

# The Role of Organizational Agility in Enhancing Organizational Excellence: A Study on Telecommunications Sector in Egypt

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## Abstract

**Purpose:** The purpose of this research is to identify the types of OA (sensing agility, decision-making agility and acting agility) and its role in promoting OE at the Telecommunication sector in Egypt.

**Research Design/Methodology:** To assess positive OA, refer to (OA questionnaire, Jaworski and Kohli 1993) and OE (OE survey Kandula, 2002; Hesseblin & Gohanston, 2002). The data of the study was collected from the employees at Telecommunication sector in Egypt. Out of the 290 questionnaires that were distributed to employees, 250 usable questionnaires were returned, a response rate of 86%. Multiple Regression Analysis (MRA) was used to confirm the research hypotheses.

**Findings:** OA factors have an impact on OE is investigated. In other words, sensing agility, decision-making agility and acting agility significantly correlated with OE. The study findings support the view that OA and OE are related constructs. In other words, the research has found that the study subjects do agree that OA directly affects the dimensions of OE at Telecommunication sector in Egypt.

**Practical implications:** The study suggests that the Telecommunication sector in Egypt can improve OE by influencing its OA, specifically, by developing sensing agility, decision-making agility and acting agility. The study provided that it is necessary to pay more attention to the dimensions of OA as a key source for organizations to enhance the competitive advantage which is of prime significance for OE.

**Originality/value:** The study observes that there is a critical shortage of OA and that a greater understanding of the factors that influence the OE is needed. Therefore, this study examines the relationship between OA and OE at Telecommunication sector in Egypt. This research dealt with OA in terms of its concept and dimensions, in addition to dealing with the role of OA in promoting OE at Telecommunication sector in Egypt.

**Keywords:** organizational agility, organizational excellence

## 1. Introduction

In the beginning of 21<sup>st</sup> century, the world faced considerable changes in all aspects, especially great changes in the communicational channels. These changes require organizations to revise their strategic priorities and visions (Sharifi & Zhang, 1999; 2001).

In the unpredictable and competitive world of today, the organizations must have different competitive features to compete; otherwise, they will move towards annihilation. One of these features that organizations need in turbulent environments is agility. Agility provides the organization with the possibility of quick response and compatibility with environment and allows the organization to improve its efficiency (Yeganegi & Azar, 2012).

Since human mind capabilities are limited in terms of grasping important changes that take place in the environment surrounding it, so has the current business environment for any organization in the world become complicated and highly dynamic (Zain et al., 2005). Therefore, it has become necessary that organizations in dire need for light movement of human capital be characterized with sensing agility, decision-making, and agility in carrying out work properly. This should be done in a manner which makes them engaged at work devoting all their efforts, feelings and realization in order to achieve the objectives of the organization (Markos & Sridevi, 2010; Warr & Inceoglu, 2012).

Agility provides the organization with the possibility of quick response and compatibility with environment and

allows the organization to improve its efficiency (Yeganegi & Azar, 2012).

Organizational Agility (OA) has become the topic of interest of both academics and practitioners in recent years. Nine out of ten executives ranked OA as both critical to business success and growing in importance over time in a McKinsey & Company survey (Sull, 2009).

OA plays an important role in the life of the organization as it provides personnel with knowledge, high skills, restructuring and organizational processes, employing new technology (Sherehiy, 2008).

Research on OA is emerging in the information systems field (Izza et al., 2008) due to the extensive reliance of contemporary organizations on information, in general, and information system, in particular. OA refers to organizations' ability to thrive by sensing and responding to environmental changes which has become critically important nowadays when the business environment is getting highly competitive and turbulent. It is regarded as a key business factor and a potential enabler to organization's competitiveness (Mathiassen & Pries-Heje, 2006),

This study is structured as follows: Section one is introductory. Section two presents the literature review. Section three discusses the research methodology. Section four presents the hypotheses testing. Section five explains the research findings. Research recommendations will be provided at section six. Section seven handles the research implications. Limitations and future research will be provided at section eight. Conclusion will be provided at the last section.

## **2. Literature Review**

### *2.1 Organizational Agility*

The concept of agility needs to be well grounded in management theory (Yusuf et al., 1999). Early in the 1990s, the new solution for managing a dynamic and changing environment emerged; agility. Agile manufacturing is the ability of surviving and prospering in a competitive environment of continuous and unpredictable change by reacting quickly and effectively to changing markets, driven by customer-defined products and services (Gunasekaran, 1999).

The creators of "agility" concept at the Iacocca Institute, of Lehigh University (USA) defined it as a manufacturing system with capabilities (hard and soft technologies, human resources, educated management, information) to meet the rapidly changing needs of the marketplace (speed, flexibility, customers, competitors, suppliers, infrastructure, responsiveness). Agility is the successful application of competitive bases such as speed, flexibility, innovation, and quality by the means of the integration of reconfigurable resources and best practices of knowledge-rich environment to provide customer-driven products and services in a fast changing environment (Yusuf et al., 1999).

Agility emphasizes speed and flexibility as the primary attributes of an agile organization (Gunasekaran, 1999). An equally important attribute of agility is the effective response to change and uncertainty (Goldman et al., 1995). Some authors state that responding to change in proper ways and exploiting and taking advantages of changes are the main factors of agility (Sharifi & Zhang, 1999).

Agility refers to the proactive responses to changes (Bessant et al., 2001). Agility refers to the use of changes as inherent opportunities in turbulent environment (Sharifi & Zhang, 2001). Agility refers to the ability to survive and progress in the variable and unpredictable environment (Dove, 2001).

Organizational flexibility represents an organization's capacity to adjust its internal structures and processes in a predetermined response to changes in the environment. Adaptability underlies the fit of organizational operations to their environment while flexibility emphasizes the readiness of organizational resources and the ease of resource mobilization. The "agility" concept encompasses both flexibility and adaptability. Agility, as a business concept, was coined in a manufacturing context-particularly in relation to flexible manufacturing systems (Christopher & Towill, 2001).

Agility is a new concept in contemporary administrative thought. One writer has defined the process of agility in terms of the capabilities necessary to achieve light movement in the organization (Sherehiy, 2008).

Agility is the ability to respond to unpredictable changes with quick response and profitability (Erande & Verma, 2008).

Agility is an organizational ability to react quickly and effectively to an environment which can change radically (Janssen, 2010).

The concept of agility means rapid, agile, and active movement. Also, agility refers to the ability of rapid and easy movement and rapidly thinking with a thoughtful method. The root or origin of agility is derived from agile

production and this is a concept that has been presented during later years. The agile production has been accepted as a successful strategy by producers that prepare them for a considerable performance (Mehrabi et al., 2013).

According to the different definitions of the word agility, the concept of speed and quick response and also the concepts of group work and common goal regarding the word organization can be inferred. Agility can be defined as swiftness and quick response of a harmonious group to the changes made by the environment surrounding them in order to reach a goal (Yeganegi & Azar, 2012).

OA is the organization's ability to respond quickly and effectively to unexpected opportunities, in addition to providing, in advance, solutions that meet potential needs (Nelson & Harvey, 1995).

OA is the ability to survive and grow in an unexpected competitive environment of constant change through rapid response to changing markets and through meeting the desires and needs of customers, whether of products or services (Gunasekaran, 1999).

OA is the successful application of the competition rules, such as speed, flexibility, innovation and quality, through the means of integration of resources and the restructuring of best practices in the environment of technical knowledge, through the provision of services or products that meet customers' preferences in light of a rapidly changing environment (Yusuf et al., 1999).

OA is the organization's ability to work comfortably in a quickly and consistently changing and fragmented global market environment, through producing high quality and effective performance (Tsouveloudis & Valavanis, 2002).

OA enables the organization to carry out a series of specific tasks successfully, in addition to managing the opportunities and risks in the business activities effectively (Ardichvile et al., 2003).

OA makes organizations more responsive to market trends, and faster in terms of the delivery of products and services compared to non-agile ones. OA is composed of three basic dimensions of the sensor agility, decision-making, and agility practice and application (Sambamurthy et al., 2003).

OA is not only "flexible" to cater for predictable changes but also is able to respond and adapt to unpredictable changes quickly and efficiently (Oosterhout et al., 2006).

OA can be viewed as the state of organizational performance in terms of flexibility and adaptability and is attainable through organization's activities. In particular, from the process-based perspective, OA is a set of processes that allow an organization to sense changes and respond efficiently and effectively in timely and cost-effective manner in the internal and external environments. Sensing refers to an organization's ability to detect, capture and interpret organizational opportunities (Seo & Paz, 2008).

Responding represents an organizational ability to mobilize and transform resources to react to the opportunities that it senses (Gattiker et al., 2005; Oosterhout et al., 2006).

These two capabilities must be aligned to optimally obtain OA. OA is the organizational capacity to sensor response successfully to the opportunities and threats in the market in a timely manner (Overby et al., 2006).

OA is a proactive management strategy that aims at maintaining the organization's resources and achieving the desires of customers in a timely manner (Hitt et al., 2007).

The concept of OA is derived from performance characteristics of an agile organization and is rooted in two related concepts- "organizational adaptability" and "organizational flexibility". Organizational adaptability focuses on how an organization's form, structure, and degree of formalization influence its ability to quickly adapt to its business environment (Sherehiy et al., 2007).

OA consists of several key elements. They are (1) speed and flexibility, (2) responding to changes in the surrounding environment, (3) high quality products, (4) products and services of accurate information, (5) interacting with social issues and the environment, (6) different technologies collecting, and (7) internal integration inside the institutions and among each other (Sherehiy, 2008).

OA is the process of arrangement, and abolition of business units, markets and industries to re-focus on differentiated core capabilities (Hill & Jones, 2009).

OA is a package of ideas that aims at continuous improvement, flat organizational structures, work teams, stopping waste or loss, efficient use of resources, and managing the chain of preparation. Japanese companies have adopted the concept of OA in terms of reducing costs through the removal of waste (David, 2009).

OA is a construction of three basic elements. They are (1) sensing agility, (2) decision-making, and (3) acting agility (Pavlou & El Sawy, 2010).

OA quickly meets customer requests, offers new products, and gets on strategic alliances or gets rid of them. This means that organizations are in an urgent need of strategic alliances in order to solve the problems of its customers, rather than providing products or one service. The fundamental reason behind the necessity of OA is searching for the core capabilities, on the one hand, and identifying the business environment and capturing opportunities, on the other hand (McCarthy et al., 2010).

OA is the manufacturing system for physical and non-physical technology, human resources, educated management and information in order to meet the rapidly changing needs of the market in a manner that achieves the desires and needs of the customers in time (Park, 2011).

In light of this, the researcher does identify OA as the organization's ability to achieve its objectives, through the development of its products increasing knowledge of its human resources, effecting the development of the organization and lightening its movement in a rapidly changing environment.

The dimensions of the OA are three main types. They are sensing agility, decision-making agility and acting agility (Park, 2011).

#### ▪ **Sensing Agility**

Sensing agility is the organizational capacity to inspect and monitor events and changes in the surrounding environment (customer preferences changes, the movements of the new competitors, new technology) in a timely manner (Park, 2011). The task of sensing means the strategic monitoring of environmental events that could have an impact on organizational strategy, competitive work, and future performance, including several activities such as access to information related to the events which show environmental change, on the one hand, and getting rid of the trivial information, on the other hand, in light of predetermined foundations and rules (El-Sawy, 1985). This task is related to decision-making and its execution (Daft & Weick, 1984; Dutton & Duncan, 1987). It is interested in organizational adaptation to change in the surrounding environment (Smircich & Stubbart, 1985).

#### ▪ **Decision-Making Agility**

Decision-making agility process is the ability to collect, accumulate, restructure and evaluate relevant information according to a variety of sources to explain the implications of the business without delay, and to identify opportunities and threats based on the interpretation of events, along with the development of action plans, which direct the reconfiguration of resources and the development of new competitive procedures (Park, 2011). The decision-making task consists of several interrelated activities, which explain many events and identify opportunities and threats in the surrounding environment. Decision-making task focuses on collecting information from multiple and diverse sources in order to understand the implications of their work (Thomas et al, 1993). Decision-making task seeks to capture the utmost opportunities and minimize the impact of threats on the life of the organization (Houghton et al., 2004).

#### ▪ **Acting Agility/Practicing**

The acting task consists of a set of activities for re-assembling organizational resources and modifying business processes on the basis of the principles of work resulting from the task of decision-making in order to address the change that occurs in the surrounding environment (Eisenhardt & Martin, 2000). Organizations can change the business processes by various procedures and resources, redesigning the organizational structure of the organization (Dutton & Duncan, 1987; Thomas et al., 1993).

### *2.2 Organizational Excellence*

Organizational Excellence (OE) is the pursuit of the organization towards the exploitation of appropriate opportunities through effective strategic planning and shared vision based on clarity of purpose and adequacy of resources to achieve high levels of performance (Burkhat, 1993).

Excellence is any act or activity for anyone who wants to enhance and achieve the goals of the organization. OE depends mainly on the competitive strategy of the organization, technology and relationship with customers (Mcgregor, 1994).

The excellent organization is constantly superior to the best international practices in the performance of its functions. It is also linked with its customers and clients with relations of support and interaction. It recognizes the capabilities of its competitors; their strengths and weaknesses, as well as the opportunities and threats that surround it (Gilgeous, 1997). OE is the total of the work and the way to achieve the objectives of all parties concerned with the organization. Thus comes the possibility of long-term success (Eskild, 1999).

The organization is distinguished by consistently excelling in the performance of its functions, and having good relations with its customers and clients. It should identify the performance of its competitors, strengths and weaknesses, and the circumstances surrounding its environment (Gilgeous & Gilgeous, 1999).

OE is a total way of action that leads to the satisfaction of both balance (1) of employees in the organization, (2) customers, (3) the surrounding community, and thus increasing the possibility of success of the organization in the long run (Eskild, 1999).

There are several determinants to achieve OE; such as the presence of visionary leadership, focusing on the future through strategic planning, activating the role of knowledge and adoption of organizational learning (Grant, 2000).

The aim of the organizational process excellence is to develop a strong work force having the ability to produce goods and services in a manner that achieves the internal and external consumer expectations. The intrinsic value is to achieve internal and external consumer desires, and to develop awareness towards achieving the objectives of the organization, through (1) energies of creativity and innovation (2) policies and flexible measures (3) skilled leadership to guide and stimulate communication with employees (4) manpower and professionals having a capacity for creativity and innovation (5) a cultural climate that provides confidence, safety, job satisfaction and real belonging and loyalty to the organization to achieve customer satisfaction (Rahman, 2001).

OE is the organization's ability to create and exploit the opportunities of encouraging climate, in addition to effective confrontation of different problems at work. In other words, OE is the ability of organizations to provide development opportunities, and create the conditions that stimulate and correct performance problems, besides facing them effectively. In other words, there are several determinants to achieve OE, (1) the existence of a vision in the organization's leadership, (2) focusing on the future, (3) activating the role of knowledge, organizational learning and individual learning (Grote, 2002).

Performance is high in organizations that contain centers of excellence rather than those organizations that do not include centers of excellence (Frost et al., 2002).

There are a number of steps that must be followed in order to build a distinct organization. They are (1) communicating the vision of leadership with regard to the excellence to all workers in the various levels of management in a clear and specific manner, (2) linking OE and all operations and activities of the organization, (3) understanding the basic capabilities of the organization and evaluation in terms of how optimally such capabilities are exploited in order to achieve excellence, (4) empowering workers and encouraging initiatives, (5) employing a technical image that achieves the highest possible use, (6) dissemination of knowledge among all employees within the organization, and (7) encouraging learning at individual level, group level, and organizational level (Sasmita & Nayantara, 2003).

The shift from traditional management to integration results from the perception of employees that they participate strongly in solving problems, and that the merger turns into excellence. The goal is to get maximum productivity, better quality, consumer satisfaction, and excellence to maximize and enhance the overall performance of the organization. This can bring success and gives the authority to make decisions in various business achievements of the Organization (Kathryn et al., 2005).

Excellence can be attained by encouraging workers to participate with their opinions and suggestions in solving the problems they face within the organization, the delegation of authority, freedom and avoidance of excessive instructions, policies and commands control related to their work, freedom to take responsibility to express their views and make their own decisions besides doing their jobs (Simard & Rice, 2006).

The excellent organization is able to collect, manage and use information from the organization in order to ensure the achievement of the desired goals (Martensen et al., 2007).

The outstanding management must have a vision that can create a climate of participation and provide assistance to excellence conditions (Vouzaz & Psychogios, 2007). This also requires a clear strategy, an organizational structure that promotes a sense of responsibility, skills development, keeping channels of communication open, guidance and training of staff as the employees are the key element in the process of excellence. Employees' awareness of excellence enhances the meaning of fidelity, devotion to the attention of customers and their satisfaction (Al-Marri et al., 2007).

The excellent organization is crystallized through the ability to study the current situation of the organization, external variables through strategic analysis processes, specifying its foundations and strategic direction, formulating the organization's mission, vision, strategic objectives and laying the foundations and criteria for measuring results. It prepares strategic plans in light of its objectives in order to exploit opportunities and avoid threats. It develops follow-up and identifies the environmental variables and their possible impact on the

organization's mechanisms (Bukovec & Markic, 2008).

Through reviewing previous concepts, OE may be defined as the organization's ability to contribute strategically to achieve its goals effectively and in a form which distinguishes it from the rest of the organizations working in the same field.

### 3. Methodology

#### 3.1 Research Model

The proposed comprehensive conceptual model is presented in Figure (1). The diagram below shows that there is one independent variable of OA. There is one dependent variable of OE. It shows the rational links among the variables. The research model is as shown in the following figure.

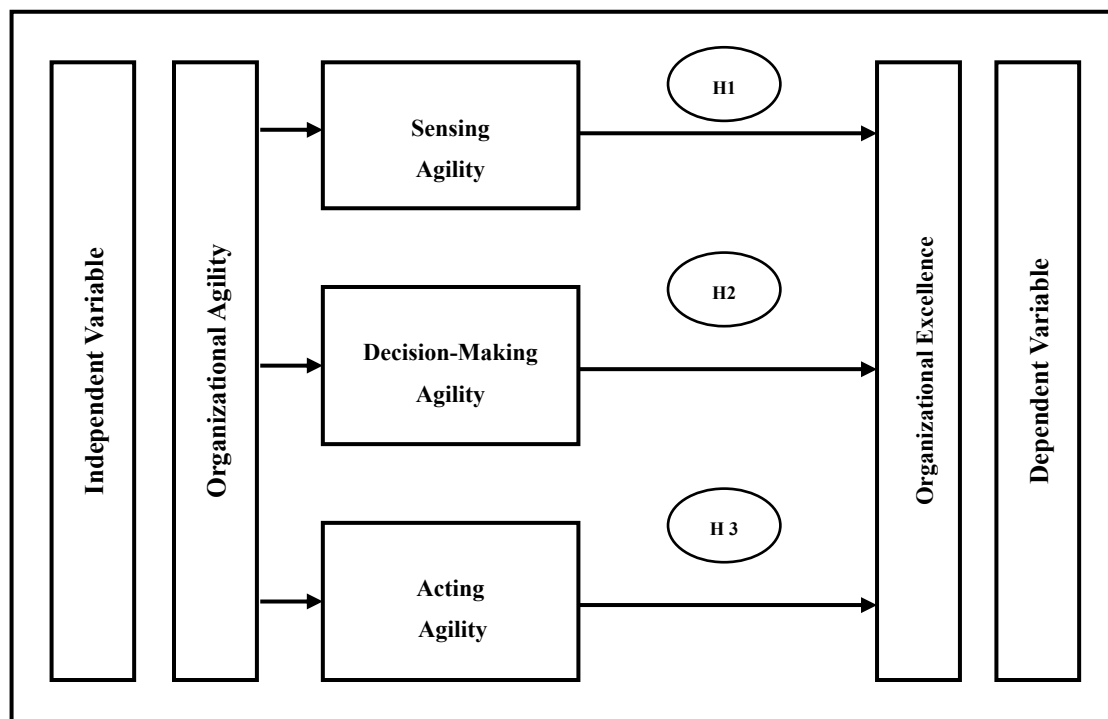


Figure 1. Proposed comprehensive conceptual model

The research framework suggests that OA has an impact on OE. OA as measured consisted of sensing agility, decision-making agility and acting agility (Jaworski & Kohli, 1993).

OE is measured in terms of leaders excellence, subordinates excellence, operational excellence, culture excellence, and financial excellence (Kandula, 2002; Hesseblin & Gohanston, 2002).

#### 3.2 Research Questions and Hypotheses

The objective of this study is to analyze OA and its relation with OE at Telecommunication sector in Egypt. The research question or hypothesis is a key preliminary step in the research process. It presents the idea to be examined in the study and is the foundation of the research study. The hypothesis attempts to answer the research question.

In light of the above-mentioned discussion, the researcher found the research problem through two sources.

The first source is to be found in previous studies, and it turns out that there is a lack in the number of literature reviews that dealt with the analysis of the relationship between OA and OE at Telecommunication sector in Egypt. This called for the researcher to test this relationship in the Egyptian environment.

The second source is the pilot study, which was conducted in an interview with (30) employees in order to identify the relationship between OA and OE. The researcher found through the pilot study several indicators notably the important and vital role that could be played by OA in reinforcing OE at Telecommunication sector in Egypt. As a

result of the discussions given above, the research questions are as follows:

Q1: What is the nature and extent of the relationship between OA (sensing agility) and OE at Telecommunication sector in Egypt.

Q2: What is the nature of the relationship between OA (decision-making agility) and OE at Telecommunication sector in Egypt.

Q3: What is the extent of the relationship between OA (acting agility) and OE at Telecommunication sector in Egypt.

As variables that were focused on in this study, perception for OA that is in interaction with it effect OE closely. There are studies in literature that study OA and OE factors separately and within the frame of bilateral relation but there is no study that examines these two factors collectively at the Egyptian environment. This study aims to contribute to the literature by examining the research variables collectively and revealing the interaction between the research variables.

As a result of the discussions given above, the following hypotheses were developed to test the effect of OA on OE at Telecommunication sector in Egypt.

H1: OA (sensing agility) of employees has no statistically significant effect on OE at Telecommunication sector in Egypt.

H2: OA (decision-making agility) of employees has no statistically significant impact on OE at Telecommunication sector in Egypt.

H3: OA (acting agility) of employees has no statistically significant influence on OE at Telecommunication sector in Egypt.

### 3.3 Population and Sample

The population of the study included all employees at Telecommunication sector in Egypt. The total population is 1196 employees. Determination of respondent sample size was calculated using the formula (Daniel, 1999) as follows:

$$n = \frac{N \times (Z)^2 \times P(1-P)}{d^2(N-1) + (Z)^2 \times P(1-P)}$$

The number of samples obtained by 290 employees at Telecommunication sector in Egypt in Table 1.

Table 1. Distribution of the sample size

Telecommunication Sector in Egypt	Nurses	Percentage	Sample Size
1. Telecom Egypt	812	68%	290X 68% = 197
2. Vodafone	134	11%	290X 11% = 32
3. Mobinil	128	11%	290X 11% = 32
4. Telecommunications	122	10%	290X 10% = 29
<b>Total</b>	1196	100%	290X 100% = 290

Source: Personnel Department at Telecommunication Sector in Egypt, 2015.

Proportionality with the number of employees in the research population is proved in Table 1. By using the lists of employees at Personnel Department, Telecommunication sector in Egypt random choice of categories was attained.

Table 2 describes some of the features of the respondents at Telecommunication sector in Egypt who participated in the survey.

Table 2. Frequency distribution table of demographics

Variables		Frequency	Percentage
1. Sex	Male	170	68%
	Female	80	32%
	<b>Total</b>	<b>250</b>	<b>100%</b>
2. Marital Status	Single	120	48%
	Married	130	52%
	<b>Total</b>	<b>250</b>	<b>100%</b>
3. Age	Under 30	50	20%
	From 30 to 45	100	40%
	Above 45	100	40%
	<b>Total</b>	<b>250</b>	<b>100%</b>
4. Educational Level	Secondary school	50	20%
	University	100	40%
	Post Graduate	100	40%
	<b>Total</b>	<b>250</b>	<b>100%</b>
5. Period of Experience	Less than 5 years	60	24%
	From 5 to 10	100	40%
	More than 10	90	36%
	<b>Total</b>	<b>250</b>	<b>100%</b>

### 3.4 Procedure

The goal of this study was to identify the relationship between OA and OE at Telecommunication sector in Egypt. A survey research method was used to collect data. The questionnaire included three questions, relating to OA, OE, and biographical information of employees at Telecommunication sector in Egypt. Data collection took two months. Survey responses were 86%, 250 completed surveys out of the 290 distributed.

### 3.5 Research Variables and Methods of Measuring

#### 3.5.1 Organizational Agility Scale

The researcher will depend on the scale developed by Jaworski & Kohli 1993 in measuring OA, which has been divided into three elements (sensing agility, decision-making agility and acting agility). OA consists of 15 statements. There were three items measuring sensing agility, five items measuring decision-making agility, and seven items measuring acting agility. The survey form is used as the main tool for data collection in measuring OA at Telecommunication sector in Egypt.

#### 3.5.2 Organizational Excellence Scale

The researcher will depend on the scale developed by Kandula, 2002; Hesseblin & Gohanston, 2002 in measuring OE, which has been divided into six main components (leaders excellence, subordinates excellence, operational excellence, culture excellence, and financial excellence). OE consists of 28 statements. There were six items measuring leaders excellence, seven items measuring subordinates excellence, five items measuring operational excellence, five items measuring culture excellence, and five items measuring financial excellence.

Responses to all items scales were anchored on a five (5) point Likert scale for each statement, ranging from (5) "full agreement," (4) for "agree," (3) for "neutral," (2) for "disagree," and (1) for "full disagreement."

### 3.6 Data Analysis and Testing Hypotheses

The researcher has employed the following methods: (1) Cronbach's alpha or ACC, (2) (MRA), and (3) F- test and T-test. All these tests are found in SPSS.

## 4. Hypotheses Testing

### 4.1 Evaluating Reliability

Before testing the hypotheses and research questions, the reliability of OA and OE were assessed to reduce errors of measuring and maximizing constancy of these scales. To assess the reliability of the data, Cronbach's alpha test was conducted. Table 3 shows the reliability results for OA and OE. All items had alphas above 0.70 and were, therefore, excellent, according to Langdridge's (2004) criteria.



Table 3. Reliability of organizational agility and organizational excellence

Variables	The Dimension	Number of Statement	ACC
OA	Sensing Agility	3	0.670
	Decision-Making Agility	5	0.748
	Acting Agility	7	0.804
	<b>Total Measurement</b>	<b>15</b>	<b>0.895</b>
OE	Leaders Excellence	6	0.906
	Subordinates Excellence	7	0.968
	Operational Excellence	5	0.921
	Culture Excellence	5	0.873
	Financial Excellence	5	0.921
	<b>Total Measurement</b>	<b>28</b>	<b>0.986</b>

Regarding Table 3, the 15 items of OA are reliable because the ACC is 0.895. Sensing agility, which consists of 3 items, is reliable because the ACC is 0.670. Decision-making agility, which consists of 5 items, is reliable because the ACC is 0.748. Furthermore, the acting agility which consists of 7 items, is reliable because the ACC is 0.804. Thus, the internal consistency of OA can be acceptable.

According to Table 3, the 28 items of OE are reliable because the ACC is 0.986. The six items of leaders excellence scales are reliable due to the fact that the ACC is 0.906. The subordinates excellence, which consists of seven items, is reliable since the ACC is 0.968. The five items related to operational excellence are reliable as ACC is 0.921. Furthermore, the five items of culture excellence scales are reliable due to the fact that the ACC is 0.873. The financial excellence, which consists of five items, is reliable since the ACC is 0.921. Thus, the reliability of OE can be acceptable.

Accordingly, two scales were defined, OA (15 variables), where ACC represented about 0.895, and OE (28 variables), where ACC represented 0.986.

#### 4.2 Correlation Analysis

The researcher calculated means and standard deviations for each variable and created a correlation matrix of all variables used in hypothesis testing. Arithmetic mean and standard deviation values related to dependent and independent variables of this study and correlation coefficients between these variables are given in Table 4.

Table 4. Descriptive statistics and correlation matrix of constructs

Variables	Mean	Std. Deviation	1	2	3	4
1. Sensing Agility	4.09	0.806	1			
2. Decision-Making Agility	3.61	0.805	0.591**	1		
3. Acting Agility	3.97	0.692	0.849**	0.661**	1	
4. Organizational Excellence	3.56	0.893	0.359**	0.401**	0.539**	1

Note. \*\* Correlation is significant at 0.01 level.

Based on Table 4, the first issue examined was the different facets of OA (sensing agility, decision-making agility and acting agility). According to Table 4, among the various facets of OA, those who responded identified the presence of a sensing agility ( $M= 4.09, SD= 0.806$ ). This was followed by acting agility ( $M= 3.97, SD= 0.692$ ), and decision-making agility ( $M= 3.61, SD= 0.805$ ).

The second issue examined was the different facets of OE (the moral conditions of the work environment, job characteristics, wages and rewards, team work, head's method in supervision, and participation in decision-making) are examined. Most respondents identified the overall OE ( $M= 3.56, SD= 893$ ).

According to Table 4, OA dimensions have positive and significant relation with OE dimensions. The correlation between OA (sensing agility) and OE is 0.359. For decision-making agility and OE, the value is 0.401 whereas acting agility and OE show correlation value of 0.539.

Finally, Table 4 proves that there is a significant and positive correlation between OA and OE. So our hypothesis is rejected and it can be said that there is a significant and positive correlation between OA and OE.

#### 4.3 The Relationship between OA (Sensing Agility) and OE

The relationship between OA (sensing agility) and OE at Telecommunication sector in Egypt is determined. The hypothesis to be tested is:

***There is no relationship between OA (Sensing Agility) and OE at Telecommunication sector in Egypt.***

Table 5. MRA results for OA (sensing agility) and OE

The Variables of OA (Sensing Agility)		Beta	R	R <sup>2</sup>
1.	The organization has been slow in terms of detecting changes that occur in customer preferences for products.	0.515**	0.321	0.103
2.	The organization has been slow to detect changes that occur in the movements of competitors.	0.353**	0.415	0.172
3.	The organization has been slow to detect changes in technology.	0.319**	0.140	0.019
▪	MCC	0.517		
▪	DC	0.267		
▪	Calculated F	29.884		
▪	Degree of Freedom	3, 246		
▪	Indexed F	3.78		
▪	Level of Significance	0.000		

Note. \*\* P < 0.01.

According to Table 5, the regression-coefficient between OA (sensing agility) and OE is R= 0.517 and R<sup>2</sup>= 0.267. This means that the OE can be explained by the dimensions of OA (sensing agility). Because of the calculated F (29.884) more than indexed F (2.80) at the statistical significance level of 0.01, the null hypothesis is rejected.

#### 4.4 The Relationship between OA (Decision-Making Agility) and OE

The relationship between OA (decision-making agility) and OE at Telecommunication sector in Egypt is determined. The hypothesis to be tested is:

***There is no relationship between OA (Decision-Making Agility) and OE at Telecommunication sector in Egypt.***

Table 6. MRA results for OA (decision-making agility) and OE

The Variables of OA (Decision-Making Agility)		Beta	R	R <sup>2</sup>
1.	The organization analyzes important events concerning customers, competitors, and technology without any delay.	0.137*	0.273	0.074
2.	The organization detects the opportunities and threats to changes in customers, competitors, and technology in time.	0.228**	0.267	0.071
3.	The organization carries out a specific action plan in order to meet customer needs without any delay.	1.522**	0.294	0.086
4.	The organization implements a plan of action in order to respond to the strategic movements of competitors without delay.	1.395**	0.267	0.071
5.	The organization is implementing an action plan on how to use the new technology without delay.	0.141*	0.320	0.102
▪	MCC	0.467		
▪	DC	0.218		
▪	Calculated F	13.629		
▪	Degree of Freedom	5, 244		
▪	Indexed F	3.01		
▪	Level of Significance	0.000		

Note. \*\* P < 0.01; \* P < 0.05.

As Table 6 proves, the MRA resulted in the R of 0.467. This means that OE has been significantly explained by the

5 independent variables of decision-making agility. Furthermore, the  $R^2$  of 0.218 indicates that the percentage of the variable interprets the whole model, that is, 21.8%. It is evident that the five independent variables justified 21.8% of the total factors of OE. Hence, 78.2% are explained by the other factors. Therefore, there is enough empirical evidence to reject the null hypothesis.

#### 4.5 The Relationship between OA (Acting Agility) and OE

The relationship between OA (acting agility) and OE at Telecommunication sector in Egypt is determined. The hypothesis to be tested is:

***There is no relationship between OA (Acting Agility) and OE at Telecommunication sector in Egypt.***

Table 7. MRA results for OA (acting agility) and OE

The Variables of OA (Acting Agility)	Beta	R	R <sup>2</sup>
1. The organization can reconfigure its resources in the proper time.	0.120*	0.287	0.082
2. The organization can re-adjust operations carried out in a timely manner.	0.085	0.457	0.208
3. The organization can use new technology in the proper time.	0.239**	0.432	0.186
4. The organization can introduce new products in the proper time.	0.413**	0.608	0.369
5. The organization can change prices quickly in the proper time.	0.067	0.321	0.103
6. The organization can change strategic things in the proper time.	0.073	0.415	0.172
7. The organization can solve customers' needs and complaints without delay.	0.191*	0.140	0.019
▪ MCC	0.673		
▪ DC	0.453		
▪ Calculated F	28.603		
▪ Degree of Freedom	7, 242		
▪ Indexed F	2.63		
▪ Level of Significance	0.000		

Note. \*\* P < 0.01; \* P < 0.05.

According to Table 7, the regression-coefficient between OA (acting agility) and OE is R= 0.673 and R<sup>2</sup>= 0.453. This means that the OE can be explained by the dimensions of OA (sensing agility). Because of the calculated F (28.603) more than indexed F (2.80) at the statistical significance level of 0.01, the null hypothesis is rejected.

## 5. Research Findings

The present study on analyzing the relationship between OA and OE at Telecommunication sector in Egypt revealed the following results:

1. Our findings support the view that the dimensions of OA (sensing agility, decision-making agility and acting agility) were positively related with OE. The findings reveal that there is a positive relationship between OA and OE. In other words, OA significantly influences OE.
2. Overall findings suggested that OA does affect OE. Management should ensure that OA be applied in the organization through the encouragement of cooperative teamwork. Our findings support the view that more OA are more effective in achieving OE. High OA will be more likely to achieve high OE.
3. The results refer to a direct exponential impact relationship between OA and OE. Employees with high OA enjoy higher production capacity compared to their counterparts with low-level OA as the availability of a high level of OA among employees leads to improving the quality of the relationship between employees and their bosses which leads to the improvement of the level of performance.
4. There is a significant relationship between OA and OE at Telecommunication sector in Egypt. In other words, **sensing agility**, which is an integral part of OA, significantly and positively influences OE. This is consistent with the finding that the employees who believed their organization had a sensing agility was more successful with their job. OA plays an important role in influencing OE. Also, OA contributes significantly to reinforcing OE.
5. This study concluded that the OA was positively related with OE at Telecommunication sector in Egypt. In other words, OA (**decision-making agility**) was positively related with OE. Overall findings from this study

suggested that OA does affect OE. Hence, the management at Telecommunication sector in Egypt should ensure that suitable types of agility be applied in the organization through the encouragement of cooperative teamwork.

6. There is a positive relationship between the types of OA and OE of employees at Telecommunication sector in Egypt. In other words, *acting agility*, which is an integral part of OA, positively correlated with OE.

7. OA plays an important role in influencing OE. The study pointed out that the availability of OA (sensing agility, decision-making agility, and acting agility) plays an important role in influencing the dimensions of OE. In other words, OA affects OE.

## 6. Research Recommendations

The managers at Telecommunication sector in Egypt might be able to improve OE through the following:

The need to focus on the dimensions of OA and use them to increase the OE among employees.

- Sensing agility, detecting and attracting important business at one time at Telecommunication sector in Egypt.

- Decision-Making Agility, interpreting events, identifying opportunities and threats and taking the actual plans in time at Telecommunication sector in Egypt.

- Acting Agility: reshaping organizational resources drastically and modifying business processes and the provision of services to market in time at Telecommunication sector in Egypt .

2. It is necessary to pay attention to the impact of the types of OA on OE for employees at Telecommunication sector in Egypt and for the purpose of obtaining an effective impact of OA on OE.

3. Broader usage of the various means of *sensing agility*, especially detecting and attracting important business at one time. This will highly improve OE, as the field study has proved.

4. Reconstructing *decision-making agility*, besides paying attention to interpreting events, identifying opportunities and threats and taking the actual plans in time. The field study has proved the adverse effect of existing structures on OE.

5. Adopting more *acting agility*, besides reshaping organizational resources drastically and modifying business processes and the provision of services or new products to market in time. This will entail their feeling of empowerment as the field study has concluded the existence of a strong positive impact of decentralization and authority delegation on OE.

6. The managers should be more attentive towards organizational factors; especially *sensing agility, decision-making agility, and acting agility*. This could lead to more success and effectiveness of Telecommunication sector in Egypt.

7. Factors that lead to OE (leaders excellence, subordinates excellence, operational excellence, culture excellence, and financial excellence) should be enhanced in accordance with contemporary management trends in a changing environment.

8. Seeking for ways and means to achieve the objectives of the organization so as to ensure survival and continuance, and perhaps Management excellence, is the perfect choice to make it happen.

9. Creating a culture of excellence among workers, and drawing their attention to customer service. Given that excellence is based primarily on this aspect, it can not be achieved only by creating a positive difference from competitors.

## 7. Research Implications

Managers at Telecommunication sector in Egypt might be able to improve OE through OA (sensing agility, decision-making agility and acting agility). OA also helps employees pay attention to professional standards. OE may exist with the help of top management at Telecommunication sector in Egypt. This is achieved by taking employees interests into account. Absenteeism and turnover will be lower. Productivity and profitability will be higher.

## 8. Limitations and Future Research

There are some limitations of this study. Firstly, the data was collected from employees in Egypt. Therefore, the generalization of the results must be made with caution. Secondly, the findings may not be generalized to other organizations in Egypt. Thirdly, a small sample size is used.

There are several areas for future research. They are (1) the relationship between OA and OCB, (2) similar studies

should be undertaken in other organizations in Egypt, (3) more studies should look at a comparative study of another sector such as education and tourism, (4) future studies should examine the relationship between OA and organizational success, (5) more studies should examine the relationship between OA and quality of work life, (6) examine the relationship between the determinants of organizational agility and organizational effectiveness, (7) study the relationship between the determinants of OA and financial excellence, (8) measure the impact of the availability of the determinants of OA on the competitiveness of companies, (9) highlight the role of knowledge management in ensuring the quality of education, and (10) provide an evaluation study of higher education policies in the light of the requirements and challenges of knowledge management and specify obstacles to the application of knowledge management in higher education institutions.

## 9. Conclusion

This study attempted to investigate the relationship between OA and OE at Telecommunication sector in Egypt. The study proved that there is a statistical significant relationship between OA and OE. It revealed that OA and OE are related.

Telecommunication sector in Egypt can increase OE by ensuring OA within their organizations. Research on OA and OE increased over the past decade. However, this rapid growth caused several problems, including the need to better understand the conceptual similarities between various forms of OA and OE, as well as their antecedents and consequences. Overall, this is an exciting and dynamic field of research, and we hope this paper will help speed progress in this area by highlighting several key issues that need more attention.

According to importance of enhancement of OE in organizations such as Telecommunication sector, one of the most important factors that plays positive role is OA of human resource of that organization. Then, in this research, we try to test this assumption to help managers invest OA of their organization, improve OE and subsequence job performance of their personnel.

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