	45	17	2.84	1.23	9
Management provides the necessary data and information electronically to all levels and branches of the company	15	34	19	44	16	2.9	1.25	6
A company has highly qualified human competencies in adopting and implementing e-management and enhancing its performance efficiency.	23	33	29	25	18	3.14	1.31	2
The company continuously modernizes its management by relying on electronic records and documents and abandoning paper documents.	20	31	14	38	25	2.86	1.39	8
The company's electronic systems are highly efficient in collecting, organizing and updating data and information.	14	26	18	05	20	2.71	1.26	10
The company has a security system to protect data and information from various electronic risks	19	21	38	31	19	2.92	1.26	5
The company works to provide the best electronic services and achieve the satisfaction and loyalty of its customers	13	33	26	41	15	2.9	1.2	7
The company seeks to adapt to	18	56	27	18	9	3.4	1.11	1

	Strongly Agree	Agree	Neutrally	Disagree	Disagree Agree	Mean	Std. Deviation	Relative importance
various changes and emergencies and works to keep up with them such as epidemics								
The company adopts an effective communication sand and media network between its divisions and branches and with its customers	14	37	21	39	17	2.9	1.25	3
A company that trains employees on an ongoing basis in the practical application of e-management programs	20	27	22	42	17	2.92	1.3	4
Total						**2.96**	**1.01**	

It is clear from table 6 that the level of e-management terms according to the view of the study sample members was average, with paragraph No. (12) in first place with an average of my account (3.43) and a standard deviation (1.11), while the last was the paragraph. Number (9) with an average account (2.71) and a standard deviation (1.26) is generally attributed to the lack of modern electronic systems in the company and the lack of adequate training for employees, which motivates them to effectively apply electronic management in the National Railway Transport Company (SNTF). Sixthly: Correlation Hypotheses Testing

Second hypothesis: There is no statistically significant relationship between strategic vigilance and effective e-management in the National Railway Transport Company (SNTF).

To test this hypothesis, Pearson was used to identifying the relationship between independent variables, to detect a linear link between independent variables, and Table 7 showing the results of correlation muses between strategic alert dimensions and e-management as follows:

Table 7. Correlation coefficient and the total degree of the questionnaire

	Competitive vigilance	Technological vigilance	Commercial Vigilance	Environmental vigilance	The Strategic Vigilance	e-management
Competitive vigilance	1	0.742	0.73	0.654	0.887	0.771
Technological vigilance	0.742	1	0.779	0.707	0.905	0.663
Commercial Vigilance	0.73	0.779	1	0.74	0.91	0.721
Environmental vigilance	0.654	0.707	0.749	1	0.864	0.7
The Strategic Vigilance	0.887	0.903	0.908	0.851	1	0.771
e-management	0.771	0.7	0.725	0.667	0.662	1

** Correlation is significant at the level of p <0.01;* Correlation is significant at the level of p <0.05
Prepared by researchers based on the outputs of the SPSS program

It is clear from Table 7 that most of the correlations between the areas of study are moral. It is further noted that after commercial vigilance is the highest Correlation (0.779) and morally (0.000), which indicates that the Organization is interested in following up and monitoring the needs of its customers, and following the offers of its suppliers of trains and various equipment from companies inside and outside the country, as we note from the table that there is a positive and robust relationship between strategic vigilance and electronic management of the National Railway Transport Company (SNTF). It is valued at 1.771 c/o, which means that the Organization is concerned with strategic vigilance and follows up on everything in its surroundings to keep up with developments in its environment, which means accepting the first fundamental hypothesis.

Fourthly: Testing the hypotheses of impact

To test the study hypotheses, multiple regression analysis was used. Before that, some tests had to be carried out to determine the suitability of study variable data for various regression analysis assumptions. The VIf, tolerance and skewness factor (Skewness) has been used to ensure that the study data follow the normal distribution, the absence of linear interference and a high correlation between independent variables (Multicollinearity) and the following table shows this

Table 8. Results of the VIF test, Tolerance and Skewness of the study variables

Variables	Tolerance	VIF	Skewness
Competitive vigilance	0.384	2.607	-0.005
Technological vigilance	0.312	3.204	-0.356
Commercial Vigilance	0.290	3.447	0.122-
Environmental vigilance	0.393	2.546	-0.89

prepared by researchers based on the outputs of the spss program

Table 8 shows that the value of the VIF for all strategic vigilance variables is less than (10) and that the tolerance test values for those variables were more significant than (0.05), indicating that there was no high correlation between the independent variables. The importance of the twisting coefficient of the study variables was lower than (1). It is known that the data approach the normal distribution if the value of the twisting coefficient is less than (1) based on (Ho & Yu, 2015, p. 371)This confirms that the study data follows the natural distribution.

Presentation and analysis of the first sub-hypothesis: H01 there is no statistically significant link between competitive vigilance and the application of e-management in the National Railway Transport Company (SNTF).

Table 9. Analysis of the simple regression between competitive vigilance and e-management

Independent variable	β	t	R	R Square	Sig (T)	F	Sig(F)
Constant	1.04	5.065	0.662	0.444	0.000	98.148	0.000
Competitive vigilance	0.618	9.907			0.000		
The equation	**Y=1.04+0.618x**						

Prepared by researchers based on the outputs of the spss program

The results shown in Table 9 indicate a statistically significant effect of competitive vigilance (independent variable) in the application of e-management (dependent variable) based on the calculated (F) value of (98.148) with a level of moral significance (Sig = 0.000), which is lower than the pre-approved indication level (0.005). Therefore we reject the first zero hypotheses and accept the alternative hypothesis of the existence of vigilance following competitiveness in the application of effective e-management.

Presentation and analysis of the second sub-hypothesis: H02, there is no effect of technological vigilance in the application of e-management in the National Railway Transport Company (SNTF).

Table 10. Analysis of the simple regression between technological vigilance and e-management

Independent variable	β	t	R	R Square	Sig (T)	F	Sig(F)
Constant	1.04	5.065	0.667	0.444	0.185	100.779	0.000
Technological vigilance	0.618	9.907			0.000		
The equation	**Y=1.04+0.618x**						

It is clear from the table above that the value of (F) was (100.779) at a moral level (Sig = 0.000) which is below the indication level (0.05). It is also shown from the table that the table also shows the independent variable (technological vigilance) that the independent variable (technical vigilance) The magnitude (0.444) of the variation in the e-management variable (e-management) is therefore rejected by the second zero sub-study hypothesis and the acceptance of the alternative hypothesis is that there is an effect of technological vigilance in the practical application of electronic management in the National Railway Transport Company (SNTF).

Presentation and analysis of the third sub-hypothesis: H03 there is no trace of commercial vigilance in the application of e-management in the National Railway Transport Company (SNTF).

Table 11. Analysis of the simple regression between business alertness and e-management

Independent variable	β	t	R	R Square	Sig (T)	F	Sig(F)
Constant	0.279	1.188	0.725	0.526	0.237	139.678	0.000
Commercial Vigilance	0.791	11.819			0.000		
The equation	**Y=0.279-0.791x**						

prepared by researchers based on the outputs of the spss program

It is clear from the table above that the value of (F) reached (139.678) at a moral level (Sig = 0.000) which is below the indication level (0.05) and also shows from the table that the table also shows the independent variable (commercial vigilance) that the independent variable (commercial vigilance) The magnitude (0.526) of the variation in the e-management variable (e-management) is therefore rejected by the third zero sub-study and the acceptance of the alternative hypothesis is that there is an effect of commercial vigilance in the practical application of e-management in the National Railway Transport Company (SNTF).

Presentation and analysis of the fourth sub hypothesis: H04 there is no effect of environmental vigilance in the application of e-management in the National Railway Transport Company (SNTF).

Table 12. Analysis of the simple regression between environmental vigilance and e-management

Independent variable	β	t	R	R Square	Sig (T)	F	Sig(F)
Constant	0.328	1.325	0.7	0.491	0.188	121.374	0.000
Environmental vigilance	0.784	11.017			0.000		
The equation	**Y=0.328+0.784**						

prepared by researchers based on the outputs of the SPSS program

The table above indicates that the value of (F) was 121.374 at a moral level (Sig = 0.000) which is below the indication level (0.05). It is also clear from the table that the independent variable (environmental vigilance) explains that the fourth zero sub-study hypotheses are rejected. The alternative hypothesis is rejected, and there is an effect of environmental vigilance in the practical application of e-management in the National Railway Transport Company (SNTF).

Once the study's sub-impact hypotheses have been validated, we will prove the central hypothesis of the impact that there is no statistically significant effect at a moral level (α 0.05) of strategic vigilance in the useful application of electronic management in the National Railway Transport Company (SNTF).

Table 13. Analysis of the impact of strategic vigilance on the application of e-management

Model	Sum of Squares	df	Mean Squares	F	Sig
Regression	78.234	1	78.234	184.282	0.000
Residual	53.491	126	0.425		
Total	131.725	127			

prepared by researchers based on the outputs of the spss program

The data of table (10) shows that the calculated (F) value reached (184.282) the level of F (0.000=Sig) and when comparing the value of the assumed level of indication (0.05), it is found that the calculated F indicative level was less than (0.05). Therefore the hypothesis of the first zero primary studies is rejected. The alternative hypothesis is accepted. The same table also explains that the independent variable strategic vigilance explains the (0.594) variation in the e-management variable, a relatively high explanatory force, indicating a statistically significant effect, between these two variables in the society in question.

Results

The study came to a set of results:

- The study showed a medium degree of availability of strategic vigilance and e-management system in (SNTF).
- The study results indicated a relationship d statistically at a moral level (a≤0.05) between strategic vigilance and e-management application in (SNTF).
- The study results revealed a statistical indication at a moral level (a≤0.05) for the strategic vigilance in the practical application of electronic management in the research company. The researchers attribute this result to the relative stability witnessed by Algerian institutions in the transport sector, which enabled the company to obtain and control the relative control of environmental information in the application of e-management under the state strategy to modernize the industry and keep up with the challenges and provide the best services to its customers.
- The test hypotheses showed a statistically significant effect at a moral level (a≤0.05) for technological vigilance in the application of e-management of (SNTF).The researchers attribute this result to the state's desire to modernize the company. The company follows various modern technological technologies and works on applying it to provide its customers with the best services.

- The study results show a statistically significant effect at the moral level (a≤0.05) of competitive vigilance in the application of e-management of (SNTF), and researchers attribute this result to the weakness of competition in this sector subject to competition law.

- The study results showed a statistically significant effect at the moral level (a≤0.05) of commercial vigilance in applying e-management of the research company. The researchers attribute this result to the company's inability to follow its customers' needs and track its suppliers' bargaining power by trains and various types of equipment, due to the large railway lines and the company's endeavour to expand.

- The test hypotheses showed a statistically significant effect at a moral level (a≤0.05) for - The results of the study showed an effect of statistically significant environmental vigilance on the application of e-management in (SNTF). Given the importance of environmental vigilance factors (political, legal, social...) in enhancing stability and success of electronic management in the face of various emergency conditions and crises.

Conclusion

Algerian institutions are experiencing complex and rapid changes. In light of the state's tendency to modernize Algerian institutions and improve services aimed at society, it has become necessary to adopt an integrated electronic management system with the flexibility, speed, and transparency. Providing all the essential data from its environment and analyzing it that has been published at all administrative levels and achieves the desired goal for which it was established. To achieve this purpose, we present a set of recommendations, which are as follows:

- Spreading and consolidating the electronic culture in Algerian institutions reflects positively on the services provided to their customers.

- Strengthening the infrastructure and the application of modern technology in Algerian institutions of all kinds.

- Providing highly skilled people and abandoning bureaucracy in recruitment for successful application of the integrated e-management system.

- Work on establishing a competent department in the National Railway Transport Company (SNTF) that works to track and provide all the necessary information related to its house and analyse it to make strategic decisions and achieve its objectives.

- Decision-makers should be focused on the dimensions of competitive vigilance and environmental vigilance related to the strategic vigilance variable

- Further studies on strategic vigilance and e-management, in light of the severe shortage of the Algerian and Arab library in general due to the importance of strategic attention as a tool to achieve creativity and innovation and promote a culture of e-management in Algerian institutions.

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Bibliographic information of this paper for citing:

Karima, Kasmi & Zohra, Djalab (2021). The Impact of Strategic Vigilance on E-management in the National Railway Transport Company (SNTF). *Journal of Information Technology Management*, 13(2), 202-230.