

Qualitative Evaluation of Designing a Competitive Advantage Model in the Syrian Pharmaceutical Industry

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Abstract: Achievements of the Syrian pharmaceutical industry, which it gained 20 years before the crisis, have made it one of the most important pillars of economic development in Syria. In recent years (2017-2018), the Syrian government has been able to liberate economically vital areas, especially in Damascus and Aleppo; As a result, some pharmaceutical companies have returned to operation, and competitiveness in this industry has grown significantly in the short term. The present study provides insights into strategic pharmaceutical industry of Syria and Qualitatively analysing the unexpected results of a competitive advantage model based on dynamic management capabilities of marketing managers by explaining the role of, knowledge absorptive capacity and knowledge management process in the Syrian pharmaceutical industry which is gradually returning to operation. Statistical population of this study is qualitatively experts who are currently working in pharmaceutical factories in Syria. The sample size selected in the qualitative part for in-depth interviews is about 14 cases among practical experts. Interviews were used to collect information. The interview was semi-structured and the sample was purposive. The questions were formulated based on explanation and interpretation of ambiguous results in the hypotheses. The results were analysed based on summative qualitative content analysis.

Keywords: Competitive Advantage, Qualitative Content, Pharmacology, Knowledge Absorptive Capacity

1. Introduction

Business in modern world has shifted from simple to a completely professional activity and requires knowledge and awareness in various fields. Some experts call modern world a competitive age, the main features of which are complexity, ambiguity and high speed of changes in the business environment. In such an environment, only firms and organizations will be able to survive and maintain their existence to focus on all aspects of competition. It is only in the light of focusing on the nature of competition that organizations can play a role in the market and sustain their role, and this requires gaining and having a competitive advantage. Knowledge brings advantage, despite dramatic changes in business, dynamic nature of markets, and increased competition over the past decade. For this reason, managing this knowledge leads organizations to a competitive advantage in their chosen markets, when they leverage existing knowledge in the organization and create new knowledge (Ehsani et al., 2012; Ghlichlee, Khodadad Hosseini et al., 2020).

Unfortunately, many knowledge management projects are planned without regard to the ability of organizations; in order to achieve a competitive advantage, many companies have to make great efforts to review knowledge management (Hou & Chien 2010). According to Davenport and Prusak (1998), knowledge management projects should achieve at least one of the following goals: creating a knowledge-based culture by encouraging appropriate behaviours, creating knowledge infrastructures not only as a technical system but also as a network of communication between people to encourage interaction and cooperation and finally creating visible knowledge and showing the role of knowledge in an organization (Alavi & Leidner, 2001). There are different views on the importance of knowledge management and the results of its exploitation; according to Von (1998), knowledge management increases competitiveness of organizations by identifying and leveraging collective knowledge in organizations. Hackbarth (1998) argued that knowledge management enhances

innovation and accountability. Beckman (1999) believes that knowledge management creates new capabilities, provides superior performance, encourages innovation, and increases customer value (Gloet & Berrell, 2003; Alavi & Leidner, 2001).

According to a literature review by Helfat and Martin (2015) on dynamic managerial capabilities, only one study by Kaplan, Murray, and Henderson (2003) was done on differences between pharmaceutical companies in relation to senior management cognitive models which lead to differences in strategic initiatives (Helfat & Martin, 2015; Crick, 2018). For this reason, it can be claimed that this study (Kaplan et al., 2003) has introduced only one dimension of managerial capabilities and other dimensions have been neglected. On the other hand, Crick (2018) examined the concept of dynamic managerial capabilities and systematically reviewed the literature in this field; according to him, less research has been done on dynamic managerial capabilities with a marketing orientation. It can be argued that the study by Bruni and Verona (2009) is the only study that has applied the perspective or framework of dynamic managerial capabilities in the field of marketing (Bruni & Verona, 2009; Crick, 2018). Integrating the perspective of dynamic managerial capabilities of Adner and Helfat (2003) and the perspective of Bruni and Verona (2009) and focusing on managerial importance of previous capabilities at the level of top marketing management, this study not only orients the dynamic managerial capabilities to marketing context, but it also introduces a new term as dynamic managerial capabilities of marketing managers which defines as "are the capabilities which include managerial human capital, managerial social capital and managerial cognition of top marketing managers, and on the one hand build, integrate and reconfigure organizational competencies and resources (Adner and Helfat, 2003) and on the other hand creation, use and integration of market knowledge and marketing resources in order to match and create market and technological change (Bruni and Verona, 2009), to maintain a competitive advantage in a dynamic environment".

Hence, the present study tries to fill the gap or overlooked aspects that exist in the literature of dynamic managerial capabilities. On the one hand, it examines three dimensions of dynamic managerial capabilities of marketing managers (human, social and cognitive capital) in the Syrian pharmaceutical industry, and on the other hand, takes a step forward in incorporating the concept of managerial capabilities in the field of marketing theory. As noted, few studies have been done on the Syrian pharmaceutical industry, which is vital to the Syrian economy, and is considered a brand-new research field. However, Kutaini (2010) published a study entitled "The Pharmaceutical Industry in Syria." He focused on a few points in his study: "historical path of improvement and development of the Syrian pharmaceutical industry, weaknesses in this industry and government support, domestic and foreign markets and coverage of the pharmaceutical industry at the national level" (Kutaini, 2010). On the other hand, he reviewed academic dissertations of universities of Syria and noted the following topics:

1. Green marketing (case study of some pharmaceutical companies in Syria)
2. The effect of strategic orientation on product marketing (field study on Syrian pharmaceutical companies)
3. Reality and perspective of marketing of pharmaceutical products in Syria

Therefore, it can be claimed that so far this is a new research field and there is a gap in literature of pharmaceutical industry, particularly within the strategic concept of competitive advantage. Thus, this study is an opportunity to fill the theoretical gap in the literature, while reducing the research gap in a strategic industry that faces many problems, particularly after the Syrian crisis.

2. Literature Review

Knowledge management process and competitive advantage: Some researchers such as (Carayannis, 1999; Argote & Ingram, 2000; Dias & Bresciani, 2006) recognized knowledge management as a key management process necessary to achieve competitive advantage (Santoro, Vrontis et al., 2018). Grant (1996) introduced knowledge management as a key strategic initiative and the most important guarantor of competitive advantage for companies (Grant, 1996). The idea of knowledge management has become important because of the increasing awareness of the importance of knowledge for prosperity and survival of the organization and because of the increasing availability of information technology for storing, distributing and generally "managing" knowledge. The resource-based approach suggests knowledge as a key "valuable, rare, inimitable and irreplaceable" resource; thus, knowledge and its management are considered as a source of competitive advantage (Easterby-Smith & Prieto 2008). Moshabaki and Zarei (2003) study showed that there was positive relationship between knowledge management and competitive advantage (Moshabaki & Zarei, 2003). Nguyen and Nek (2008) examined the effect of knowledge management process on competitive advantage of 2000 Vietnamese companies; their results show that knowledge management process has a positive effect on competitive advantage (Nguyen & Neck, 2008).

Knowledge absorptive capacity and competitive advantage: Currently, competitive advantage is more influenced by knowledge than by physical resources; because of ambiguity and complexity in new business environments, physical assets alone cannot be considered a competitive advantage (Johannessen & Olsen, 2003;

Moshabbeki & Ardakanie et al., 2011). There are always sources of knowledge outside the hypothetical boundaries of organizations or domestic business environments that increasing the ability to use and exploit them can develop competitive capabilities (Cohen & Leventhal, 1990). Knowledge absorptive capacity refers to the same ability that allows new ideas to be incorporated into internal processes. Currently, the ability to recognize value of new knowledge and external information, absorb, adapt and apply it for business purposes is critical to innovation activities and plays an important role in developing competitive advantage (Zahra & George, 2002; Lane et al., 2001; Todorova & Durisin, 2007). The concept of absorptive capacity is actually learning from the environment, a type of learning that focuses on learning from available knowledge resources in the environment instead of emphasizing knowledge creation through experience (Cohen & Leventhal, 1990; Sun & Anderson, 2010).

Knowledge absorptive capacity and Knowledge management process: According to Sun (2010), knowledge absorptive capacity is specific learning processes which supporting the knowledge management process, through creating new knowledge and also utilizing the existing knowledge base (Sun, 2010; Saghali & Allahverdi 2011). Gold (2001) has also emphasized in his studies that organizational absorptive capacity greatly affects the knowledge acquisition of the knowledge management process (Gold et al., 2001). On the other hand, the results of Tan study (2018) in 27 financial companies in Indonesia showed that knowledge absorptive capacity has a positive impact on the knowledge management process (Tan, 2018).

Competitive advantage: Integration of global markets, the increasing complexity of markets, and dynamism of the corporate environment distinguish modern business world from the past; according to theorists of the organization, there is no choice but to gain competitive advantage in order to be safe from violent environmental waves, to succeed and adapt to competitive requirements in such a competitive environment. Competitive advantage occurs when an organization outperforms all its competitors by delivering superior values in a particular product, service, or market. However, an organization which is able to deliver optimal values to its target market through product differentiation, inexpensive alternatives, rapid customer response, and creation of new markets or through a combination of these strategies will gain a competitive advantage (Moshabaki, Khoddami et al., 2010; Hunt, 2000).

Singh (2014) integrated power and flexibility into change and competitive advantage framework to gain insights from the Indian pharmaceutical industry based on data from 216 senior executives in the Indian pharmaceutical industry. This study examines flexibility and resilience and its effect on organizational change to create a competitive advantage using confirmatory factor analysis (CFA). Al-Qudah (2012) examined the effect of total quality management (TQM) on competitive advantage of pharmaceutical companies in Jordan. Data was collected from middle to senior management of pharmaceutical companies in Jordan and analyzed using correlation and multiple regression analysis. The results showed that the effect of TQM performance is significant on competitive advantage. Hajiabedin and Amani (2016) examined the effect of knowledge management (KM) and information technology (IT) implementation process on competitive advantage in the pharmaceutical industry of Tehran province. The data collection method is descriptive-survey and it is applied research in terms of objective. The results of Pearson test and correlation test show a significant positive effect on knowledge management, information technology and competitive advantage. Knowledge acquisition, knowledge conversion, knowledge utilization, knowledge protection and information technology have a direct effect on gaining a competitive advantage. Moshabaki and Ghilichli (2007) research discussed the role of intellectual capital and social capital in competitive advantage in two automobile maker companies in Iran. Statistical community of the research consisted of supervisors, general managers and top managers. The obtained results indicated that the company's intellectual capital had direct impact on their competitive advantage. However, their social capital had indirect impact on their competitive advantage.

3. Research Methodology

Statistical population in the qualitative part includes experts who are currently working in pharmaceutical factories in Syria. These people should have the following criteria:

- These people should work in the factories already participated in the second quantitative phase.
- These people have scientific and practical approach, which means that they should be university professors and consultants in the industry.

The sample size selected in the qualitative part for in-depth interviews is about 14 cases among practical experts. In fact, the sample size of the interviews was based on saturation point, which means that, in these extreme cases of interviews, the data collected began to match the previous interviews. (Yin Robert, 1994).

The protocol developed for the interview took about one to two hours. Fourteen interviews were performed; This number of interviews is consistent with recommendations of Eisenhardt (1989), Perry (1998) and Yin (1994) for data collection. Interviews are performed at workplace of the interviewees along with a series of

implicit notes for each interview that reflect the interviewer's perception of the interview (Yin Robert, 1994). Table 1 presents characteristics of the interviewees.

Table 1: characteristics of the interviewees

No.	company	university	background
1	Ibn-Alhaytham pharmaceutical Industries	University of Aleppo and private schools	20
2	Ibn Hayyan Pharmaceuticals (private)	University of Homs	14
3	Ibn Rushd Medical Drugs and Equipment	private schools	16
4	AVENZOR (private)	University of Damascus	6
5	Ultra Medica Pharmaceutical Industries (private)	University of Damascus and private schools	17
6	Thameco (public)	University of Damascus and private schools	22
7	Oubari for Pharmaceutical Industries (private)	private schools	12
8	Isa pharma (private)	Tishreen University and University of Tartous	18
9	Mediotic Labs (private)	University of Homs and University of Damascus	14
10	Human Pharma (private)	Tishreen University and University of Tartous	11
11	Aleppo Pharmaceutical Industries LLC (ALPHA)	University of Aleppo	5
12	MAATOUK PHARMA (private)	University of Damascus and private schools	13
13	Masoud Pharma (private)	private schools	8
14	Dimas Pharmaceutical Factory (public)	University of Damascus	6

In this study, six stages of Blandford (2013) in-depth semi-structured interview (Arrival, Introducing the research, Beginning the interview, During the interview, Ending the interview, After the interview) are considered (Blandford, 2013).

3.1. Preliminary Interview Agreement (Protocol)

The preliminary interview agreement (protocol) is the general framework for the interview questions. In-depth semi-structured interview questions should be open, neutral and clear. In addition, it is necessary to use familiar language and avoid vague terms (DeJonckheere & Vaughn, 2019). In this regard, the researcher designed the interview questions according to DeJonckheere and Vaughn (2019) instructions and based on preliminary studies, research problem, introductory interviews with advisor professors and consultants, and review of the theoretical literature.

3.2. Data Analysis in Qualitative Phase

Qualitative analysis clarifies the semantic burden of quantitative findings. In integrated approaches, the researcher uses both quantitative and qualitative approaches according to the topic and tends to study the subject more comprehensively by using quantitative and qualitative methods (Johnson & Christensen, 2019). This qualitative step explaining and interpreting the ambiguous and unexpected results in the hypotheses “3.1, 3.3, 3.2, 2.3, 2.1, 4, 3”, which were quantitatively reviewed and rejected.

3.3. summative Content Analysis

In this study, researcher for analysing the interview data used summative content method which leads to a deeper understanding by combining quantitative and qualitative approaches to phenomena (Hsieh & Shannon, 2005). Here are steps for qualitative cumulative content analysis by Hsieh and Shannon (2005):

- **Quantitative step:** Typically, studies that use a cumulative approach to qualitative content analysis begin with identifying and quantifying certain words in the text. This quantification is not for inference but for exploration.
- **Qualitative step:** If the analysis is stopped in the previous step, the analysis will be quantitative and focused on counting the frequency of specific words or content; but the cumulative content analysis goes beyond the number of keywords and includes latent content analysis that refers to the process of content interpretation.

3.4. Hypothesis

The following hypotheses previously quantitatively reviewed:

1. Dynamic management capabilities of marketing managers have a positive and significant effect on competitive advantage.
 - 1.1. Dynamic managerial human capital of marketing managers has a positive and significant effect on competitive advantage.

- 1.2. Dynamic managerial social capital of marketing managers has a positive and significant effect on competitive advantage.
- 1.3. Dynamic managerial cognition of marketing managers has a positive and significant effect on competitive advantage.
2. Dynamic management capabilities of marketing managers have a positive and significant effect on knowledge absorption capacity.
 - 2.1. Dynamic managerial human capital of marketing managers has a positive and significant effect on knowledge absorption capacity.
 - 2.2. Dynamic managerial social capital of marketing managers has a positive and significant effect on knowledge absorption capacity.
 - 2.3. Dynamic managerial cognition of marketing managers has a positive and significant effect on knowledge absorption capacity.
3. Dynamic management capabilities of marketing managers have a positive and significant effect on knowledge management process.
 - 3.1. Dynamic managerial human capital of marketing managers has a positive and significant effect on knowledge management process.
 - 3.2. Dynamic managerial social capital of marketing managers has a positive and significant effect on knowledge management process.
 - 3.3. Dynamic managerial cognition of marketing managers has a positive and significant effect on knowledge management process.
4. Knowledge absorption capacity has a positive and significant effect on competitive advantage.
5. Knowledge management process has a positive and significant effect on competitive advantage.
6. Knowledge absorption capacity has a positive and significant effect on knowledge management process.

4. Results

4. Results

Output of the qualitative phase is done in two stages.

Quantitative phase: After reading the interviews to establish a deep relationship and understanding with data (Tolley, Ulin et al., 2016), the most abundant words are extracted using tag cloud technique.

For any type of evaluation, if data is collected from interview output, focus group, open-ended questions, or any qualitative method, tag cloud can be a first step in understanding the important concepts identified by a group. Using tag cloud can save a lot of time in coding qualitative data because the researcher already has an idea of common terms or ideas (DePaolo & Wilkinson, 2014; (Williams, Parkes et al., 2013). Therefore, the researcher removes words that do not add any semantic value to the sentence from tag cloud, such as filler words, etc; then henceforth we use the term code instead of using the word. In the following, we show the output of the tag cloud from the software (Max QDE) in the figure below (Figure 1).

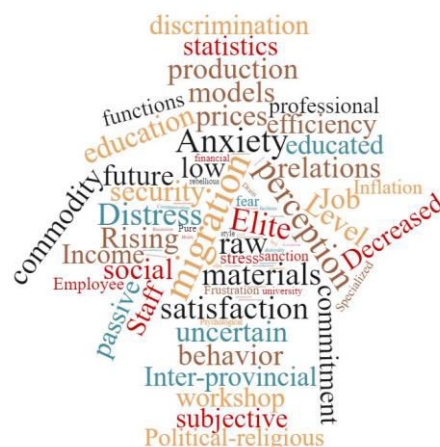


Figure 1: tag cloud of interviews

Table 3 shows the frequency of codes:

Table 3: frequency of codes

No.	code	Frequency	No.	Code	Frequency
1	perception	14	21	Decreased production	12
2	Anxiety	14	22	educated	12
3	Distress	14	23	subjective models	12
4	stress	13	24	passive	12
5	sanction	13	25	Inter-provincial migration	12
6	Inflation	13	26	Income	12
7	professional	13	27	Frustration	12
8	Job satisfaction	13	28	Pure statistics	11
9	Elite migration	13	29	Staff efficiency	11
10	raw materials	13	30	Political-religious discrimination	11
11	social relations	12	31	Psychological	11
12	Rising commodity prices	12	32	lack of commitment	11
13	low security	12	33	rebellious	11
14	uncertain future	12	34	Specialized workshop	11
15	fear	12	35	financial facilities	10
16	elite	12	36	Recession	10
17	university	12	37	Communication style	10
18	Employee behavior	12	38	disloyalty	10
19	Level of education	12	39	Brain Drain	10
20	functions	12			

According to Tolley et al. (2016), a bigger data picture can be obtained using data reduction method. The reduction process usually occurs when all the data is in the hands of the researcher and the researcher is familiar with their content. This method tends to gain a general understanding of the data, to identify the main and secondary themes and to separate the necessary from the unnecessary (Tolley, Ulin et al., 2016; Nang, Monahan et al., 2015). In the following table (4) we present the main and necessary codes to start the analysis in the second qualitative step.

Table 4: codes after data reduction

No.	code
1	stress
2	elite migration
3	income
4	pure statistics

Qualitative phase: In this phase, the researcher analysed and interpreted the qualitative data (interview). The researcher first used output codes of data reduction in Table 5 as the first step. After reviewing the study, the researcher used alternative vocabulary to fill the gap and make connections between the concepts noted in the interview. The researcher referred to the interviewer's code in the interpretation to indicate that he was trustworthy (Tolley, Ulin et al., 2016). Table 5 shows the output of this phase.

5. Discussion and Conclusion of Qualitative Phase

As noted, this research has 15 hypotheses; finally, 7 hypotheses were rejected. In the following, each of them is addressed and the results obtained from interviewing experts with findings of other researchers are discussed.

Initially, it can be concluded from interviews with elites that negative consequences of the war are the main reason for rejection of some results.

- **Sub-hypothesis 3.1:** Managerial cognition of marketing managers has a negative and significant effect on competitive advantage.
- **Sub-hypothesis 3.3:** Managerial cognition of marketing managers has a negative and significant effect on knowledge management process.
- **Sub-hypothesis 3.2:** Managerial cognition of marketing managers does not have a positive and significant effect on knowledge absorption capacity.
- **Sub-hypothesis 2.3:** Managerial social capital of marketing managers does not have a positive and significant effect on knowledge management process.

Table 5: qualitative phase of interpretation and analysis of interview

no.	code	Alternative terms	interpretation	Member control	literature
1	stress	Anxiety (interviewees 1 to 14) Frustration (interviewees 1, 2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14) Fear (interviewers 1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14)	Some of our employees are stressed, anxious, and frustrated by the war, which has lasted for more than ten years. This psychological state that our employees suffered from is due to fear of environmental factors related to their daily lives, such as low security in society, uncertain future, inter-provincial migration and political-religious discrimination, etc.). On the other hand, it cannot be ignored that reality of business in Syria, especially in the pharmaceutical industry, is not static. On the one hand, the industry relies heavily on imports of raw materials from abroad, and on the other hand, there are sanctions; for this reason, all companies active in this field may cease their activities at any time. Therefore, our employees experience stress in their own organization as a result of fear of low job security. As a result, this stress, anxiety, and frustration cause distress in cognitive activities of employees, thus disrupting their mental models, perceptions, and processes of analysis and thinking, as well as their job performance. This insight applies to sub-hypothesis 3.1, sub-hypothesis 3.3 and sub-hypothesis 3.2, as managerial cognition of marketing managers has a negative and significant effect on competitive advantage and knowledge management process and managerial cognition of marketing managers has no positive and significant effect on knowledge absorption capacity. On the other hand, this stress has psychological effects on employee behavior and increases rebellious and passive communication style between them. However, employees endanger external and internal social communications and formal and informal communication networks; this insight applies to the sub-hypothesis (2.3), as social capital of marketing managers does not have a positive and significant effect on knowledge management process.	confirmed	The results of studies (Ferrie et al., 2002; Burgard et al., 2012) show that employees at risk of losing their jobs have higher levels of stress, anxiety, and depression and negative effects compared to employees who are not at risk of losing their jobs (Ferrie, Shipley et al., 2002; CARA & Cambridge, 2019); according to Yu et al. (2021), however, job insecurity in the business environment makes employees nervous and restless (Yu, Wu et al., 2021). On the other hand, Sverke et al. (2002) show that job insecurity can have extensive negative effects on their employees and organizations (Sverke, Hellgren et al., 2002), especially that job insecurity is related to higher levels of psychological distress, aggression, decreased job performance, and job conflict (Sverke, Hellgren et al., 2002; Yu, Wu et al. 2021). Girotti et al. (2018) emphasized that active memory, attention, response inhibition, and cognitive flexibility are affected by stress (Girotti, Adler et al., 2018); Luethi et al. (2009) in their experimental study reported that when participants were given stress tests, their cognitive activities, such as planning, analysis, and reminders, decreased compared to before; thus, stress had a negative effect on cognitive performance (Luethi, Meier et al., 2009). According to effective events theory of Weiss and Cropanzano (1996), job insecurity is a stressor that provoke negative emotions in employees (Weiss & Cropanzano, 1996); moreover, Zhang et al. (2013) believed that job insecurity not only causes negative emotions (such as depression and pain) but also leads to depression of psychological resources of employees (Zhang, Lin et al., 2013). As a result, these negative emotions cause employees to be more aggressive and less friendly at work, which in turn can negatively affect their personal and professional relationships (Yu, Wu et al., 2021).

2	elite migration	Brain drain (interviewees 1, 3, 4, 5, 7, 8, 11, 12, 13, 14) Labor force (interviewees 1, 2, 4, 6, 9, 10, 11, 12, 13, 14)	Elite migration and brain drain is one of the inevitable phenomena in war-torn countries. The pharmaceutical industry in Syria suffers from the lack of educated (at appropriate level for an industry on science), expert and professional workforce for the same reason. On the other hand, due to war, the level of education in universities has decreased and the labor force that is just entering the market does not have a suitable and sufficient scientific background, but we have to deal with this force. As a result, it can be claimed that human capital in the pharmaceutical industry now consists of inadequate labor available. This insight applies to sub-hypothesis (1.2), as human capital of marketing managers has a negative and significant effect on knowledge absorption capacity.	confirmed	Brain drain and declining levels of education in Syria are among the most significant effects of the civil war that began in 2011 (Tigau, 2019; CARA & Cambridge, 2019). Brain drain is migration of people with knowledge or technical skills due to conflict, lack of opportunities, political instability or health risks (Research, Agency et al., 2013). According to Tigau (2019), the brains that fled Syria during the war formed the wealthy and educated section of Syrian society and worked in sectors such as trade, construction, health and education (Tigau, 2019). These Syrian immigrant brains and elites reduce the average skilled manpower and cause a shortage of skilled manpower in some occupations; thus, they have direct negative effects on the Syrian economy (Docquier & Rapoport, 2006; Mariani 2004). The ongoing civil war has had a negative impact on the education system in Syria. On the one hand, some educational institutions in Syria have been destroyed or are operating only partially; on the other hand, the quality of education has declined due to the loss of qualified and experienced personnel. Thus, students who complete their university studies at Syrian universities and enter the market are criticized, especially after the war, because the university curricula do not adequately meet the needs of the labor market (Mourtada, 2019; CARA & Cambridge, 2019).
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3	Income	<p>Inflation (interviewees 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14)</p> <p>Job satisfaction (Interviewees 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14)</p>	<p>The negative economic effects of the ongoing war in Syria (such as reduced production, inflation, recession, etc.) both put pressure on various industries and affected the welfare of society. These economic problems imposed on the pharmaceutical industry, like the rest of the industry, and lowered the welfare of its employees. Some of our employees feel dissatisfied with their job due to disproportionate amount of income to their living conditions. This feeling increases the spirit of disloyalty and commitment among employees, and this in turn affects various organizational functions. As a result, this insight applies to the main hypothesis (4), as knowledge absorption capacity does not have a positive and significant effect on competitive advantage.</p>	<p>confirmed</p> <p>War causes tremendous negative damage to the economy of societies. Since 2011, Syria has witnessed a very intense civil war; this civil war has had significant negative economic consequences for the country. The International Monetary Fund and Syrian Centre for Policy Research report that wages of employees in Syria during the war are not enough to meet their living needs because people suffer from inflation, rising prices, low purchasing power and shortage of goods (Gobat & Kostial, 2016; Research Agency et al., 2013). Wages are one of the forms of compensation that employees receive from the employer to meet their living needs, in exchange for work or service, and is an effective strategy that helps to achieve the vision, mission and goals (Umar, 2014). Job satisfaction is an attitude that shows the difference between the amount employees receive and the amount they believe they should receive (Robbins & Judge, 2003); money is a major motivator for excellence (Dessler, 2010). Thus, researchers believe that wages have always been the biggest and most effective factor in job motivation and employee satisfaction in line with goals of the organization and refer to it as the most important subject in employee management (Umar 2014; Igalens & Roussel, 1999). On the other hand, job satisfaction is one of the most important and influential factors in motivation, commitment and success of human resources in an organization; they believe that an organization whose job satisfaction is at a desirable level will be more successful and have more progress (Kreitner & Kinicki, 2007); whereas, organizational commitment is a state in which a person has a deep desire to continue to be a member of the organization and loyal to it (Westgeest, 2011). In order to explain the relationship between these concepts, numerous studies have relied on Smith et al. (1969) who defined salary satisfaction as one of the dimensions of job satisfaction and claimed that salary satisfaction has a positive effect on organizational commitment (Saridakis, Lai et al. 2020; Tekingündüz, Top et al. 2017).</p>
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4	pure statistics	non	<p>The question related to "Hypothesis (3): why dynamic management capabilities of marketing managers do not affect knowledge management process" as a whole cannot be answered; this means that dynamic managerial capabilities of marketing managers consist of three concepts (human capital, social capital and cognition) and if we tend to answer the question of Hypothesis (3), we must consider the concepts that make up the capability individually. On the other hand, it was observed that</p> <p>Sub-hypothesis (1.3): human capital of marketing managers has a positive and significant effect on knowledge management process was confirmed and Sub-hypothesis (2.3): social capital of marketing managers has a positive and significant effect on knowledge management process was rejected and Sub-hypothesis (3.3): managerial cognition of marketing managers has a positive and significant effect on knowledge management process was rejected.</p> <p>As a result, answering the questions related to the sub-hypotheses (2.3) and (3.3) is sufficient, and on the other hand, confirming or rejecting the hypothesis that has sub-hypotheses is a purely statistical task in this case.</p>	confirmed	
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The results of interviews with experts show that stress, anxiety and frustration are caused by fear due to low job security or environmental factors related to daily life, disrupt cognitive, functional and behavioral activities among employees in the pharmaceutical industry in Syria.

Studies (Ferrie et al., 2002; Burgard et al., 2012; Yu et al., 2021) show that employees who are at risk of losing their jobs experience varying levels of stress, anxiety, depression, anger, restlessness, and negative emotions. According to Girotti et al. (2018), people with stress have cognitive impairments; because stress can negatively affect cognitive flexibility, active memory, attention and response inhibition; whereas, Luethi et al. (2009) found that cognitive activities of people under stress (such as planning, analysis and reminder) are reduced compared to before; thus, stress has a negative effect on cognitive performance. As a result, based on interviews and views of these researchers, it can be claimed that cognition of marketing managers (pharmaceutical industry in Syria) who are stressed may have a negative effect on competitive advantage and knowledge management process.

On the other hand, Sverke et al. (2002) and Yu et al. (2021) agreed that stress due to low job security has a negative effect on employees and organizations; these negative effects can be seen in job performance and job involvement of employees. As a result, based on interviews and views of these researchers, it can be claimed that cognition of marketing managers (pharmaceutical industry in Syria) who are stressed may not affect knowledge absorption capacity.

According to Weiss and Cropanzano (1996), Zhang et al. (2013) Yu et al. (2021), stress and negative feelings caused by job insecurity make employees more aggressive and less friendly at work. This in turn can negatively affect their personal and professional relationships. As a result, social capital of marketing managers (pharmaceutical industry in Syria) who are stressed may not affect knowledge management process.

Sub-hypothesis 2.1: Managerial human capital of marketing managers has a negative and significant effect on knowledge absorption capacity.

The results of interviews with experts show that migration of experts, brain drain and decline in the level of academic education will reduce adequate manpower at a high level in the pharmaceutical industry in Syria. Studies by Tigau (2019) and the Cambridge University report (2019) show that Syria has been suffering from brain drain and declining levels of education since the start of the war in 2011.

According to Mariani (2004), and Docquier and Rapoport (2006), brain drain reduces the average skilled manpower and leads to lack of adequate manpower in some occupations (pharmaceutical industry in this study). On the other hand, Mourtada (2019) and the Cambridge University report (2019) emphasized that graduate students, especially those who studied and entered the labor market during the war, are criticized by the employer because they do not have enough talent to meet the needs of jobs. As a result, social human of marketing managers (pharmaceutical industry in Syria) who are not skilled and expert may have a negative effect on knowledge absorption capacity.

Hypothesis 4: knowledge absorption capacity does not have a positive and significant effect on competitive advantage.

The results of interviews with experts show that negative economic consequences of the war and disproportionate incomes to living conditions cause a feeling of job dissatisfaction among employees. This feeling reduces job motivation, commitment and loyalty, and in turn affects various organizational functions. A report by the International Monetary Fund (IMF) in 2016 and the Syrian Center for Policy Research (2013) suggest that wages in Syria during the war were not sufficient to meet the living needs of employees. According to Umar (2014), Igalens and Roussel (1999), salary is the most effective factor in job motivation and employee satisfaction in line with organizational goals. Kreitner and Kinicki (2007) consider job satisfaction as one of the effective factors on motivation and commitment among employees; an organization with a satisfactory level of job satisfaction of its human resources will be more successful. Experimental studies (Saridakis et al., 2020; Tekingündüz et al., 2017) emphasized that wage satisfaction has a positive effect on organizational commitment. As a result, knowledge absorption capacity of employees who are not satisfied with their job may not affect competitive advantage.

Hypothesis 3: Dynamic managerial capabilities of marketing managers do not have a positive and significant effect on knowledge management process.

The question related to "Hypothesis (3): why dynamic management capabilities of marketing managers do not affect knowledge management process" cannot be answered; this means that dynamic managerial capabilities of marketing managers consist of three concepts (human capital, social capital and cognition) and if we tend to answer the question of Hypothesis (3), we must consider the concepts that make up the capability individually. On the other hand, Sub-hypothesis 1.3 (human capital of marketing managers has a positive and significant effect

on knowledge management process) was confirmed; thus, the questions related to sub-hypotheses 2.3 and 3.3 would suffice.

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