The business intelligence in the moroccan industrial companies

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ABSTRACT:

The main goal of this work is to understand the use of environmental scanning by senior managers in the context of the Moroccan pharmaceutical industry. This work also makes it possible to compare our hypotheses of research with the reality of the Moroccan ground. Our results showed that competitors is the main variable impacting the perception of uncertainty in the top manager and pushes him to increase his monitoring frequency based mainly on external and personal sources. On a methodological level, we mobilized a hybrid exploratory approach, based on 13 guided interviews with senior managers operating in the Moroccan pharmaceutical industry.

KEY WORDS:

Environmental scanning, Behavior of use, Perceived Strategic Uncertainty, Perceived Source Accessibility, Perceived Source Quality.
INTRODUCTION:

Whether economic, political, technological or social, various changes take place into the society. These mutations do not date from today, but they are more accelerated than ever. The different mutations create an environment where the only certainty is uncertainty, and where relevant information remains an increasingly valuable resource and requires more attention for its management.

In this sense, environmental scanning, as a particular information system, is the first link in the chain of perceptions and actions that allow an organization to adapt to its environment. Environmental scanning is the company's radar for detecting signals from the environment and, as a result, enables the company to cope with uncertainties and formulate adaptive strategies (Aguilar, 1967; O.Oju 2008). However, the extent, variability, and complexity of the organization's external environment typically push senior managers to further rationalize their use of environmental scanning in terms of frequency and scope, and therefore use environmental scanning with more efficiency and effectiveness.

As part of the continuity of research aimed at the study of vigilance behavior among senior managers, we seek, on the basis of a hybrid exploratory qualitative study, to suggest a conceptual model adapted to the Moroccan context which allows the understanding of the factors impacting the use of environmental scanning by senior managers. Similarly, this work aims to verify the reality of our research variables and the adaptation of our items to the Moroccan context for a possible confirmatory study.

1. CONTEXT AND CENTRAL QUESTION OF RESEARCH
   1.1. MOROCCAN CONTEXT

As all developing countries, Morocco is always looking for an economic identity and a positioning on the international market. In this sense, a debate on environmental scanning emerged in the 90s, and meetings were organized to raise awareness among companies and public institutions about the importance of environmental scanning. Indeed, this will of the public authorities has materialized through the creation of bodies and institutes whose vocation is the production and dissemination of scientific, technical and commercial information, such as: the Moroccan Institute of Scientific Information and Techniques...
1. CONTEXT OF THE MOROCCAN PHARMACEUTICAL INDUSTRY

Regarding the sector that is the subject of our study, which is considered one of the most profitable industrial sectors and creators of value and employment in Morocco, the Moroccan pharmaceutical industry, which produces nearly 400 million units, occupies the second rank on the African continent. With an average of 300 million dirhams in terms of annual investments and qualified human resources, the pharmaceutical industry was able to achieve in 2011 a turnover of 12 billion dirhams with a turnover of 360 million dirhams export and employs directly and indirectly a workforce of 40,000 people. This sector creates value added between 1% and 2% of national GDP.¹

Conscious of the importance of a Environmental scanning, companies in the pharmaceutical industry are investing heavily in the development of their scanning practices. Therefore, an understanding of the scanning behavior at the senior managers is a prerequisite for any initiative aimed at developing this practice within the Moroccan company and more particularly those operating in the sector of the pharmaceutical industry.

Our general research problem can then be stated: what are the factors that influence the use of environmental scanning by senior managers of companies in the Moroccan pharmaceutical industry?

2. THEORETICAL FRAMEWORK OF RESEARCH

The problem of the use of strategic intelligence by senior managers has attracted the interest of a large number of researchers in information systems management as well as researchers interested in the theory of organization and the relationship between the latter and its external environment. This section focuses on the main works dealing with our research problem as well as the reference models forming our theoretical construct.

2.1. PREVIOUS WORK

Based on 137 interviews with senior managers in 41 companies in the United States, Aguilar sought to answer questions mainly related to the nature of the information sought, the source

¹ Report realized in 2014 by the Moroccan Ministry of Health with the technical support of the World Health Organization.
of this information and how it is acquired. The study revealed that senior managers prefer and give more importance to personal sources. The study showed that information from external sources was more solicited than information from internal sources (Aguilar 1967, cited by N.Rupcic and S. Borovac, 2013).

As part of his thesis work, Hambrick in 1979 examined the correlations between senior managers' strategic intelligence practices and organizational strategy in three sectors: higher education, health and insurance. Hambrick used the sleep frequency and sleep mode (the sources used) to operationalize the "environmental scanning" variable. The main conclusions of this work: The organizational strategy does not impact the frequency of surveillance performed by senior managers. However, the strategy had a limited effect on the standby mode (the sources of information used). Surveillancekeeping practices do not seem to vary significantly with their hierarchical levels, nor with their functional specializations. (Hambrick 1979, 190-208, cited by Choo 1993)

Boyd (1989) studied the standby behavior of 72 executives in 23 companies. He found a strong correlation between the frequency of environmental scanning in environmental sectors and the perceived importance of these sectors, and concluded that the perceived importance of an environmental sector remains the predictive factor. the most important of the surveillance activity among senior managers. In this sense, Boyd's work is a confirmation of the results of Daft et al (1988).

At the end of this review of the literature on previous research that has addressed the issue of surveillanceful behavior among managers of industrial companies, it can be argued that the main variables that influence the surveillanceful practice of senior managers found three categories:

- Environmental characteristics: the perceived complexity of the sector, the perceived variability of the sector and the perceived importance of the sector;

- The characteristics of the sources of information: the quality of the sources of information and the accessibility of the sources of information;

The socio-demographic characteristics of the top manager such as hierarchical level, functional specialization, etc.

By mobilizing the theory of media richness (Daft, Lengel and Trevino 1987) whose central hypothesis states that the uncertainty of the external environment is the main determinant of the use of an information system, the objective of this model is to first present the factors that influence the perception of senior managers of environmental uncertainty in a sector, and subsequently explain the impact of this perception of uncertainty on the frequency and mode of environmental scanning practiced by these senior managers.

![Diagram of chief executive scanning behavior](Daft et al. 1988)

**Figure n°1 : model of chief executive scanning behavior Daft et al (1988)**

This model is the result of a study in which top managers of 50 US industrial companies were asked about their perceptions of strategic uncertainty in six different environmental sectors on the one hand, and the standby frequency and mode of standby used for each sector.

This work suggests the following correlations:

- The micro environment generates more perceived strategic uncertainty among senior managers than the macro environment;

- When the perceived strategic uncertainty of a sector was high, senior managers of companies reported growth over the frequency of environmental scanning in the same sector and the use of sources of personal information.

- The perceived strategic uncertainty in an environmental sector correlates positively with the use of external sources of information and does not correlate with the use of internal sources of information.
• The positive correlation between environmental scanning frequency and perceived strategic uncertainty is more significant among the top managers of the most successful companies than among their counterparts in the lower performing companies.

2.3. THE MODEL OF CHOO (1993)

This model is the result of a study that sought to explain the behavior of senior managers in the use of environmental scanning to learn about the external environment in the Canadian telecommunications industry. The data was collected through a nationwide survey based on interviews with 67 senior managers.

Choo’s work suggests the following correlations:

• Senior managers who perceive higher levels of strategic uncertainty in an environmental sector tend to use environmental scanning more frequently in this sector.

• Senior managers use personal sources more frequently than impersonal sources in their environmental scanning practices.

• The use of an information source is explained more by the perceived quality of this perceived source than by its perceived accessibility.

2.4. THEORICAL RESEARCH MODEL

Chafik and Hamdoune (2016) believed that the frequency of surveillance and surveillance mode, practiced by senior managers, correlates positively with the perceived strategic
uncertainty as well as the perceived quality and perceived accessibility of information sources.

This theoretical model is obtained through the extension of the model of Daft et al (1988), by adding two variables of the Choo model (1993). The two extension variables are the perceived accessibility of a source of information and the perceived quality of an information source.

![Theorical research model](image)

Figure 3: Theorical research model (K.Chafik et A.Hamdoune 2016)

The work of Chafik and Hamdoune suggests the following correlations:

- the micro environment generates more perceived strategic uncertainty for senior managers than the macro environment.

- The perceived strategic uncertainty in all sectors correlates positively with the frequency of surveillance among senior managers.

- Perceived strategic uncertainty in all environmental sectors will be positively associated with the use of personal sources and negatively correlated with the use of impersonal sources of environmental information.

- Perceived strategic uncertainty in all environmental sectors correlates positively with the use of external sources and does not correlate with the use of internal sources of environmental scanning.

- The perceived accessibility of an information source is positively correlated with the frequency of its use in the environmental scanning process.
• The perceived quality of an information source is positively correlated with the frequency of its use in the environmental scanning process.

• Perceived accessibility of a source of information correlates more meaningfully than the perceived quality of a source with the frequency of use of a source in the environmental scanning process.

3. EMPIRICAL FRAMEWORK OF RESEARCH

The study of scanning behavior among senior managers must be done according to the organizational context. Indeed, we are obliged to suggest a model that takes into account the peculiarities of the Moroccan sector pharmaceutical industry and the specificities of the practice of environmental scanning among senior Moroccan managers. Indeed, this exploratory qualitative study will allow us to understand the use behavior of the environmental scanning at the top Moroccan manager.

3.1. DATA COLLECTION

To carry out our exploratory study and meet the research objectives, we needed a set of information and knowledge collected from senior managers in the Moroccan pharmaceutical industry. This information will be collected via guided interviews (table n° 1) with decision-makers within the sector (CEOs, Marketing Directors, Production Managers, etc.). In this sense, with an average duration of one hour (60 minutes) per interview, there were twelve (12) direct interviews (face to face) and one (01) telephone interview. It is reported that two (02) interviews were conducted by communicating in Arabic dialect and the rest in French.

<table>
<thead>
<tr>
<th>The themes</th>
<th>Examples of issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>The perception of the environmental uncertainty.</td>
<td>• What is the degree of change in every sector of the environment?</td>
</tr>
<tr>
<td></td>
<td>• What is the degree of complexity in every sector of the environment?</td>
</tr>
<tr>
<td>The perception of the importance of the changes.</td>
<td>• What is the degree of importance of the trends and the events in every sector of the environment?</td>
</tr>
</tbody>
</table>
| The frequency and the mode scanning. | • What is the environmental sector (the microphone or the macro) which generates at your home a perception of more environmental uncertainty?  
• What are sectors on the which you concentrate more your frequency scanning?  
• What are your favorite information sources? |
|---|---|
| The perception of the accessibility received from an information source. | • What are your asking information sources less effort and time to reach it?  
• Having contacted or having located an information source, what are the sources from which the information is easier to obtain? |
| The perception of the quality received from an information source. | • What are your most useful information sources?  
• What are your information sources among which to arrange you more confidence? |

**Tableau n°1: The main themes and questions for Semi directive conversations.**

Based mainly on professional contacts, and during the period between September 2016 and January 2017, we conducted thirteen (13) semi-structured interviews with senior managers in the pharmaceutical laboratories located in the region of Greater Casablanca and the region from Rabat Kenitra.
<table>
<thead>
<tr>
<th>Position occupied</th>
<th>Sex</th>
<th>Age</th>
<th>Experience as high manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Director</td>
<td>M</td>
<td>44</td>
<td>9</td>
</tr>
<tr>
<td>Research and development director</td>
<td>W</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td>Human ressources Director</td>
<td>M</td>
<td>55</td>
<td>12</td>
</tr>
<tr>
<td>Directeur de produit</td>
<td>M</td>
<td>39</td>
<td>6</td>
</tr>
<tr>
<td>Commercial Director</td>
<td>W</td>
<td>47</td>
<td>7</td>
</tr>
<tr>
<td>Director of product</td>
<td>M</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>Sales manager</td>
<td>M</td>
<td>45</td>
<td>8</td>
</tr>
<tr>
<td>Quality manager</td>
<td>M</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>Commercial manager</td>
<td>M</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>Communication manager</td>
<td>M</td>
<td>58</td>
<td>17</td>
</tr>
<tr>
<td>Product manager</td>
<td>M</td>
<td>48</td>
<td>9</td>
</tr>
<tr>
<td>Financial officer</td>
<td>M</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>Commercial manager</td>
<td>W</td>
<td>38</td>
<td>6</td>
</tr>
</tbody>
</table>

Tableau n°2 : The sample of the qualitative study
Opting for a logic of theoretical saturation (Glaser & Strauss, 1967). We found, after the 13th interview (table 2), that the answers of senior managers did not provide any additional information regarding our problem.

### 3.2. DATA PROCESSING AND ANALYSIS

As part of this qualitative study, we seek to establish the representations of senior managers regarding the use of environmental scanning. These interviews will be recorded and then transcribed in their entirety to be coded later. Data is generated spontaneously in response to open-ended questions, and is more likely to reflect what senior managers think (Cossete, 1994, cited by Thietart 2007).

The coding process consists in cutting out the content of the transcribed interviews by themes and integrating them into selected categories according to our object of study. This process requires two steps: the definition of the units of analysis (defined by theme) on the one hand and the categorization on the other hand.

1. The determination of the units of analysis: also called coding unit or units of registration, is the element according to which we proceeded to the division of the recordings. Following the content analysis method, we opted for "word meaning or a group of words" (Weber, 1990).

2. Categorize the units of analysis: Once the units of analysis are located in the retranscribed recordings, they are placed in categories. A category is a group of analysis units (Thietart, 2007).

At the end of the coding of the data, we have a list of analysis units classified in categories, lists from which we will make counts for the analysis of content which will then be analyzed. For our study, we favored a qualitative rather than a quantitative analysis for the content analysis usually employed and highlighting the importance of the themes identified. Thus it should be noted that we paid more attention to the importance of the topics identified in the interviews rather than the frequency of appearance of these themes.

### 4. RESULTS AND DISCUSSIONS

Our discussion of the results will be preceded by a presentation of the sample structure. Table 3 presents the main results of the descriptive statistical study of our sample.
Tableau n°3: Characteristics of the sample of the qualitative study

The analysis of the content of the guided interviews conducted during the exploratory phase allowed us to identify the relevant variables that emerged from the various interviews. We report in the following, the results found in relation to each theme:

- The relevance of the theme of the use of environmental scanning by senior managers in the Moroccan context.

In order to establish a certain consensus with the interviewees about the concept and practice of "environmental scanning" on the one hand, and to examine the level of knowledge and awareness of the interviewees with regard to this theme, we started our interview with a request for their opinions on the question of the use of environmental scanning within the company. In this respect, the majority of respondents confirmed a good mastery of the concept both semantically and practically. The interviewees also showed great interest in the issue of our research and its relevance.

Extracts of verbatim illustrating our purpose:

A sales manager in a large pharmaceutical laboratory confirms the importance of environmental scanning practice within the organization and, through his definition of environmental scanning, affirms the level of knowledge and awareness of the interviewees in relation to this theme: "[...] environmental scanning is a wide field and I can not have an exact precise answer and each company has its own methods to practice the day before .... this depends on the company's policy [...] but here
environmental scanning is a system that anticipates changes in the business environment.

"Interviewed n° 9.

"[...] So for me, the environmental scanning aaaa is to seek to anticipate the changes coming from the internal and external environment of the company". Interviewed n° 6.

Another senior manager (Human ressources Director) also emphasized the anticipatory nature of surveillance keeping: "[...] environmental scanning ! it is a concept that leads directly to paradise (smiling) [...] it is to have a step ahead of all my competitors ... it is a concept that is really difficult to achieve ". Interviewed n° 3.

A senior manager (Production Manager) explained his surveillance practices and insists on their strategic characteristics at the decision-making level: "[...] Environmental scanning in the broadest sense of the term is the set of mechanisms, a set methods that allow the manager to be awake and looking in his field [...] we practice monitoring by collecting information from the competitors and the target audience in order to make decisions more and more successful." Interviewed n° 11.

From these experts, we can see that our interlocutors are very aware of the relevance of the use of environmental scanning as a research topic. We noticed also a good mastery of the concept semantically among senior managers and their awareness of its contribution to the performance of the company.

- Axis No. 1: the perception of environmental uncertainty with top manager

Before pushing the interview with senior managers for an examination of the existence of a correlation between the perception of the strategic uncertainty of the environment and the frequent use of a standby mode, it was decided to explore, on the basis of our review of the literature, the factors that influence this perception of uncertainty in the senior manager and identify the sectors of the environment (macro or micro) that generate more strategic uncertainty.

This line will allow us also to examine, among senior managers, their different perceptions of the degree of change and perceived complexity compared to the environmental sectors (Competitors, customers, suppliers, political, economic, legal, social and environment cultural etc.). A review that will help us to validate the "Environmental perceived variability," the "Environmental perceived complexity" and "perceived importance" as items or dimensions of the variable "perceived strategic uncertainty of the environment".

Extracts of verbatim illustrating our remarks:

A senior manager (Human Ressources Director) emphasizes competitors as the most changing and most complex environmental sector: ":[...] in the context of the Moroccan pharmaceutical industry, I think competitors always changes its strategy, as you know ... it is hard and fierce and there are
always blows under the belt [...] regarding the customers, I think that it is the competitors which impacts the same change of tendencies and needs with the customers. [...] for me the most important is the competitors ". Interviewed n° 3.

Another senior manager (Product Manager) affirms the importance of the changes generally coming from the micro environment and more particularly the competitors: " [...] Of course, my main concern is the competitor [...] what matters to us the the more competitors, suppliers and customers [...] that creates more uncertainty for us is our micro environment”. Interviewed n°6.

Another product manager says that the changes in the micro-environment are the most important: " [...] I think that at present, and with the development of NICTs, all sectors of the environment are changing, but competitors is the fastest sector in terms of change at a level that it starts to create need for the customer [...] of course, the macro environment is changing but I'm talking about the most important sectors [...] the uncertainty emanates much more from the micro environment ". Interviewed n°12.

A sales manager confirms the significant impact of the "perceived importance of a sector" dimension on the perception of strategic uncertainty: " [...] Of course, my main concern is the competitor [...] which we are most important it is all that is competitors, suppliers, customers [...] which creates, for us, more uncertainty is our micro environment”. Interviewed n° 9.

In a spectacular way, we notice a strong concentration of the top Moroccan manager on competitors to the detriment of the other factors of the micro environment: " [...] Following my experience, I see that competitors remains the most changing factor [...] Competitors are the most complex link and difficult to master by the company [...] Technological evolution and competitors are the most important sectors and experiencing very fast change events and difficult to master by the company ". Interviewed n° 2.

We can notice that the micro environment and more particularly the competitors constitutes the main source of environmental uncertainty perceived by the senior managers. The interviewees emphasize the degree of complexity and change in the micro environment and point out that these changes remain the most important and influential events. Our remarks are relatively consistent with our literature review on this issue.

This is tantamount to saying that a growing perception of strategic uncertainty in relation to an environmental sector is mainly related to a growing perception of the degree of complexity, change and importance of the same sector.

According to our interviews, it should be noted that Moroccan senior managers pay particular attention to competitors as a source of uncertainty and neglect the other sectors of the micro environment (customers and suppliers). During the interviews, it was noted that the sectors of the
macro environment (political, legal, economic, socio-cultural) have been almost absent and do not present a concern for the senior managers of our area of study.

- **Axis 2: The sectors of the environment in which senior managers concentrate more frequently on environmental scanning practices and the most convenient sources of information.**

In order to examine the existence of a positive correlation between the standby frequency for a sector of the environment, and the perceived strategic uncertainty that it can create in the senior manager, it was decided to integrate. This axis will enable us to qualitatively evaluate the monitoring frequency practiced by the top manager in each sector of the environment.

This axis also aims to examine the existence of a correlation between the perception of the strategic uncertainty of the environment and the use of a standby mode. In this sense, we decided to question senior managers about their preferences in terms of sources of information during their environmental scanning practices.

**Extracts of verbatim that illustrate our remarks:**

After arguing that competitors is his main source of uncertainty, the Product Manager said that competitors remains his main target in terms of standby frequency: "[...] In our environmental scanning practices, competitors remains our main target then it is the bills which govern our sector and which can impact the prices [...] All the sources are complementary, in case of urgency, one generally bases on the sources of external information (Web site, bankers, friends, media, colleagues), this information will be validated and confirmed as and when it is subsequently compared to internal sources and official internal information. It can be said that information from internal sources is a posteriori evaluation of information from external sources. " Interviewed n° 1.

Another commercial director confirms these remarks: "[...] For me, it is the competitive intelligence, it is it that premium.... Sincerely, it's the one that's the most important [...] Regarding my preferences, I can say, for example, that to inform me on the legal side, I trust a member more than a product manager within a company. competing company, so to inform me about the competitors, I think that the director in question will be perfectly the right choice as source " Interviewed n° 5.

A quality manager within a laboratory insists on quality and ease as criteria for choosing an information source during its monitoring practices: "[...] We always focus on the problems directly impacting the development of our company to know our micro environment. All that is competitors, customers, we must not forget our suppliers .... We have more concerns about the competitors [...] it is very difficult to specify a particular source, I think the most accurate and easy sources will be the most preferred " Interviewed n° 8.
It should be noted that the micro environment and more particularly the competitors capture the interest of senior managers in strategic intelligence. The interviewees insist on the frequency of scanning for changes in strategies in competitors and changes in customer trends. This means that an increasing frequency of scanning over a sector of the environment correlates positively with a growing perception of the strategic uncertainty of the same sector.

From our interviews, it should be noted that senior Moroccan managers prefer sources of external and personal information and consider internal sources and official external sources (non-personal) as complementary sources. For our interviewees, internal sources (database, reports, studies ...) are used to validate the reliability and relevance of sources of external personal information (Friends operating in the same sector, close customers, bankers, consultants, wholesalers.).

During interviews, it was also noted that the use of internal and external personal sources remains the preferred choice for a competitors or micro environment surveillance in general.

- Axis 3: The perceived accessibility and quality of a source of information.

The objective of this axis is to examine the existence of a correlation between the perceptions of senior managers of the quality and accessibility of an information source on the one hand, and the preferred mode of standby or the frequency of use of a source in the environmental scanning process on the other hand. In this sense, and after having examined the source preferences of senior managers at the level of the previous axis, it was decided to question senior managers in relation to their perceptions of the quality and accessibility of these sources. Our second objective is the validation of our search items for the two variables of perceived accessibility and quality of an information source.

Extracts of verbatim illustrating our remarks:

A director of communication confirms reliability and accessibility as criteria for choosing an information source and insists on personal sources such as the preferred mode of surveillance in a situation of uncertainty: "[...] An easy source of information and accurate is certainly the favorite [...] Uncertainty usually pushes us to use personal sources because They are easy [...] personal contacts are relevant sources that require less effort and easy [...] not often but accessibility is a determining factor for the choice of a source [...] it is perfectly normal, to avoid uncertainty or to minimize it, external contacts, as a source of information, remain clearer and easy [...] in the business world, people trust more, but the closest bankers and friends are the choice I trust most. ”

Interviewed n° 13.

"[...] the fact of preferring a source is a matter of trust and time [...] I inform myself about the competitors in my contact network that I maintain outside the box and at the customer .... external
sources are easily accessible [...] the most useful information is personal sources ... Internal sources are used to develop the reliability of external sources. ” Interviewed n ° 8.

"[...] for me, the two sources (external and internal) are sine qua non and complementary [...] the formal sources are more preferred because they are accurate [...] the most accessible sources are the sources on the Internet [...] the most useful sources are telephone conversations with friends [...] the most reliable sources are internal sources while external sources are still sources to test ”. Interviewed n ° 1.

It can be noted that the practice of strategic intelligence generally pushes senior managers to diversify their sources of information by using both external sources and internal sources. However, with the increase in strategic uncertainty, it has been noted in the interviews that senior managers begin to form their impressions through direct contacts and external sources. According to our interviews, it should be noted that the senior Moroccan managers, in their scanning practice, use much more sources of information deemed quality.

Regarding the perceived quality of a source, utility has been found to be an important factor in judging the quality of a source, whereas reliability or confidence in a source is not same degree of importance as the utility because the large part of the senior managers are reluctant compared to the judgment of degree of confidence.

It should be noted that the Moroccan senior managers, during their waking practice, use much more sources of information deemed accessible.

Regarding the perceived accessibility of a source, we noticed that our interviewees no longer manage to distinguish between the effort to access a source and the ease of obtaining information from a source. The confusion between the two items dominated the interviews and the majority of senior managers found the two questions to be similar.

5. PROPOSAL FOR A CONCEPTUAL RESEARCH MODEL

The main objective of our study is to compare our theoretical construct and all of its variables from the literature review to the reality of environmental scanning behavior among senior managers in the context of the Moroccan pharmaceutical industry. This confrontation test, conducted through guided interviews, allowed us to validate and confirm the relevance of both the variables of the Daft et al (1988) model and the extension variables extracted from the Choo model (1993). The interviews created doubts among our research team about the potential impact of socio-demographic characteristics and the position held on the environmental scanning behavior of the senior manager. These socio-demographic characteristics can make correlations more or less significant and play the role of a moderating variable at the level of the conceptual model.
Despite the frequent confusion experienced by senior managers with regard to the perceived accessibility dimensions of an information source, we are obliged to maintain, during the test phase, the two dimensions of this variable (L’effort and ease of access) thanks to their strong presence in the literature.

Our conceptual model is composed of several variables resulting from our review of the literature and the results of the qualitative study:

- **Dependent variables**: Scanning frequency and scanning mode (Sources used)
- **Independent variables**: the perceived strategic uncertainty, the perceived accessibility of a source of information and the perceived quality of an information source.
- **Moderating variables**: socio-demographic characteristics (Experience, Age, Gender, Position occupied).

Figure 4: conceptual research model
CONCLUSION

On the basis of the literature and a qualitative exploratory study aimed at the Moroccan pharmaceutical industry sector, we sought in this work to suggest a contextualized conceptual model presenting the factors influencing the use of environmental scanning by senior managers. In this sense, our methodology was based on guided interviews.

In conclusion, it can be argued that this paper has allowed us to:

- Confront our research hypotheses in the context of the Moroccan pharmaceutical industry sector.
- To observe the impact of socio-demographic characteristics on the scanning behavior of the top manager.
- Adapt our choice of items to the Moroccan industrial context.

The next step in our research is to test the suggested conceptual model through a confirmatory quantitative approach.
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