

Technological vigilance as an input to enhance the competitive advantage of organizations in light of digital transformation

-Sociological vision -

اليقظة التكنولوجية كمدخل لتعزيز الميزة التنافسية للمؤسسات في ظل التحوّل الرقمي
- رؤية سوسيولوجية -

*Ahmed bedjadj

Ghardaia University (Algeria) , Ahmed.bedjadj@univ-ghardaia.dz

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Abstract : This article aims to shed light on technological vigilance and its importance in enhancing the competitive advantage of Algerian enterprises. Within the framework of the shift towards the digital economy, from the point of view of the sociology of strategic action, considering that the institution is a social construct whose central component is the actor and the engine of all organizational processes and practices. Considering that the act of vigilance is a process linked to the actor and his perceptions of action in the face of the challenges facing institutions in light of competitiveness and the requirements of organizational change as inevitable. Our interest focused on the human element through the theory of strategic action to achieve technological vigilance, based on the analytical approach to interpret and understand the functional relationship between the elements of the subject.

This research paper concluded the centrality of the social actor in organizational practices, and the importance of strategic action as it reflects the state of alertness among those concerned about their roles and status within the organizational system, and the opportunities it represents for accumulating capital. This includes embodying the process of technological awakening as a horizon for organizational practice..

Keywords: Technological vigilance , Competitive advantage , Theory of strategic action , digital transformation.

ملخص: يهدف هذا المقال إلى تسليط الضوء على اليقظة التكنولوجية وأهميتها في تعزيز الميزة التنافسية للمؤسسات الجزائرية. في إطار التحوّل نحو الاقتصاد الرقمي، وذلك من وجهة نظر سوسيولوجيا الفعل الاستراتيجي، باعتبار المؤسسة بناء اجتماعي يعدّ الفاعل مكونها المركزي ومحرك كل العمليات والممارسات التنظيمية. باعتبار أن فعل اليقظة عملية مرتبطة بالفاعل وتصوراته للعمل أمام تحديات الواقع في ظل التنافسية ومتطلبات التغيير التنظيمي كحتمية. انصب اهتمامنا على العنصر البشري من خلال نظرية الفعل الاستراتيجي، وذلك اعتمادا على المنهج التحليلي لتفسير وفهم العلاقة الوظيفية بين عناصر الموضوع. وقد خلصت هذه الورقة البحثية الى مركزية الفاعل، و أهمية الفعل الاستراتيجي باعتباره يعكس حالة اليقظة بأدوارهم ومكانتهم داخل النسق التنظيمي، وما تمثله من فرص لمراكمة رأسماله. ومنه تجسيد عملية اليقظة التكنولوجية كأفق للممارسة تنظيمية.

الكلمات المفتاحية: اليقظة التكنولوجية، الميزة التنافسية، نظرية الفعل الاستراتيجي، التحوّل الرقمي.

*Ahmed Bedjadj

First: Introduction:

Institutions that embrace technological vigilance are able to win the battle of competition and ensure a permanent presence in the economic landscape and its challenges. This is done by liberating the individual and collective initiative, which allows the actors in the organization to adopt strategic options that guarantee the achievement of common goals, given that the human component is the basis of all organizational processes and it is up to him to embody and translate the act of vigilance into reality and practice, based on the fact that the actor is not only a working hand, but also has mental capabilities that enable him Adaptation and creativity. According to the stakes imposed by the nature of the work and the strategic choices it adopts according to the theory of strategic action by Michel Crozet. Against the background of the assumption that the institution is a social structure in which the actor represents the basis of this structure.

Therefore, in this research paper we ask the question:

How does technological alertness contribute to enhancing an organization's competitiveness from the point of view of the sociology of strategic action?.

To answer this problem, we adopted the following questions:

- **Does technological awakening represent a central value in the Algerian enterprise?**
- **How does the social actor (according to the theory of strategic action) contribute to achieving the process of technological awakening, thus enhancing the organization's competitiveness?**

Accordingly, we divided the research into the following elements:

1 - Determine the conceptual framework for the research

1-2 Technological awakening

1-3 - Motivations and importance of technological vigilance as a competitive philosophy for institutions.

1-4 - The dual relationship between competitive strategies and technological vigilance

1-5 - Technological vigilance as a mechanism to enhance the competitive advantage of Algerian enterprises

1-6 - The challenges facing technological awareness in Algerian institutions

2- Theory of strategic action.

2-1- Technological vigilance and its relationship to the theory of strategic action.

Second: Determine the conceptual framework for the research:

The basic concepts in this article can be defined as follows:

1- Technological awakening:

1-1 The concept of vigilance.

1-2 Techno Mindfulness Meal

Technological vigilance refers to the efforts made by the institution, as well as the means employed, with the aim of revealing all the latest developments occurring in the field of technologies and technologies that are of interest to the institution now or in the future.

It can also be defined as the sum of activities that allow:

- Monitoring the organization's surroundings and following up on technological innovations.
- Collecting and processing information about technological developments and innovations.

- Communicating this information to the decision-making centers in the organization. (Ukel, 1998, p. 15)

According to (**Jakubiak F.**) for example, technological vigilance is “a process of observation and analysis of the environment followed by another process of direct transmission of information that has been selected and processed so that it is useful in making decisions.”

There are three points or elements in this definition that require consideration for some analysis and comment. The first of these points is observing the surroundings, that is, following what is happening in it and learning about its joints. The second point relates to analyzing the data in that environment and identifying the main actors. The third point concerns broadcasting the processed information and then delivering it to various decision-making levels at the appropriate speed and time.

Accordingly, the concept of technological vigilance then involves considering it a necessary activity and a dynamic process for producing the knowledge and information it needs. Hence, determining the policy and strategy followed in this field is extremely important for economies and societies alike. Technological awakening derives its sources mainly from: (Ghazal, 2013)

- Scientific research bodies and universities, through continuous communications and participation in forums.
- Institutes and institutions of applied research and engineering
- Periodic study of all patents related to the activity.
- Information banks.
- Participating in forums and studying publications of a professional nature.
- Careful analysis of competitive products.

It is clear that the most prominent source, in addition to the necessary modern imported means and equipment, highlights the human element as one of the most important foundations of the process and the primary source in achieving technological awakening in terms of its formation and qualifications, as well as the appropriate, encouraging, and stimulating material and moral conditions.

Through these definitions, we can extract the most important and prominent characteristics of technological awakening, which are:

Early warning in the event of electronic attacks, theft of organization data, or technical failures such as problems with production machines, etc.

It enables the organization to know the capabilities it has in the technological aspect and the challenges it faces, thus clarifying to senior management the current status of the organization
Improving and raising the level of the organization’s internal and external communication through quickly obtaining information and delivering it to those in need.

It helps reduce production costs and improve the quality of services by possessing advanced production methods that contribute to reducing labor.

It enables the institution to mitigate the effects of Sharia fluctuations in the technological field.

It helps in innovation electronically by creating new products and services, developing new foundations using information technology, and electronic promotion of the products and services it provides.

It helps in knowing the weakness factors related to competitors and allows it to overcome the electronic threats to which the organization is exposed. It also enables it to recognize its

strengths and seek to strengthen them further and exploit the opportunities available for that (Al-Malik, 2009, p. 4).

2- Competitive advantage:

The concept of competitive advantage includes meanings related to proving excellence and superiority over competitors through the capabilities and resources it possesses. It is achieved when we add value and benefit to the institution, which other institutions cannot copy or find a substitute for. Therefore, it can be said that defining the concept of competitive advantage requires knowledge of three terms on which this concept is centered: advantage, competitiveness.

The WEBSTER dictionary includes definitions of these terms, as it defined advantage as the distinctive position, condition, or benefit resulting from the organization's course of action. It also defined competitiveness as the characteristics that characterize the organization compared to its competitors, and defined sustainability as that which can be maintained for the longest possible period. Therefore, competitive advantage can be defined as: "the unique characteristics that distinguish a business organization from its current and potential competitors." It also means: "the new advantages that the business organization obtains, which place it in a constantly advanced position in the relationship with its competitors" (Omar, 2013, p. 87). It is also described as: "the defenses and returns that the organization obtains to the greatest possible extent, which cannot be imitated or copied from Before other organizations. (Al-Baghdadi, 2009, p. 84) Therefore, we find that many researchers refer to its concept as the ability of the organization to provide the highest returns on investment in the industry and to continue to maintain this progress." (Al-Abidin, 2012, p. 29).

Based on these definitions, the determinants of competitive advantage can be extracted as follows:

2-1 Foundations of competition:

Building and sustaining a competitive advantage in markets requires the availability of a set of competitive assets, resources, and capabilities. A competitive strategy that is concerned with quality, for example, requires special capabilities and skills in generalization and manufacturing to produce goods capable of delivering a certain value to the consumer. The same goes for a focus strategy that needs capabilities. A competent human being, so the question is, who is she?? It has emerged in this field as a basis for competition in markets. Although imitation operations have affected many products with distinctive brands, it is difficult to imitate the high quality of these products, which are based on certain competitive capabilities.

2-2 The field of competition: The organization's determination of its choices of products and target markets to compete in is one of the requirements for competitive advantage. Despite the importance of supporting the organization's strategy with sustainable competitive assets and capabilities, despite the importance of supporting the organization's strategy with the necessary competitive assets and capabilities, it may be exposed to It will fail if it is not used in the right place. (Bernacki, 2014, p. 331)

2-3 The organization's choices regarding its competitors: The organization must identify the identity of its competitors and determine their positions, capabilities, and relative importance in the industry in order to ensure the continuity of its competitive advantage. It focuses on classifying competitors into strong and weak groups, in order to build a strategy based on the competitors' weaknesses while taking into account the organization's capabilities and capabilities. Competitiveness into consideration.

2-4 Ways to compete: Building a competitive advantage and working to sustain it depends on the type of strategy adopted by the organization. (Bouderbala, 2015, p. 46)

3-Digital transformation:

The continuous and rapid development of digital technologies creates challenges facing organizations. Thus, it imposes a qualitative transformation and transition in all aspects of its activities and equipment to ensure adaptation to a changing and complex environment, according to new digital tools. Organizational actors must deal with structural issues, review their organizational processes and patterns of interactions within the organization. Since digital transformation is not an isolated and specific process, but rather a complex process that includes all aspects of the organization.

Digital transformation means moving from a state of traditional activity and action in dealing with data to a modern state that relies on modern technologies characterized by speed, accuracy, flexibility, and the ability to store, transfer, and process material easily and quickly. Digitization means converting written or audio-visual data into numbers that can be stored on a computer and dealt with easily and quickly.

“To keep their businesses relevant according to the current digital market and ensure their competitiveness, companies must embrace digital transformation or else they will go out of business. Recently, digital transformation has been an exciting trend for both researchers and strategic practitioners in the field of information systems (Vial, 2019). The researchers identified Digital Transformation in Different Ways Digital transformation is defined as the use of digital technologies to increase an organization's performance.

Define digital transformation as a way to leverage new digital technologies to enable the investing company to increase customer experience, streamline operations, or create new business models.” (nyerere, 2022, p. 6)

On the social side, digital technology can increase employee satisfaction by giving them more autonomy and flexibility. For example, remote work allows some employees to better balance private and professional life and work more effectively (Mayo et al., 2016).

That this allows for better support and motivation of employees (Berger-Sweet, 2008). However, digital can also have negative effects on employees, by increasing their stress or reducing their productivity (in the case of overuse or misuse of digital tools). (MERLET, 2020, p. 22).

4-Digitization in Algeria:

Algeria's experience with digitization: The government seeks to develop a road map to digitize Algeria during the next stage, aiming to accelerate the digital transition, and in all sectors of activity, and this is to modernize and improve public service. It also determined the features of this strategy, which we summarize in points:

Devoting digitization by enlisting economic institutions, customers, emerging institutions, and research and training institutions in this process.

Allow all Algerians to access information and communication technologies, including networks and services; Developing innovative services and national digital contents;

Strengthening capabilities in the field of information and communication technologies and spreading their use in various fields of life.

Strengthening electronic governance and improving the digitization ecosystem, as well as establishing general principles of digital trust.

“Establishing a culture of purposeful digital citizenship that will serve as a foundation for the success of this desired transformation” (Qasi, 2022, p. 1116). However, these ambitions - to

ensure their actual realization in the field - require a digital infrastructure and the preparation of technicians and engineers across all public and private institutions, in addition to opening a real partnership with the leading global industrial institutions in the field of information technology and artificial intelligence to transfer technology and establish national companies and workshops for installation and production.

-5 Motivations and importance of technological vigilance as a competitive weapon for organizations

Motives for technological awakening: The motives for the emergence of technological awakening have been multiple. The expansion of the circle of knowledge and the development of research and experimentation methods are factors that have helped increase the rate of innovations and the rate of technological development among institutions, which has prompted them to establish bodies specialized in technological monitoring. The motives for technological monitoring can be summarized as follows:

- Accelerating technological changes.
- Reduced product life cycle due to the high percentage of new products.
- Intense global competition through prices.
- Lack of suppliers of raw materials directed to certain sectors, such as electronics, automated media, and chemicals.
- Every institution that seeks to take a position of leadership and brilliance in the market in which it is active is required to adopt a permanent and continuous technological vigilance, as long as the purpose of the latter is to identify the various technologies present in the environment of the institution and, first of all, the sector to which it belongs, in order to collect and exploit information. (Bouderbala, 2015, p. 48).

The importance of strategic vigilance:

Technological vigilance has an effective role in the life of institutions, economies, and societies, as it provides managers of industrial institutions, as well as decision makers at the governmental level, with a sufficient amount of awareness and embodied desire to invest in the process of keeping pace with developments and trends, and enables the process of monitoring or impulsive anticipation to be continued. Regular and direct, instead of just waiting, while ensuring access to and finding access to sources of knowledge and information production. The presence of technological vigilance also means the presence of seriousness and continuity in the process of monitoring and anticipation, especially in the fields that enable the improvement of the various technological and competitive capabilities of the country and its economic institutions. In addition to the above, technological awakening has the primary mission of researching and obtaining not only knowledge and information, but also scientific innovations and technological innovations in various fields and sectors.

According to **Jakobiak**, the primary role of technological alertness is to allow the organization to carry out the best strategic planning. **Mockler** also considers it to be the indispensable pillar in the decision-making process in the medium and long term **Lainée** has concluded that practicing any industrial profession requires controlling a high number Of technologies. (Bouderbala, 2015, p. 29).

While we find that **Humbert Lesca** emphasizes the basic justifications that require systematic technological vigilance on the part of the institution, that is, the possibility that no competitor will outperform the institution, whether circumstantial and probabilistic, legitimate or illegitimate. Therefore, establishing a device for technological vigilance allows avoiding this threat, whether through a defensive perspective, which means insuring against sudden and

emergency risks that appear in the surroundings, or according to an offensive perspective, which means focusing on possessing a strong technological advantage to confront the competition and getting ahead of it in stages of the technological advance available by this advantage. Or the avoidance view, which means making a decision to invest in a sector where there is not strong competition, by locating away from technological fluctuations and avoiding rapid technology. (Bernacki, 2014, p. 336).

Third - the dual relationship between competitive strategies and technological alertness

Strategic alertness plays a decisive role in determining the strategies played by the institution. It is not possible to determine the nature and method of competition without referring to the skills and technological means that the institution possesses. This is due to the nature of the role and the impact that technological alertness imposes on the various competitive strategies of the institution, as follows:

Technological vigilance and cost leadership strategy: The goal of the cost control strategy is the organization's ability to provide products or services at a low cost compared to its competitors or improve its productivity without incurring additional costs.

Technological vigilance plays an important role in adopting this strategy because technological vigilance provides the institution with any significant development in the technological field, whether in terms of the emergence of new machines to produce advanced programs for designing the engineering of production processes or new materials and formulations to produce the final product. Technological vigilance in this aspect also allows providing... Many advantages, the most important of which are:

Anticipating the reaction of customers: Through the updates that the institution makes and working to satisfy their desires through continuous communication with them in the institution, the institution has a website and an e-mail that works to monitor and track the behavior of customers and the extent of their acceptance of the services provided. This leads the organization to provide services at a price acceptable to customers.

Exploring and monitoring the movements of competitors: with regard to their development of production methods and product design programs that contribute to reducing production costs, and alerting those in charge of the production department of the developments taking place, which allows it to predict a better position in terms of competition on price, as the organization is aware of the techniques used by Before its competitors.

A patent benefits potential competitors: it is one of the barriers to entry that hinders new competitors in the sector. A patent allows an organization to provide products and services at a lower price than its competitors who do not have a patent. It does not need to buy licenses because it is an organization that owns the rights, and therefore has the ability to confront new competitors.

Technology vigilance allows an organization to build a protection system that enables it to make production processes and the development of its services secure against any hacking or tampering, to reveal its secrets in the field of production at a lower cost and the recipe it adopts in order to reduce costs, which is what keeps competing organizations in confusion and constant anticipation instead of offering products with a lower price. Less than her. Technological vigilance enables the organization to build an effective communication system and ensure the transmission of information, which contributes to the speed of delivering orders in addition to reducing the costs of communication and continuous movement between workshops, and exchanging appropriate information at the appropriate time. (Bouderbala, 2015, p. 31).

Technological vigilance and differentiation strategy:

This strategy allows the organization to provide distinguished services, by providing a product or service that contains characteristics that distinguish it from other competing institutions, a service that competitors cannot provide, and if its price is higher, the customer is willing to pay in exchange for obtaining that product or service.

The role of technological vigilance in this strategy is embodied through distinction based on technological superiority. Among the advantages of this integration we mention the following:

Taking customers out of the traditional scope: by providing products and services that are out of the ordinary. Technological vigilance is a function that monitors, anticipates and detects changes occurring in the technological field. The technology-based institution has developed its services as a way for the customer to pay for the product through electronic payment methods - electronic payment cards - It also gives the customer the opportunity to submit his requests to obtain it without traveling to the institution's offices, through the technological vigilance team constantly updating the institution's website, which saves customers the hassle of traveling to the offices to obtain information about modern products and services. Accordingly, the customer is willing to pay for what he needs, regardless of its high price, because what he wants to get is done without difficulty.

Technological vigilance allows the organization to obtain patents and business licenses to exploit new technology before current and potential competitors enter, which enables the organization to provide distinguished and quality services and products. Technological vigilance works around the clock to find out what technologies and technological developments are emerging from competitors.

With regard to suppliers, the organization is able to achieve a high profit margin that allows it to keep up with the authority of suppliers. The technological vigilance and its team are in contact with all suppliers who provide the same service, which contributes to obtaining raw materials that go into making the products provided with high quality and at the best prices. The supply team is familiar with all Information related to the technological development taking place.

Accordingly, technological vigilance contributes to improving the organization's competitiveness through integration between the lowest cost strategy and excellence, because after the development of the business structure, the combination of these two strategies is the key to benefiting from the greatest advantages that technology gives in order to achieve what was mentioned above, and it also contributes to increasing profitability. The institution and improving the competitive position of the institution, and thus raising the market share of the institution, paving the way for improving the competitive advantage of institutions, which is what will be discussed in the next element. (Bernacki, 2014, p. 335).

Fourth - Technological vigilance as a mechanism to enhance the competitive advantage of Algerian institutions

Vigilance plays a major role in improving the organization's competitive advantage with regard to the technological field, as it is its means of being aware of the developments taking place in this field and showing the extent of the organization's control over the technology it possesses. Therefore, the organization must be vigilant to what is happening in its surroundings and strive to make technology attractive to raise the level of its competitiveness.

Achieving its distinction from other institutions through:

Technological alertness and institutional performance:

Among the requirements for the success of technological vigilance within the organization is its availability of a work methodology and technical means in addition to individuals qualified in information search techniques. H.Dou also adds that the technological vigilance network allows the creation of a system that gives the opportunity for institutions to intervene and react to the environmental changes that affect the institution. The vigilance system Technology increases its effectiveness when it falls within a cooperative framework between the institution and its partners. For example, it is possible to create a network for vigilance between institutions, by monitoring all suppliers and all customers belonging to its sector in a way that allows them to see the creativity of each one of them.

The effectiveness of the technological vigilance system depends on the credibility of the information collected from the technological environment. Accordingly, the strategic choices followed by the institution are what open this path to technological innovation. For example: cooperation with university research laboratories and industrial research laboratories allows the institution to exploit new knowledge and Developing her learning in the field of scientific research. (Bernacki, 2014, p. 336).

Technological awakening is a source of technological creativity:

According to Morin, “the future is in favor of creative institutions that create their own destiny.” The importance of creativity and development lies in that they represent the heart of economic and social growth. Creativity represents the result resulting from the establishment of a new method or method of production, as well as change in all types of components. The product or how to design it, and he identified five forms of creativity: producing a new product, incorporating a new method in production or marketing, using a new source of raw materials, opening and conquering a new market, and achieving a new organization of the industry. The technological innovation system can be represented as a system open to the technical environment. Social, cultural, economic and political, to feed from its various resources - with the aim of transforming them into innovations in the form of improved or new products or methods.

Technological vigilance and the formation of competitive advantage: Competitive advantage expresses the unique position of an organization that it can develop vis-à-vis competitors through the allocation of resources. Porter also considers that competitive advantage is a phenomenon that arises as soon as an organization discovers new methods that are more effective compared to those used by competitors, as it is able to embody this discovery in the field. That is, the essence of competitive advantage is creativity, and competitive advantage can also be formed by responding to various environmental changes. Competitive advantage, then, is everything that the organization specializes in, which gives double value to customers. It is a variable function of the degree to which the customer realizes the value that the product creates. In order for it to be said that the organization has a competitive advantage, the customer must feel this difference in value. In order for the customer to seek this The difference in value: The organization must distinguish its products with unique characteristics from other competing products, including creativity and keeping pace with innovations and technological developments. (Ukel, 1998, p. 15).

Fifth - The challenges faced by technological awakening in Algerian institutions.

It is a total of the obstacles faced by strategic vigilance in general, which stand in the way between technological vigilance and achieving its goals, among which we find achieving competitive advantage. Most notable:

The huge budget required by technological awakening and the huge costs.

Lack of highly qualified human resources in the technological field within the organization.

Difficulty analyzing and translating results.

In some cases, the person in charge of the technological vigilance process is lenient, that is, not being serious with an information, which costs the organization a useless drain of energy.

Pattern of authority and nature of organizational practices.

The frames of reference that govern the nature of work and action in Algerian institutions, which are dominated by traditional values and culture, conflict with rationalization and the culture of the institution.

The lack of an official source of information related to technological developments and also technology owned by competitors. In many cases, institutions resort to spreading rumors in order to influence competitors.

Lack of team spirit and closing the way for initiative

This system is imposed coercively or randomly on employees within the organization, which leads to adverse results (Bouderbala, 2015, p. 29).

This is in addition to “the continuation of the problems raised at the level of industrial institutions and their accumulations throughout the various stages of the formation of the Algerian institution, including the continuation of the conflict of interests at the level of the institution, which is evident from the existing contradiction between management as a technocratic group that has the right to exercise supervision and control and the majority of workers who are trying to possess some power” (Ismail Guira) , 182)

The logic of rent to buy social peace, the adoption of a policy of loyalty at the expense of competencies and customer relations, and excessive social treatment to absorb unemployment and achieve social peace at the expense of the logic of rationalization and the rules of good governance are factors that make the organizational climate incapable of developing, growing, and benefiting from technology. Indeed, many times technology turns into mere Storage and accumulation of things without their optimal use as a result of a lack of planning and coordination between the central administration and specialized technical professional groups.

Seventh: Technological alertness and its relationship to competitive advantage through strategic action

7-1 Theory of strategic action.

In the context of researching the nature of the relationship between workers as actors and the organization or institution, which has become clear that it goes beyond the idea of need or incentives and the various organizational rules that direct behavior and actions in the organization, but rather behavior according to the sociological approach developed by (**Michel Crozier and Erhard Fried Barg**), it confirms that the behavior of individuals Within the organization, it is a conscious action stemming from the choices of individuals according to the situations or problems they face within the organization. From this logic, it is confirmed that behavior in the organization is a strategic act that translates the actor's defensive and offensive choices in his relationship with the organizational environment and its obstacles, against the backdrop of two facts:

-The actors within the organization have personal goals that they seek to achieve.

- No matter how strict the official system is, there are loopholes and margins of freedom that allow the actor to move and maneuver in order to achieve their goals.

"**Crozier** believes that strategic analysis aims to study how the system works by revealing the contributing actor and the actors in it, so it is difficult to predict his actions, given that his action is subject to influences and conditions that require the actor to determine his strategy in order to coexist with those influences and conditions within the system." (Farah, 2019)

7-2 The foundations of this theory:

The behavior and actions of individuals within the organization are not considered an automatic, mechanical response to the professional situation experienced by the individuals within the organization, but rather conscious actions stemming from individual choices based on the situations and problems that the organization poses to them and according to the areas of suspicion that are within their reach.

The organization is important, regardless of its strictness and the extent to which it covers all its activities and resources. There are points of suspicion, weakness, or shadow areas that allow the actor to exploit them in order to achieve his goals and strategies." (Ben Issa, 2010)

By reviewing the details of the theory of strategic action, it becomes clear that the spirit of this theory derives its strength from the process of awakening as a social philosophy imposed by the constraints of the organizational field.

7-3- Technological vigilance and its relationship to the theory of strategic action.

Based on the postulates adopted by the theory of strategic action, achieving vigilance as an organizational practice passes through social actors' representations of the nature of work relationships, extent, loyalty and organizational commitment, which allows the human component of the organization to engage in the philosophy of technological vigilance as a central value so that it is used as an advantage to accumulate the actors' balance in their strategies to achieve additional gains and enhance Their roles and status are commensurate with the realization of common goals. This depends on the actor's defensive and offensive choices in his relationship with the organizational environment and its obstacles, against the backdrop of two facts:

-The actors within the organization have personal goals that they seek to achieve.

-The organization seeks to exploit the actors for its benefit, just as the actors seek to exploit the organization for the benefit of their goals, according to **Amitai Etzioni**. Therefore, this reciprocal relationship enables the organization to exploit this situation between the actors and the organization as a positive incentive to direct the community of actors towards the choice of mindfulness as a social philosophy in general and technological mindfulness in particular. This situation contributes to pushing the social actor in the institution to accumulate his capital in order to achieve a negotiating advantage from the logic of power, which he invests to enhance his gains and goals so that these goals intersect with the goals of the institution, especially in light of a participatory organizational approach, and when technological alertness is adopted as a central value that allows the human component to contribute and identify with... The values and culture of the organization are necessary to maintain its gains.

Eighth: Conclusion:

The axiom of the institution being a social construct is a fundamental truth, as the human element represents its pivotal capital, as competitiveness cannot be achieved except through a social actor as a partner and concerned with the reality and future of his institution.

Adopting vigilance as a social philosophy and organizational practice in general and technological vigilance as an inevitability imposed by the present in terms of the speed of development witnessed by various sciences.

Achieving competitiveness as an existential necessity imposes the liberation of individual and collective initiative and viewing the worker as a partner, as he is the producer and creator, the basis of vigilance, and an important element for embodying the organization's competitiveness in light of a highly intelligent and stable digital environment.

Thus, this research paper confirms the reality of the positive and fundamentally significant relationship between technological alertness and the theory of strategic action, as they are factors that help and motivate the dynamism of the human resource within the organization, which contributes to pushing all actors to adopt the value of alertness as a central value on the basis of competitiveness as a horizon and a strategic option for achieving common goals. Which qualifies it to face competition better and take steps towards achieving independence and the ability to control fluctuations and risks, provided that it is applied efficiently and seriously, especially since Algeria is preparing itself to break into the African and Arab market, where competition is considered one of its main features. Especially in light of the dynamic nature of the environment and its complexity, fluctuations, and job instability. To ensure its survival and continued competitiveness in the market.

Recommendations:

- The necessity of working to build an organizational identity for the institution by adopting a values approach that allows for the dissemination and production of values that reflect the culture of the institution and encourages central values such as (creativity, confidence, vigilance...) based on the logic of rationalization and good governance. The human element lays the foundation for operations according to a participatory management system that opens the way for individual and collective initiatives to make and participate in decision-making to benefit from the creative capabilities of the various actors.
- The necessity of Algerian institutions adopting a culture of strategic vigilance because of its great importance, especially after the opening of Algerian markets to international competition (Allouti, 2017)
- Introducing or reconsidering scientific and technological policies, if they exist, so that the relationship between the economy and applied scientific research is taken seriously by establishing links and integration between institutions of higher education, research and industry. This is a basic structural condition for a serious technological take-off
- Adopting a new dynamic with regard to the technological issue, so that the focus is on obtaining information and knowledge according to a specific strategic approach, instead of focusing on investing in a striking manner in purchasing the latest computers, equipment and machines or importing books and magazines from time to time (Ukel, 1998, Page 15)
- It is necessary to seek the help of experts, especially when it comes to technological alertness, as only an expert can understand and analyze weak signals in this field.
- Forming frameworks specialized in monitoring and analyzing the technological environment.
- The necessity of having vigilance cells as a social philosophy at the institutional level, with an emphasis on the participation of all employees in them.

- Adding other services to the organization's website to perform its communication and promotional function, such as giving customers an opportunity to express their opinions about the services provided and to know their desires and aspirations.
- Providing material and moral incentives to motivate workers to participate in technological awakening.

In order to keep pace with technological developments, the organization must install a technological alert system that serves as a radar through which signals that suggest changes in the technological environment are captured.

- Because the behavior and actions of individuals within the organization are not considered an automatic, mechanical response to the professional situation experienced by individuals within the organization, but rather conscious actions stemming from individual choices. Therefore, the institution must invest in this truth in order to enable the institution's community to fully engage and identify with the central values, including vigilance.

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