

**THE ORGANIZATIONAL RESILIENCE MEDIATING
ROLE ON THE RELATIONSHIP BETWEEN
ORGANIZATIONAL LEARNING CAPABILITIES AND
ORGANIZATIONAL EFFECTIVENESS: THE
CATALYTIC ROLE OF TRANSFORMATIONAL
LEADERSHIP**

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الدور الوسيط للمرونة التنظيمية في العلاقة بين قدرات التعلم التنظيمي والفعالية التنظيمية: الدور المحفز للقيادة التحويلية

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Abstract

Why do some organizations possess the capability of bouncing-back from disruptions quickly? The answer of that question lies in the fact that business environments are known with substantive changes, uncertainties, and disruptions more than ever before. Hence, different organizations need to search for useful tools, mechanisms, and conditions to proactively anticipate, cope, and adapt with those challenges; in other words, to become more resilient in order to survive. In light with this, the current research is interested in studying organizational learning capabilities as a main factor helping organizations to survive, sustain their operations and achieve higher organizational effectiveness. It also seeks for investigating organizational resilience as a mechanism underlying the relationship between organizational learning capabilities and organizational effectiveness; in addition to testing the transformational leadership as a catalyst in increasing the role of organizational learning capabilities in leveling up the resilience of organizations in crises.

To achieve those objectives, the current research was conducted using a self-administered questionnaire on a convenient sample consisting of 435 respondents, working in different private service, industrial and commercial organizations. Both of the statistical package of SPSS, and the Structural Equation Modelling analysis using the AMOS program have been applied for testing the hypothesized framework. The research findings came to verify the proposed theoretical framework, such that a positive influence of organizational learning capabilities on organizational effectiveness has been reported. The results have also stressed on the partial mediating role of organizational resilience on the above-mentioned relationship; in addition to the moderating role of transformational leadership as a favorable condition in strengthening the organizational learning capabilities-organizational resilience relationship. It finally introduces several suggestions and implications for both future research and business practitioners to ensure different factors, mechanisms, and conditions for achieving higher organizational effectiveness levels, especially within disturbances and hard times.

Key Words: organizational learning capabilities (OLC), organizational resilience (OR), organizational effectiveness (OE), transformational leadership (TL).

ملخص الدراسة

لماذا تمتلك بعض المنظمات القدرة على الارتداد والرجوع سريعا خلال فترات الاضطرابات؟ تكمن إجابة هذا السؤال في حقيقة أن بيئة الأعمال تتصف بعدم التأكد، بالإضافة إلى حدوث العديد من التغييرات الجوهرية، والأزمات بدرجة أكبر مما كانت عليه في الماضي. لذلك، يجب على المنظمات المختلفة التعرف على الأدوات والآليات والظروف الملائمة لكي تتمكن من التوقع المسبق والتصدي والتكيف مع هذه التحديات؛ بمعنى آخر، أن تكون أكثر مرونة حتى يمكنها البقاء والصمود. وفي ضوء ما سبق، تسعى الدراسة الحالية إلى التعرف على دور قدرات التعلم التنظيمي كأحد العوامل الرئيسية التي تساعد المنظمات على البقاء، والحفاظ على العمليات التي تقوم بها، وكذلك تحقيق مستويات أعلى من الفعالية التنظيمية. وتهدف الدراسة أيضا لاختبار الدور الذي تلعبه المرونة التنظيمية كاحدى الآليات التي تتم من خلالها عملية تأثير قدرات التعلم التنظيمي على الفعالية التنظيمية؛ بالإضافة إلى اختبار دور القيادة التحويلية كوسيط تفاعلي يعمل على تقوية العلاقة بين قدرات التعلم التنظيمي والمرونة التنظيمية.

ولتحقيق أهداف الدراسة، فقد تم القيام بعملية تجميع البيانات باستخدام قائمة استقصاء، تم توزيعها على عينة ميسرة تبلغ 435 مفردة، من العاملين في العديد من منظمات القطاع الخاص في مجال الخدمات، والمجال الصناعي، والمجال التجاري. وقد تم استخدام تطبيقات كل من SPSS، بالإضافة إلى نموذج المعادلة الهيكلية باستخدام برنامج AMOS لاختبار اطار الدراسة المقترح. وقد أوضحت نتائج الدراسة قبول الاطار المقترح، حيث أشارت هذه النتائج إلى أن قدرات التعلم التنظيمي تؤثر تأثيرا ايجابيا على الفعالية التنظيمية. كما أكدت النتائج على أن المرونة التنظيمية تلعب دور الوسيط الجزئي في العلاقة السابق الإشارة إليها؛ بالإضافة إلى دور الوسيط التفاعلي الذي تلعبه القيادة التحويلية كاحدى الظروف الملائمة التي تعمل على تقوية العلاقة بين قدرات التعلم التنظيمي والمرونة التنظيمية. وتقدم الدراسة أيضا العديد من التوصيات والمقترحات لكل من الباحثين والممارسين في مجال الأعمال لضمان توفير العوامل والآليات والظروف المهيئة لتحقيق مستويات أعلى من الفعالية التنظيمية، وبصفة خاصة أثناء مرور المنظمات بالأزمات والأوقات الصعبة.

الكلمات المفتاحية: قدرات التعلم التنظيمي، المرونة التنظيمية، الفعالية التنظيمية، القيادة التحويلية.

Introduction

Bouncing back quickly from harmful crises would be one of the most critical competencies that organizations need to acquire to enhance their sustainability, survival, and effectiveness within turbulent environments. Moreover, vast negative consequences caused by those crises have consequently led to urgent calls for some novel organizational solutions, to assure organizations' abilities to resist, and sustain higher effectiveness levels during those tough crises.

From an applied perspective, it was cleared that focusing on the organizational capabilities' durability, sharing knowledge and organizational learning activities are critical factors to attain organizational success (Meher, Nayak, Mishra, and Patel, 2022); in which organizational learning capabilities are essential keys in increasing positive organizational and institutional results (Lee, Hwang and Moon, 2020), such as organizational effectiveness (Andreadis, 2009; Chiva and Alegre, 2009; Goh, 2003).

Meanwhile, despite the fact that organizational learning positive outcomes have received an increasing interest from scholars; such as innovation (ie. Sancho-Zamora, Hernández-Perlines, Peña-García and Gutiérrez-Broncano, 2022), performance (i. e. Supriharyanti and Sukoco, 2023); organizational survival (i. e. Goestjahjanti, Pasaribu, Sadewo, Srinita, Meirobie, and Irawan, 2022); and organizational efficiency (i. e. Fischer, Keupp, Paeth, Göhlich, and Schmitt, 2022); still more research examining the OL capabilities-organizational effectiveness relationship is required; hence calling for more investigation especially during crises (i. e. Jha, Potnuru, Sareen and Shaju, 2019; Lee, et al., 2020). Therefore, responding to those appeals, the current study may claim that organizational learning capabilities would be a vital factor accelerating organizational effectiveness.

However, by reviewing literature covering the dynamics by which OL capabilities would further support organizations to keep higher effectiveness levels during turbulences, it was detected that the organizational resilience concept has recently turned to be the "new normal" within increasing turbulences in uncertain and volatile organizational environments. This complex concept was built on several organizational capabilities developed during organizations' lifecycles, in which organizational learning would be considered as a pivotal component of those capabilities and developments. Thus, a compelling appeal has been emerged for examining how OL dynamics would serve in promoting OR (Evenseth, Sydnnes, and Gausdal, 2022). This claim has been also supported by other relevant literature, such that organizational learning resulted from crises responses has been viewed as a substantial requirement for enacting successful organizational resilience (i. e. Buhagiar and Anand, 2023; Liu, Long, and Liu, 2023; Williams, Gruber, Sutcliffe, Shepherd and Zhao, 2017).

Meanwhile, another recent wave has been interested in investigating the OR's outcomes; such as organizational sustainability (i. e. Suryaningtyas, Sudiro, Troena Eka, and Irawanto Dodi, 2019); economic sustainability (i. e. Rai, Rai, and Singh, 2021); continuous growth (Chen, Xie and Liu, 2021); and organizational performance (i. e. He, Huang, Choi, and Bilgihan, 2023; Li, Malik, Ijaz, and Irfan, 2023; Trieu, Nguyen, Nguyen, Vu, and Tran, 2023). Additionally, business continuity positively impacts organizational effectiveness (Sawalha, 2013).

Interestingly, Shaya, Abukhait, Madani, and Khattak (2023) have further demonstrated that the organizational knowledge capability base has proved to be an antecedent for the OR phases during the Covid 19 crisis, which would in turn enhance organizational resilience. Moreover, Trieu and his colleagues (2023) have revealed that OR plays the mediating role on the IT capabilities-SME's performance. This would equally urge the current research introduce organizational resilience as a mechanism, that may link the OLC-OE relationship.

Nevertheless, the above-mentioned process would be additionally enhanced by investigating the enabling conditions which may help organizations use their learning capabilities to strengthen their organizational resilience. This would raise another urgent question about what are those main conditions that may reveal this objective.

By reviewing literature to address this further challenge, it was observed that transformational leadership would be the most effective type for managing crises (Dwiedienawati, Tjahjana, Faisal, Gandasari, and Abdinagoro, 2021); moreover, organizational learning and leadership have significant roles in crises situations (Lee, et al., 2020). It was also detected that two essential streams have studied either the TL-OL relationship, or the TL-OR relationship; in which TL would be the most effective type enhancing organizational learning (i. e. Hariharan, and Anand, 2023; Udin, 2023; Wang, Zhao, and Zhang, 2023); and organizational resilience (i. e. Odeh, Obeidat, Jaradat, Masa'deh, and Alshurideh, 2023; Tvedt, Tommelein, Klakegg, and Wong, 2023).

Although the above-mentioned research lines have detected positive results; yet, a scarce in studying the favorable conditions that may strengthen the OLC-OR relationship is still noticed. Hence, the current study would suggest transformational leadership as a catalyst to level up the positive relationship between organizational learning capabilities and organizational resilience.

Accordingly, to address the above challenges and the widespread calls for the importance of keeping sustainability and effectiveness during hard times; *the overall objective of the study* lies in providing some new knowledge into the processes of organizational learning, organizational resilience, organizational effectiveness and transformational leadership areas; which may contribute in novel practices in organizations during crises. Thus, it could be claimed that the current study would provide some worthy insights and academic contribution

into the organizational capabilities' literature, by studying the main role of organizational learning capabilities in fostering organizational effectiveness, while taking into consideration the explanatory role of organizational resilience capabilities; and the transformational leadership as a favorable situation strengthening the OLC-OR relationship.

Finally, the current research would shed some light on *the importance* of responding proactively to disturbances; as well as having some potentials in helping leaders and decision makers develop their organizational learning capabilities, organizational resilience, and organizational effectiveness. Moreover, raising their attention to the crucial role of transformational leaders during disruptions.

Literature Review and Hypotheses Development

Organizations have been recently confronted by different organizational crises (i. e. Covid 19); such that there is a need to take some substantial steps by using their capabilities, learning from their past experiences, and taking many organized efforts to prevent and reduce those crises' negative effects (Eismann, Posegga and Fischbach, 2021). From this noted point of view, the current study would introduce the theoretical briefing and the relationships underlying the variables under study as follows:

Organizational Effectiveness

Organizational effectiveness is regarded to as a complex construct and a multidimensional variable (Potnuru and Sahoo, 2016). In fact, two perspectives have mainly contributed in developing the organizational effectiveness definitions; where *the first one* points to the effective organization as the one that achieves its objectives; whereas *the second one* clears that the organization is to be effective when acquiring and developing its competencies and capacity, to get higher levels of achievements. Meaning that the effective organization is that the one which aligns its employees, strategies, structure, and processes to achieve positive results. From this second noted perspective, leaders would work for creating and developing their organizations' capabilities; in which learning processes and cultures are the core competencies to achieve sustainability, innovation and effectiveness (Andreadis, 2009).

Thus, depending on Andreadis' perspective (2009); the current study would suggest organizational learning as a vital antecedent for organizational effectiveness as follows:

Organizational Learning and Organizational Effectiveness

Many scholars have contributed to the organizational learning field; in which organizational learning theory has been introduced; where knowledge is created and used within organizations, and where learning is defined as detecting and correcting errors (Argyris, 1976; Argyris and Schön, 1974; 1978). Furthermore, organizational learning is mainly seen as an

adaptation process (March and Olsen, 1975), such that organizations learn from their past experiences and adjust successive actions; in which, learning processes may be conducted by some types or theories of action by employees inside the organization (Argyris and Schön, 1974; 1997).

Organizational learning capabilities have been seen as the capability of the organization to absorb, transform new knowledge, and apply this new knowledge into change processes (Cohen and Levinthal, 1990); it is also the organizational ability to carry out relevant policies, practices, procedures, and structures to enable learning (Goh, 2003). In addition to the organization's capability for processing knowledge; which points to the capability of the organization for creating, acquiring, transferring, integrating knowledge, and modifying behaviors to demonstrate new cognitive situations, and increasing organizational performance (Gómez, Lorente and Cabrera, 2005).

The Dynamic capability theory has further explained that some organizations may gain competitive advantage, and respond effectively within dynamic turbulent environments; through integrating, building and reconfiguring their specific competencies into novel ones (Teece, Pisano and Shuen, 1997). Therefore, organizational learning capabilities have been introduced as a crucial theme for achieving organizational effectiveness, innovation and growth (Chiva and Alegre, 2009).

In this regard, several recent studies have investigated the relationships between organizational Learning and both of organizational effectiveness and organizational performance; such that organizational learning, innovation and learning capabilities positively affect organizational performance, and resilience either directly and indirectly through the organizational change capability (Supriharyanti and Sukoco, 2023). It was also revealed from the organizational learning view, that learning between partners, transferring knowledge, absorptive capacity and internalizing knowledge positively affect productivity and performance of alliances (Rajan, Dhir, and Sushil, 2023). Moreover, knowledge based dynamic capabilities (knowledge acquisition, knowledge generation and knowledge combination capabilities) positively affect perceived knowledge employees' productivity (Khaksar, Chu, Rozario and Slade, 2023). Furthermore, relying on both the resource-based, and the dynamic capability theories, it was also found that information technology capabilities stimulate SME's performance (Trieu, et al., 2023).

Other results have also cleared that organizational learning positively improves employees' performance (Meher and Mishra, 2022); business performance (Mai, Do, and Nguyen, 2022a); competitive advantage, which in turn yields manufacturing industry performance (i. e. raising profits and assets); organizational long-term survival (Goestjahjanti, et al., 2022); organizational efficiency (Fischer, et al., 2022); organizational effectiveness (Potnuru and Sahoo, 2016); the effectiveness of logistics service, in addition to the firm's performance (Panayides, 2007). Additionally, organizational learning culture positively influences

organizational effectiveness (Jha, et al., 2019; Meher, et al., 2022); learning capabilities are also key parts for effective learning and positive organizational results (Lee, et al., 2020).

Therefore, based on the above discussion, the current study would depend on the OLC definition suggested by Gómez and his colleagues (2005). It would also rely on the organizational learning, and the dynamic capability theories, to test the OLC-OE relationship; and would claim that organizational learning capabilities may have a positive influence over organizational effectiveness. Accordingly, hypothesis one would be developed as follows:

Hypothesis One: organizational learning capabilities positively affect organizational effectiveness.

Organizational Resilience

The promising resilience concept has recently gained increasing attention in organizational studies; as it refers to the capability of the organization to respond and adapt to crises and shocks. Organizations can overcome such shocks only when they are capable to adapt and be flexible enough; in other words, being a resilient organization (Ingram, Wieczorek-Kosmala, and Hlaváček, 2023). In this regard, organizational resilience was defined as a process that allows organizations responding properly to adversities and disruptions, in addition to capitalizing on those unexpected disturbances, in order to survive and develop (Shaya, et al., 2023).

OR can be also considered as a dynamic capability, and would be conditioned on the organizational capacities to anticipate potential changes, and be prepared to respond to those changes (Marzouk and Jin, 2023); such that organizational resilience is broken up into three consecutive stages during crises: the anticipation stage, capturing the pre-crisis phase; the coping stage, within the crisis; and lastly, the adaptation stage, demonstrating the post-crisis phase (Duchek, Raetze and Scheuch 2020; McManus, Seville, Vargo, and Brunsdon, 2008; Stephenson, 2010). Thus, it would be viewed as an integrated combination of capabilities, in addition to be an outcome of the organizational activities, and lastly, the organization's tolerance to deal with unexpected disruptions (Ruiz-Martin, López-Paredes and Wainer, 2018).

Therefore, due to its significant role in helping organizations facing new challenges; an increasing interest to study its antecedents, consequences and mediating role has emerged during latest years. Moreover, a recent interesting perspective to study its adaptive internal processes, phases and dynamics has further emerged (i. e. Bento, Garotti and Mercado, 2021; Duchek, 2020). In light with those lines of research, the current study would shed light on the OR mediating role on the OLC-OE relationship as follows:

Organizational Learning and Organizational Resilience

Regarding the OL-OR relationship, Mithani, Gopalakrishnan, and Santoro (2021) have explained that some organizations would bounce-back from emergencies faster than the other ones; such that the more their organizational learning capacities increase, the faster their organizational recovery after the threats. Buhagiar and Anand (2023) have further revealed that leadership, knowledge management, and organizational learning would be a synergistic triad, and main components towards facing hard times (i.e. Covid 19), and guiding responses towards future crises.

Thus, grounded on the dynamic capability theory, several studies have reached a positive OL-OR relationship (Aldianto, Anggadwita, Permatasari, Mirzanti, and Williamson, 2021; Liu, Chen, Zhou, Zhang, and Wang, 2021; Marzouk and Jin, 2023; Wang, et al., 2023; Zighan and Ruel, 2023).

In the same vein of research, it was cleared that OL serves in promoting OR; as it is largely connected to the adaptation capabilities, and linked to the three OR phases (anticipation, coping, and adaptation); it also has a main role in achieving the overall OR. (Evenseth, et al., 2022). Organizational knowledge capabilities additionally affect the three OR phases, which would increase organizational resilience (Shaya, et al., 2023). Moreover, information technology capabilities enhance OR (Trieu, et al., 2023).

Furthermore, strategic learning (comprising organizational learning and knowledge management) positively affects both OR types (adaptive and planning capacities); in which organizations are required to absorb the main strategically information for coping with uncertainties (Liu, et al., 2023). Similarly, organizational learning capabilities positively affect organizational resilience (planning and adaptive capacity) (Orth and Schuldis, 2020). OL also affects the strategic preparation for crisis management (Bolouki Rad and Kia Kojouri, 2021), and influences business agility (Setiawati, Eve, Syavira, Ricardianto, Nofrisel, and Endri, 2022).

Organizational Resilience and Organizational Effectiveness

In this context, several studies have reached that resilient organizations responding quickly to environmental turbulences, would generate some positive results, such as performance (Patriarca, Di Gravio, Costantino, Falegnami, and Bilotta, 2018); organizational financial performance (He, et al., 2023); business performance (including economic, financial, customers, processes and learning dimensions) (Beuren, Dos Santos, and Theiss, 2022); economic sustainability (Rai, et al., 2021); continuous growth, and organizational survival (Chen, et al., 2021); organizational development, and survival (Le and Nguyen, 2022); in addition to maintaining organizational performance, and organizational sustainability (Suryaningtyas, et al., 2019). Other studies have further revealed an organizational agility-

employees' productivity positive relationship (Li, et al., 2023); moreover, IT capabilities facilitate SME's performance via OR's mediating effect (Trieu, et al., 2023).

Other scholars have further revealed that keeping business continuity affects both of financial, and non-financial performance measures (including effectiveness, efficiency, quality, innovation, productivity, and quality of work life) (Sawalha. 2013). OR would further allow achieving business survival, while responding to possible crises, and being capable of generating opportunities from those crises. This would be done via business continuity and recovery strategy plans (Fabeil, Pazim and Langgat, 2020).

To sum up from the above prior studies, it could be observed that OL positively affects OR; furthermore, OR positively affects performance, organizational sustainability, and continuous growth; additionally, business continuity increases effectiveness, business survival, and performance. Thus, the current study would follow the above-mentioned recent integrated perspective (Bento, et al., 2021; Duchek, 2020; Ruiz-Martin, et al., 2018); and would rely on both of the organizational learning, and the dynamic capability theories, to study the mechanisms by which OLC would foster OE, through the OR's explanatory role. Hence, hypothesis two would be proposed as follows:

Hypothesis Two: Organizational resilience mediates the organizational learning capabilities-organizational effectiveness relationship.

Transformational Leadership

According to the transformational leadership theory, and the Full Range Leadership Model, transformational leaders would be the most effective leaders' type to mobilize subordinates, and advance organizations (Avolio and Bass, 2002); such that they stimulate subordinates to become more self-confident, optimist, and better committed to the organizational learning to increase their performance (Udin, 2023).

As Andreadis (2009) indicated, the first leadership's work is the creation of a learning culture; thus, exhibiting proper leadership competences will help strengthening organizational learning (Mai, et al, 2022a). In this regard, transformational leadership has been suggested to be the most leadership style used to enhance organizational learning abilities and processes (Jabeen, 2022; Wang, et al., 2023); it would be also the most appropriate and powerful style during crisis management (Alzoubi and Jaaffar, 2020; Dwiedienawati, et al., 2021; Purnomo, Supriyanto, Mustiningsih, and Dami, 2021),

By reviewing literature, two basic research streams have been detected; *On the one hand*, studying the influence of transformational leadership on organizational learning. In this regard, it would be claimed that transformational project managers would motivate their subordinates introducing developed technologies, and solving problems; which would in turn

stimulate organizational learning capabilities (Wang, et al., 2023). They also enable favorable conditions to stimulate knowledge application and continuous learning (Udin, 2023). In the same vein of research, other recent scholars have reached the same results (Cui, Lim, and Song, 2022; Goestjahjanti, et al., 2022; Hariharan and Anand, 2023; Kucharska and Rebelo, 2022; Mai, Do, and Phan, 2022b). Whereas, *on the other hand*, it was further revealed that transformational leaders enhance organizational resilience (Mohtady Ali, Ranse, Roiko, and Desha, 2023; Odeh, et al., 2023; Tvedt, et al., 2023; Wang, et al., 2023).

It was also observed that there is a further need to study the main conditions that enable achieving effective OL capabilities that would enhance the OR capabilities; as it was revealed that crisis leadership qualities play the moderating role on the three anticipation, coping, and adaptation stages-organizational resilience relationship (Shaya, et al., 2023). Similarly, and referring to the transformational leadership, organizational learning, and dynamic capability theories, the current study would agree with the two main streams confirming that TL would be the most powerful predictor for enhancing both of organizational learning, and organizational resilience; and would further introduce TL to play the moderating role in strengthening the OLC-OR relationship. Accordingly, hypothesis three may be presented as follows:

Hypothesis Three: Transformational leadership moderates the organizational learning capabilities-organizational resilience relationship.

Accordingly, referring to the above-suggested hypotheses, the research model will be introduced as follows:

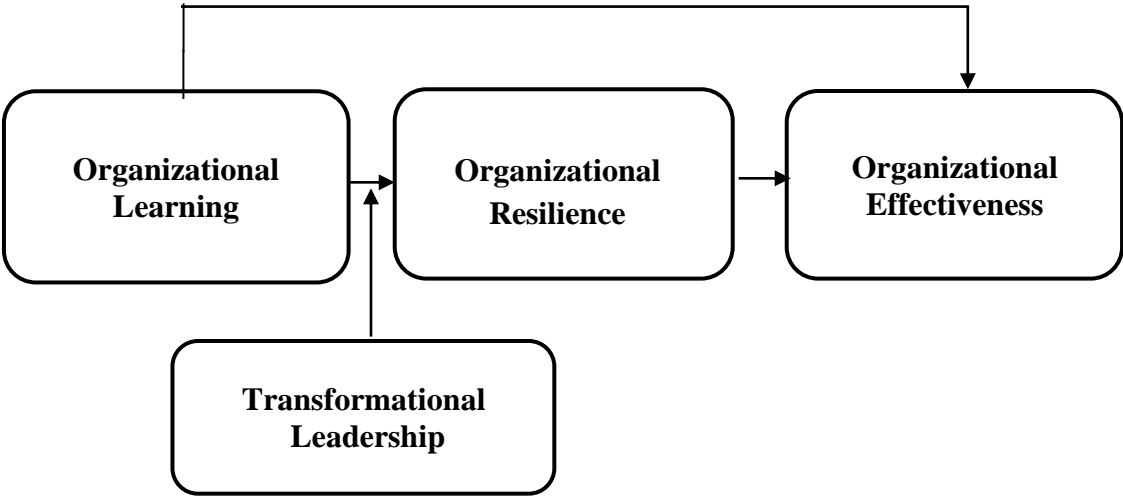


Figure (1): Research Model

Research Methodology

Pilot Study

A pilot study was employed as an earlier step of this research. Semi-structured interviews were conducted with several employees working in some governmental and private organizations. A number of 53 employees were approached during attending their EMBA and EDDBA classes in the faculty of business-Alexandria University, in the spring's semester first round in 2024. Those respondents were asked several questions to verify the availability of the research variables in both governmental and private Egyptian organizations. They were asked whether those main organizational factors have contributed in managing Covid 19 crisis, in addition to the main conditions enabling organizations to handle it, and their effects on the effectiveness of their organizations.

Most of the respondents have mainly declared that their organizations' essential traits were most likely present in the private organizations rather than governmental institutions. They have also stated that among other variables, the most important factors that may affect the organizations' ability to handle crises effectively were the organization' management to carry out changes, understand the organizational environment; in addition to the ability of creating strategic alternatives, promoting experimentation, transferring and integrating knowledge, tolerating risk taking and errors, and considering learning capabilities. In other words, the availability of a continuous and effective learning process. Additionally, they have stressed on the importance of their organizations' resilience, including their planning strategies, adaptive capacities, and continuity competencies during different crises phases; and the favorable situations that may enhance the organizations' ability to manage those crises, such as effective leadership.

Data collection Method

A field-research was conducted to achieve the main objectives of the study, using a self-administered questionnaire. The questionnaire consists of five essential sections; in which independent, mediating, dependent, and moderating variables' questions were included in the first four sections; whereas respondents' personal information were incorporated in the fifth one.

Population and Sampling

To collect data, a convenient sampling technique was employed, using handled questionnaires. This procedure was taken due to the difficulties that faced the researchers while getting a complete sampling frame. According to the previous pilot study results, only private organizations' employees, working within service, industrial, and commercial organizations

have been subjected to the research, rather than governmental ones (Details are shown in Table 1).

To overcome the above-mentioned difficulties, the researchers have approached some referent employees working in those different organizations for reaching the sampled respondents. A number of 600 questionnaires have been distributed, of which a total number of valid obtained questionnaires reached 435; recording a 72.5 % response rate.

Descriptive Analysis of the Research Sample

Descriptive statistics has been applied; as it is a statistical technique utilized to provide a detailed clarification for the research data. Both of the respondents' profiles, and the study variables have been submitted to the descriptive analyses. In this regard, Table (1) displays the sampling description, which details the respondents' profile. Moreover, three essential classifications have been demonstrated in Table (2): frequency, means (regarded as the central tendency measures), and lastly, standard deviations (regarded as the variability measures).

Table (1): The Sampling Description

Items	Frequency	Percent	Total
Gender			
Male	284	65.3	435
Female	151	34.7	
Age			
Less than 30	64	14.7	435
30 and less than 40	198	45.5	
40 and less than 50	145	33.3	
50 and more	28	6.5	
Organizational Level			
Top Management	87	20.0	435
Middle Management	223	51.3	
First line Management	125	28.7	

The descriptive analysis for the study sample has been illustrated in Table (1); where several insights of the respondents' profile are presented. It could be observed that the male and female respondents' percentages have reached 65.3, and 34.7 respectively. Also, while looking deeply to the respondents' age groups, it could be noticed that the 30 and less than 40 age group is the highest, with a percentage of 45.5, then comes the 40 and less than 50 age group with a 33.3 percentage, followed by the less than 30 age group, which recorded a percentage of 14.7, whereas the least is the 50 and more age group, which reached a 6.5 percentage. Moreover, the middle-level employees accounted for the highest percentage (51.3%), followed by the first line level with a percentage of 28.7, while the top-level employees have reached a percentage of 20.

Further, the descriptive analysis which details the research variables is depicted in Table (2), as follows:

Table (2): Descriptive Analysis of the Research Variables

Research Variables	Mean	Standard Deviation	Frequency				
			1	2	3	4	5
Organizational Learning	3.4023	0.8514	6	52	173	169	35
Organizational Resilience	3.5333	0.85365	7	34	163	182	49
Organizational Effectiveness	3.4414	0.8945	8	47	174	157	49
Transformational Leadership	3.5609	0.999	14	44	138	162	77

It could be noticed from Table (2), that a relatively large number of respondents have responded with 3 and 4, reflecting the neutral and agree zones; meaning that most of the responses are within and above average. The results have also indicated that transformational leadership has the highest mean and standard deviation; while organizational learning has recorded for the lowest mean and standard deviation.

Measures

The Independent Variable: Organizational learning capabilities:

Gómez, and his colleagues (2005) have introduced the organizational learning capabilities' measure (OLC); in which they have divided learning capabilities into four categories: managerial commitment, systems perspective, openness and experimentation, and knowledge transfer. Later on, Chiva and Alegre (2009) have also introduced their OLC measure; consisting of five dimensions: experimentation, risk taking, interaction with the external environment, dialogue and participative decision making.

The above two measures have been merged by the current study to measure the organizational learning capabilities; such that the measure would contain the underlying dimensions: managerial commitment (Q 1-5), systems perspective (Q 6-8), openness and experimentation (Q 9-12), and knowledge transfer and integration (Q 13-16) (Gómez, et al., 2005); in addition to risk-taking (Q 17-18), and interaction with the external environment (Q 19-21) (Chiva and Alegre, 2009).

Those underlying dimensions would be described as follows: *Managerial commitment*, where managers should develop a learning culture which encourages acquiring, creating, and transferring knowledge; they would also consider learning as a vital component for organizational success; and create organizations that can regenerate themselves and overcome new challenges and obstacles. *Systems perspective*, which necessitates considering organizations as systems; such that bringing various organizational members and departments together within obvious views of the organizational objectives, development, and within a common identity and coordinated manners. *Openness and experimentation*, which demands

creating an openness climate, that embraces the new coming perspectives and ideas internally and externally. This openness to novel ideas, will support experimentation, that is looking for innovative ideas, and problem solutions. **Knowledge transfer and integration**, which introduces the absorptive capacity, that implies the absence of barriers which hinder acquiring and transferring individual knowledge. This would be done through effective communications, dialogues and interactions between individuals, and teams (Gómez, et al., 2005). **Risk taking**, which would be referred to as tolerating errors, uncertainties, and ambiguities, recognizing and interpreting problems, and searching for problem solutions. Lastly, **Interaction with the external environment**, which would be defined as the relationships' scope, interactions, and connections with the external changing environment. (Chiva and Alegre, 2009).

The Mediating Variable: Organizational Resilience

The current study has utilized the shortened version of the Benchmark Resilience Tool (BRT-13B), introduced by Whitman, Kachali, Roger, Vargo, and Seville (2013), to assess both of the planning, and adaptive capacity dimensions. The essential version of the Benchmark Resilience tool (BRT-53) was developed earlier by the work of: Lee, Seville, and Vargo (2013); McManus, and his colleagues (2008), and Stephenson (2010). The current study has additionally used the measure presented by Le and Nguyen (2022), and Margherita and Heikkila (2021), to assess the business continuity dimension.

The (BRT-13B) tool evaluates the behavioral organizational resilience traits and perceptions, with regard to the organization's ability and capacities for planning to, responding at, and recovering from crises; regardless the sector and size of the organizations (Whitman, et al., 2013). It consists of 13 statements comprising planning (five Questions: 22-26), and adaptive capacity (8 questions: 27-34); such that **planning strategies** would involve risk management, and planning programs (Lee, et al., 2013; McManus, et al., 2008; Stephenson, 2010); while **adaptive capacity** may be identified as "the organization's ability to change strategies, operations, managerial systems, the structure of governance, as well as the capabilities of decision-support, to resist against disruptions and crises" (McManus, et al., 2008). Furthermore, The **Business Continuity** measurement contains five statements (35-39); and would be defined as "the probability that the organization would preserve, and generate value with its current operations" (Margherita and Heikkila, 2021).

The Dependent Variable: Organizational Effectiveness

The Potnuru and Sahoo' organizational effectiveness measurement (2016) has been used in the current study; in which they have referred to both of Gold, Malhotra, and Segars (2001), and Rahman, Imm Ng, Sambasivan, and Wang (2013) organizational effectiveness measures. Those measures include some items of **the competing values approach (CVA)** to measure organizational effectiveness. The measurement has been developed to assess the following five items (Q 40-44): the organizational adaptation to changes in business environment,

organizational productivity, human resource development according to organizational change, organizational resources optimization, and Stability.

The Moderating Variable: Transformational Leadership

Transformational leadership relates to the type of leaders who would inspire their subordinates to enact the organizational vision, and achieve organizational goals. In this regard, the current study has used the Avolio and Bass' TL twelve statements measurement (2002). In this regard, transformational leaders exhibit four main behaviors; namely: ***idealized influence***, which describes leaders who have the propensity to put their followers' needs before their own, when perceiving trust and respect from those followers (questions 45-47); ***inspirational motivation***, which refers to leaders who are behaving in ways that enable followers to achieve good performance, by creating a sense of meaning regarding their work (questions 48-50); ***intellectual stimulation***, meaning that leaders are promoting their followers to strengthen their innovation and creativity (questions 51-53); and lastly, ***individualized consideration***, which relates to leaders who are perceived as mentors by their followers (questions 54-56).

It worth mentioning that the measure's phrasing was modified in a very slight degree to begin phrases with "the leader" rather than "I" to express the respondents' opinions towards their leaders. It worth also mentioning that all the study's scales have been rated on a five-point scale, which range from 1 (completely disagree) to 5 (completely agree).

Demographic variables

Four essential demographic variables have been incorporated into the questionnaire (Q 57-60; which reflect respondents' gender, age, administrative level, and sector.

Data Analysis

Data Analysis Methods

Before conducting the data analyses, examining for the data's validity and reliability tests is a prerequisite phase; followed by the data normalcy test, as a second prerequisite step. Lastly, the statistical SPSS package-version 26, the confirmatory factor analysis, and the structural equation modelling: SEM analysis-AMOS 18 program have been applied, for the purpose of analyzing the research data, testing different validity and reliability tests, in addition to testing the research hypotheses as follows:

Validity and Reliability Tests

Verifying for both of the content and construct validity, in addition to checking for the data's consistency is considered as a preliminary step. In this regard, the content validity has been proved, that is several HR professors working in the Faculty of Business-Alexandria

University have evaluated the study measurements, to validate that those measurements fully reflect the under-study variables.

Moreover, both of the discriminant validity, and the Cronbach Alpha have been confirmed as presented in the following Table (3):

Table (3): The Research Data Reliability and Discriminant Validity

	OL	OR	OE	TL	Cronbach's Alpha
1. Organizational Learning	(0.726)				0.878
2. Organizational Resilience	0.646**	(0.708)			0.861
3. Organizational Effectiveness	0.689**	0.702**	(0.740)		0.792
4. Transformational Leadership	0.718**	0.683**	0.676**	(0.754)	0.891

N=435; ** Correlation is significant at 0.01 level (2-tailed); Squared roots for AVEs are shown on the diagonal.

The findings revealed in Table (3) have indicated an adequate discriminant validity for all the research variables; since the outcomes have implied that all the squared roots for AVE values for all the variables are greater than their correlations between the corresponding construct and the other ones. Moreover, Cronbach's Alpha formula has been employed for examining the reliability of the under-study data (Cronbach, 1951). In this regard, Cronbach's Alpha is often utilized as a widely accepted test for assessing the data's internal consistency. Cronbach's alpha was observed to range between 0.792 and 0.891; implying an adequate reliability for all the research variables, since all values are above 0.7 (as illustrated in Table 3).

Furthermore, an assessment of the measurement model has been computed; this calculation also involves a thorough examination of multiple indices to evaluate its adequacy. The indices included the χ^2/df ratio, comparative fit index (CFI), goodness of fit (GFI), incremental fit index (IFI), root mean square of approximation (RMSEA), Tucker-Lewis's index (TLI), and the root mean squared residual (RMR).

In this regard, the model fit of the confirmatory factor analysis, using the covariance method was computed; where it was found that the minimum discrepancy (the chi-square divided by the degrees of freedom: χ^2/df ratio) was $1.597 < 2$. Moreover, the probability to get as greater discrepancy as occurred with the study sample (p-value) was 0.001 (< 0.01); the GFI has reached 0.904 (> 0.9); the CFI has been recorded for 0.956 (> 0.95), The IFI was 0.957 (> 0.9), and finally, the TLI was 0,952 (> 0.9); all achieving the required levels.

Further, the root mean square residual (RMR) was 0.048 (< 0.1), where the amount of which variances and covariances of the sample would differ from their obtained estimates, when assuming that the model is correct; whereas the root mean square of approximation (RMSEA) was 0.037 (< 0.08), which would be regarded as an informative criterion in the covariance structure modelling, and computes the amount of existing error, while attempting to estimate

the population (Hair, Hult, Ringle, and Sarstedt, 2016). This means that the model is well fitting, after deleting some statements for each construct.

Table (4) depicts the measurement model using the confirmatory factor analysis as follows:

Table (4): The Measurement Model using CFA

Variables	Items	Estimate	S.E.	C.R.	P
Organizational Learning	Item 1	0.928	0.076	12.137	***
	Item 5	1.000			
	Item 6	0.855	0.073	11.691	***
	Item 7	0.894	0.074	12.134	***
	Item 12	0.961	0.076	12.608	***
	Item 13	0.960	0.075	12.870	***
	Item 14	0.865	0.070	12.376	***
	Item 19	0.799	0.068	11.734	***
	Item 20	0.876	0.073	11.967	***
	Item 21	0.994	0.078	12.677	***
Organizational Resilience	Item 24	0.916	0.078	11.745	***
	Item 25	0.921	0.080	11.551	***
	Item 26	0.880	0.076	11.602	***
	Item 28	0.986	0.083	11.930	***
	Item 34	0.921	0.082	11.221	***
	Item 35	0.918	0.079	11.646	***
	Item 36	0.919	0.078	11.801	***
	Item 37	0.921	0.065	14.219	***
	Item 38	0.935	0.079	11.811	***
	Item 39	1.000			
Organizational Effectiveness	Item 40	1.000			
	Item 41	0.905	0.069	13.137	***
	Item 42	0.902	0.071	12.652	***
	Item 43	0.886	0.069	12.823	***
	Item 44	0.900	0.070	12.824	***
Transformational Leadership	Item 45	0.957	0.066	14.602	***
	Item 47	1.000			
	Item 48	0.927	0.065	14.360	***
	Item 49	0.898	0.059	15.209	***
	Item 50	0.902	0.062	14.613	***
	Item 52	0.991	0.065	15.256	***
	Item 53	0.923	0.063	14.539	***
	Item 54	0.977	0.064	15.368	***
	Item 55	0.896	0.062	14.414	***

Referring to the above-mentioned Table (4), it could be stated that all of the factor loadings' estimates of the under-study constructs have implied adequate values (> 0.4); which reflects an adequate convergent validity. Moreover, figure (2) demonstrates the confirmatory factor analysis, in which the factor loadings are presented on the arrows as follows:

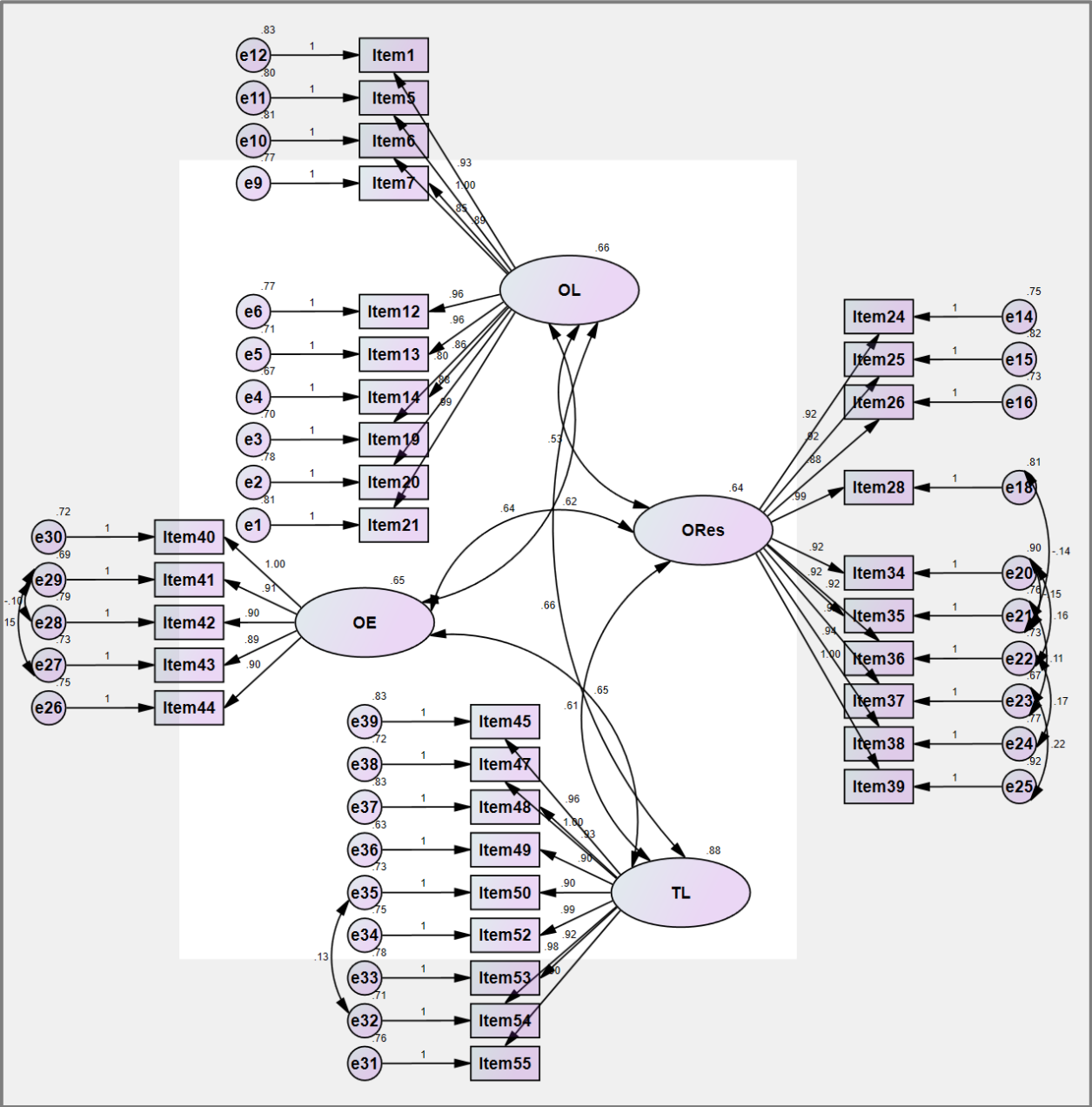


Figure (2): The Measurement Model Using CFA

Testing Normality for the Research Variables

The second requirement would entail conducting the normality test, to determine whether the statistic follows a normal distribution. Thus, validating the data normalcy is crucial before employing the statistical analysis, since it would compute whether the researchers can run parametric or non-parametric tests for addressing the research hypotheses. In this regard, it would be also cleared that the skewness and kurtosis normality tests are considered as the most frequent techniques employed to verify the data normalcy (As shown in Table 5).

Table (5): Normality Testing

	Kolmogorov-Smirnova			Skewness		Kurtosis	
	Statistic	Df	Sig.	Value	S.E.	Value	S.E.
Organizational Learning	0.228	435	0.001	-0.221	0.117	-0.108	0.234
Organizational Resilience	0.239	435	0.001	-0.328	0.117	0.168	0.234
Organizational Effectiveness	0.216	435	0.001	-0.192	0.117	-0.108	0.234
Transformational Leadership	0.219	435	0.001	-0.426	0.117	-0.175	0.234

Table (5) displays the normality test results, as it is cleared that all the skewness and kurtosis values fall within the acceptable values (-1 to 1). This would imply a crucial finding that all the under-study variables exhibit a normal distribution; which is considered as a pivotal prerequisite for statistical analysis. Consequently, it could be concluded that the research data is reliable and appropriate for further statistical parametric analysis and interpretation.

The Structural Equation Modelling Analysis

The structural equation modeling (SEM) was then conducted, where the model fit indices show good fitting of the model (χ^2/df ratio) = 1.579 (< 2); GFI = 0.902 (> 0.9); CFI = 0.955 (> 0.95); (IFI) was 0.956 (>0.9), (TLI) was 0.951(>0.9), RMR = 0.048 (< 0.1); RMSEA = 0.037 (< 0.08); meaning that all the above-mentioned indices have achieved the required acceptable levels.

The (SEM) analysis for the influence of the research variables is illustrated in Table (6) as follows:

Table (6): The SEM Analysis for the Research Variables

Dependent		Independent	Estimate	S.E.	C.R.	P	R2
OR	←	OL	0.415	0.091	4.579	***	0.719
OR	←	TL	0.408	0.081	5.062	***	
OR	←	OL*TL	0.072	0.028	2.577	.010	
OE	←	OR	0.659	0.080	8.212	***	0.915
OE	←	OL	0.399	0.068	5.823	***	

Regarding the first hypothesis, it is observed that there is a significant positive effect of organizational learning capabilities on organizational effectiveness, at a significant level of 0.01 (estimate = 0.399 > 0; P-value < 0.001); indicating that H1 is supported.

Relating to the second hypothesis seeking to measure the organizational resilience mediating effect on the organizational learning capabilities-organizational effectiveness relationship, it is observed the following: **Firstly:** there is a significant positive effect of organizational learning capabilities on organizational resilience at a significant level of 0.01 (estimate = 0.415 > 0; P-value < 0.001).

Secondly: a significant positive effect of organizational resilience on organizational effectiveness was also recorded; at a significant level of 0.01 (estimate = 0.659 > 0; P-value < 0.001). **Lastly:** concerning the organizational resilience mediating role, it could be noticed that there is a partial mediating effect of OR on the OLC-OE relationship. Using Sobel test, it was recorded that the effect of organizational learning capabilities on organizational resilience is significant (previously proved; such that estimate = 0.415, S.E. = 0.091), and the effect of organizational resilience on organizational effectiveness is also significant (previously proved; in which estimate = 0.659, S.E. = 0.080). Moreover, it is also indicated that organizational learning capabilities still has a significant effect on organizational effectiveness in the presence of organizational resilience; meaning that OR is a partial mediator. This is further proved using Sobel test computation, where Sobel Test Statistic=3.989, P < 0.001.

It should be also highlighted that the total effect (the direct and indirect effects) of organizational learning capabilities on organizational effectiveness was 0.672. That was due to both direct (unmediated) and indirect (mediated) effects of organizational learning capabilities on organizational effectiveness; such that when organizational learning capabilities goes up by 1, organizational effectiveness goes up by 0.672. The direct and indirect effects of organizational learning capabilities on organizational effectiveness were 0.399, and 0.273; indicating that H2 is accepted.

Finally, with regard to the third hypothesis capturing the transformational leadership moderating role on the organizational learning capabilities-organizational resilience relationship, it is noticed that transformational leadership has a significant effect on organizational resilience, at a significant level of 0.01 (estimate = 0.408 > 0; P-value < 0.001). Moreover, the interaction between transformational leadership and organizational learning capabilities was found to have a significant positive effect on organizational resilience, at a significant level of 0.05 (estimate = 0.072 > 0; P-value = 0.01 < 0.05); meaning that H3 is also supported.

Additionally, it would be stated that the SEM analysis has offered omitting a variety of statements, for the purpose of enhancing the model fit; which has been reflected in the final SEM analysis exhibited in the following Figure (3):

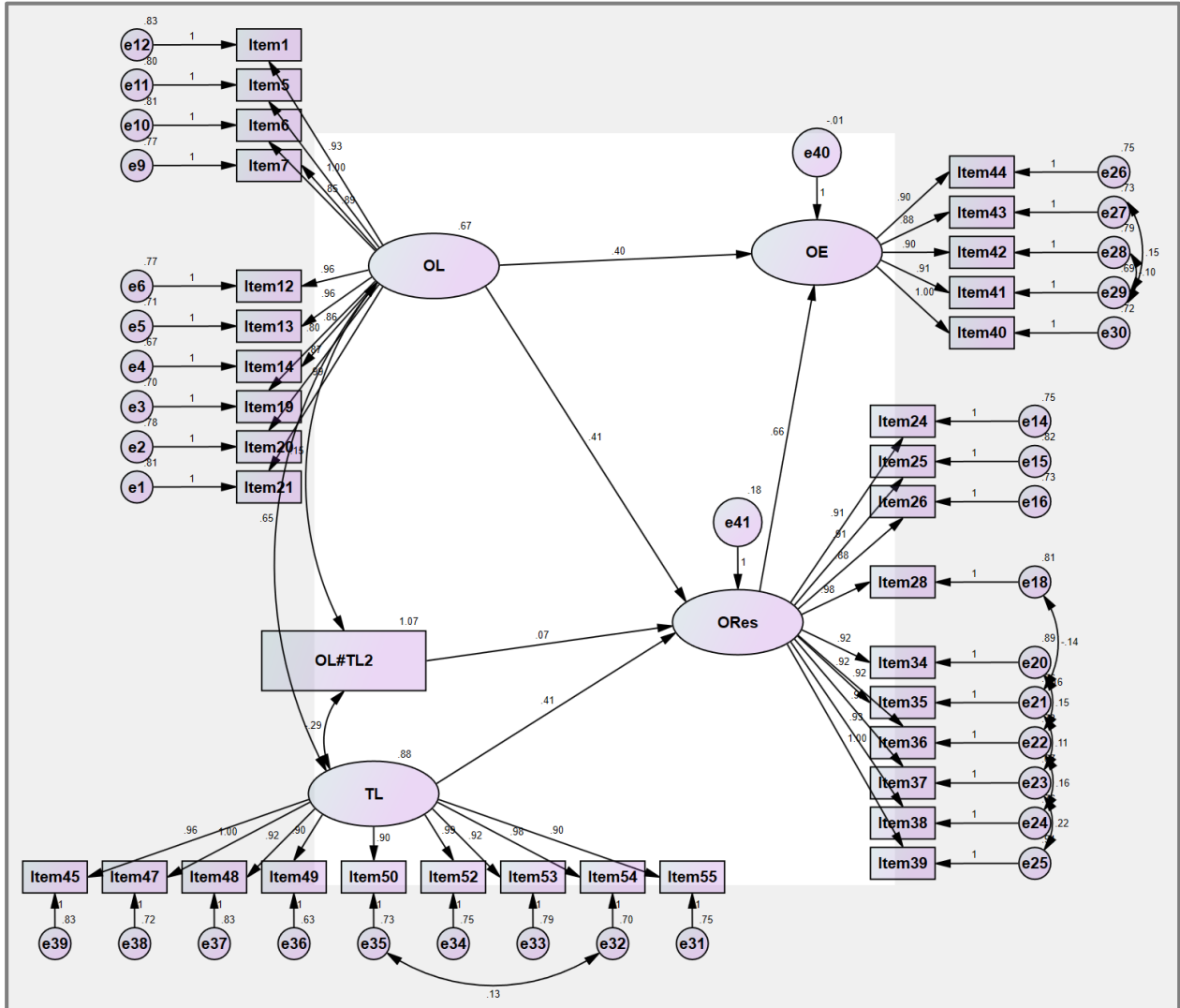


Figure (3): Final SEM for the effect of Research Variables

Discussion

From the above statistical results; it could be claimed that the current research findings have supported the suggested research framework with the gathered data; as will be discussed in the following part:

With regard to the positive OLC-OE effect (H1); both applied and normative perspectives have been introduced; where the former focuses on the durability of capabilities, knowledge and plans' achievement with relation to the organizational learning activities and knowledge sharing, which would in turn enhance organizational success and effectiveness (Meher, et al., 2022). While the later, refers to the organizational learning as a collective activity that requires some specific organizational characteristics, capabilities, practices and conditions that would

in turn foster organizational effectiveness on the long run (Goh, 2003); and achieve organizational goals (Mukibi, 2021).

In this context, the study findings may be further explained depending on the organizational learning theory (Argyris and Schön, 1974; 1978); where detecting and correcting errors may create learning (Argyris, 1976). The study findings would be also interpreted through the organizations' capabilities view to create, acquire, transfer, and integrate knowledge; and modify behaviors and actions to display new cognitive circumstances, and therefore enhancing organizational performance (Gómez, et al., 2005); and maintain competitiveness and success (Teece, 2007). Therefore, organizations have to concentrate on building their abilities for developing and renewing their capabilities, and not only making use of their resources (Teece, et al., 1997).

The results came additionally to agree with the validated relationships between knowledge and organizational learning capabilities, and each of the organizational performance, success; productivity, and effectiveness (Eriksson, 2023; Fischer, et al., 2022; Goestjahjanti, et al., 2022; Khaksar, et al., 2023; Lee, et al., 2020; Mai, et al., 2022a; Meher, et al., 2022; Panayides, 2007; Potnuru and Sahoo, 2016; Rajan, et al., 2023; Supriharyanti and Sukoco, 2023).

The study results have also exhibited that organizational resilience is a vital explanatory mechanism for the OLC-OE relationship (H2). In this context, resilience must be imbedded in each contemporary sociotechnical systems to adapt with the variation of daily activities, and manage complexities to attain organizational success (Patriarca, et al., 2018). Moreover, for keeping businesses continuity, organizational resilience would be considered as a process, encompassing three essential stages: anticipation, coping and adaptation (Duchek, 2020); such that following three different paths to detect adverse crises: first, making simple decisions rules to create some incremental changes. Second, finding ways for repurposing actual structures to keep their business operations. Lastly, appraising their situations as a fast-approaching threat to their survival (Shepherd and Williams, 2023).

Relying on the organizational learning, and the dynamic capability theories; the current study findings came further to collaborate with the research stream that indicated an OL-OR significant positive relationship (i. e. Buhagiar and Anand, 2023; Liu, et al., 2023; Marzouk and Jin, 2023; Shaya, et al., 2023; Wang, et al., 2023). It further came to support the research wave that exhibited a significant positive effect of organizational resilience upon economic sustainability (Rai, et al., 2021), continuous growth (Chen, et al., 2021); in addition to organizational performance (i. e. He, et al., 2023; Li, et al., 2023). Moreover, OR mediates the IT capabilities-SME's performance (Trieu, et al., 2023).

It additionally came to collaborate with the positive effect of business continuity on organizational effectiveness (Sawalha, 2013); and the suggested conceptual framework,

introduced by Abu Bakar, Yaacob, and Udin (2015), proposing that that business continuity management would play positive roles in increasing both of financial (ie: revenue), and non-financial organizational performance measures (ie: effectiveness).

Hence, it could be concluded that organizations need to invest on resources and learning capabilities; that would enable them to face, prepare for, respond to, and learn from adversities. This would in turn permit organizations keep planning, and adaptive capacities, in addition to preserving higher business continuity levels; in other words, to become more resilient facing those uncertainties, and therefore keep higher OE levels.

For discussing hypothesis three results; it worth mentioning first that *from the one hand*, some prior studies have reached positive results regarding the TL impact over OL (i. e. Hariharan, and Anand, 2023; Udin, 2023; Wang, et al., 2023). Whereas, *on the other hand*, some other prior studies have indicated that TL would enhance OR (i. e. Mohtady Ali, et al., 2023; Odeh, et al., 2023; Wang, et al., 2023).

In this context, the current researchers have observed that it is still required to study how TL would be a favorable condition fostering the OLC-OR relationship. Interestingly, the findings have supported hypothesis three; and suggested that the interaction between transformational leadership and organizational learning, will result in higher organizational resilience.

Those findings came to collaborate with some previous studies which claimed that when the organizational values support transformational leaders to foster an environment of learning, those values would produce stability for transformational leaders in enhancing resilience (Tvedt, et al., 2023). Further, transformational leadership can be generated through possessing high cognitive, functional and social skills and competencies; such that those leaders would conquer challenges, and exploit new opportunities for building and sustaining competitive advantage strategies and adopting change. Accordingly, during the crisis critical time, transformational leaders train, motivate subordinates and inspire them by example; via putting challenging objectives, looking for improvement, and showing trust (Țălu and Nazarov, 2020).

To sum up from the above discussion, it could be stated that the current research has achieved its main objectives; where the three hypotheses were supported.

Conclusion

Based on the research results; it could be concluded that working in volatile contexts requires practicing crucial organizational solutions, processes, and favorable situations that may shape organizational effectiveness. Subsequently, the current research has shed some light on the main framework' contributors, represented in organizational learning capabilities, and organizational resilience; which would in turn foster organizational effectiveness during severe times. It may also spotlight on the catalytic role of transformational leadership, to

verify the possible benefits of both organizational learning, and organizational resilience during those crises' times.

Recommendations of the study

Referring to the practical standpoint of keeping organizational sustainability, and higher effectiveness levels during disruptive times, the current study would offer some recommendations for leaders in different organizations as follows:

Depending on both of the organizational learning theory and the dynamic capability perspective, it has been proved that organizational learning plays a vital role in increasing organizational effectiveness. Therefore, relying on Evenseth and his colleagues' findings (2022); it could be recommended that organizations need to establish a suitable systematic approach, such that OL would depend upon a continuous process to guarantee its continuity. Additionally, enabling an effective context to use and enhance organizational capabilities, communication, opinions and experiences sharing; which may in turn enable organizations to acquire, gain, transfer and expand organizational knowledge; and guarantee high organizational learning levels. It could be also recommended relying on Zighan and Ruel' results (2023), that the continuous improvement system must incorporate all employees to facilitate change and development with regard to processes, technology, and organizational structures, while predicting the overall organizational effectiveness and efficiency.

In this regard, Argyris (1976) has also cleared two main set factors that may level up organizational learning effectiveness; that is different factors that provide information for decision makers, in addition to corrective information and feedback about those decisions. Also following, Argyris and Schön (1997) work, in which they have further described organizational learning as a continuous process that evolved over time (deutero-learning); this additional type implies that organizations have to take into consideration the required situations enabling more effective single and double loop learning processes, and encourage those processes. Therefore, the current study would additionally recommend addressing how to provide useful information, and feedback for decision makers, especially during disruptions. Moreover, taking into consideration enabling the three effective modes of learning: single, double, and deutero-learning to enable an effective learning process for accelerating both of organizational resilience, and organizational effectiveness.

Relying on Ducheck, and his colleagues' work (2020), it would be also recommended that organizational resilience needs to be viewed as a process, consisting of the anticipation, coping, and adaptation three stages; such that the organization would respond effectively to crises, not only after crises have occurred; but, also before and while the crises as well; which would consequently increase organizational effectiveness.

Furthermore, referring to some essential findings; in which the pivotal learning role would increase especially in the adaptation phase, in relation to the anticipation as well as the coping phase (Evenseth, et al., 2022). Moreover, strategic learning positively affects both types of organizational resilience: adaptive and planning capacities during crises (Liu, et al., 2023). Additionally, organizational learning has a strong positive impact on the adaptive capacity, when being compared with the overall organizational resilience (Orth and Schuldis, 2020). Therefore, agreeing with those noteworthy conclusions, the current study would also recommend business leaders and practitioners paying more attention for transforming their organizational learning capabilities into resilience capabilities. Moreover, keeping in mind that learning processes require further emphasis on how organizations would enhance their resilience; such that they would develop their organizations' learning capabilities during different OR stages and dimensions, especially the adaptation phase, and the adaptive capacity component.

Also referring to Shepherd and Williams (2023), and Akpan, Johnny, and Sylva (2022); it would be additionally recommended to take into consideration that organizations differ in their responses to the same crises. Hence, they need different organizational resilience paths, relying on their responses through their markets and industries, their decision making and interpretation of this crisis, their strategic initiatives, and their operations. Accordingly, it would be suggested putting into consideration different sectors, industries, and contexts in which they operate to become more resilient.

Additionally, urgent appeals have been recently introduced to give more attention for the effect of organizational learning on the resilience capabilities in SME's; such that those types of enterprises may face some specific challenges, due to their insufficient resources and capabilities (i. e. Ozanne, Chowdhury, Prayag, and Mollenkopf, 2022; Trieu, et al., 2023; Zighan and Ruel, 2023). Thus, relying on those studies, it would be recommended to consider the cyclical process of continuous improvement, consisting of organizational learning, renewal capacity, strategic management, and entrepreneurial resilience; which increases the resilience of SMEs in both short and long terms (Zighan and Ruel, 2023). It would be also implied that there is a great SME's challenge to strengthen the organizational learning capacities, to align their styles of management, in addition to rethink of relationships throughout all organizational levels. (Nunez-Rios, Sanchez-Garcia, Soto-Perez, Olivares-Benitez, and Rojas, 2022).

Lastly, it was also suggested that effective organizational learning would require supportive contexts (Evenseth, et al., 2022). In which, transformational leadership enhances organizational learning via the process acceleration for addressing and overcoming the obstacles that may hinder learning processes (Jabeen, 2022). Also, relying on Odeh and his colleagues' recent work (2023), the current study would recommend TL as a favorable condition for strengthening the pivotal OLC-OR relationship; such that it would imply

practitioners to develop their transformational traits to better accelerate organizational learning and organizational resilience capabilities. In this regard, Mohtady Ali and his colleagues (2023) have suggested that transformational leaders would enhance continuous learning and resilience to face disruptions; so that they would apply the “Prevention, Preparedness, Response, Recovery” framework to face crises through different stages.

Limitations of the study

The current research has some restrictions, regarding its ability to conduct a probabilistic sample; in which a convenient sampling technique has been applied, to collect data from respondents. This may have some effects on generalizing the study results; however, this non probabilistic technique was conducted, as a result of the impediments in obtaining a complete sampling frame.

Suggestions for future research

As a synthesized perspective, the current study has highlighted the fundamental effect of OL on OE through the OR role, as unified constructs; while on the other hand, other scholars have additionally cleared the essential role of OL in enhancing OR within its three stages (Evenseth, et al., 2022; Shaya, et al., 2023), especially during the adaptation phase (Evenseth, et al., 2022). Therefore, the current study would suggest adding to the promising research stream for investigating different organizational learning capabilities roles in affecting each of the OR dimensions (planning, adaptive capacity, and business continuity), during the three OR stages (anticipation, coping and adaptation) within unexpected events. It also worth suggesting that different OE dimensions may be also investigated.

It has been also suggested that the effective OL system would permit both of formal and informal learning applications; moreover, unlearning processes are crucial to accelerate and implement novel learning practices (Evenseth, et al., 2022). Therefore, the current study would further propose studying both of formal and informal learning, in addition to unlearning processes, which may accelerate organizational resilience, and organizational effectiveness.

It has been also advised to study the OR processes, such that Iftikhar, Majeed, and Drouin (2023) have introduced a conceptual integrative model comprising an interplay between five essential elements for managing crises. Those components would incorporate sense-making (gathering information, and interpreting crises), making decisions (accurate decisions on time), in addition to response (responding reactively), outcome (success or failure), and finally learning from experiences from those crises. Thus, the current study would additionally suggest applying the above-mentioned conceptual model; in order to capture how would OR processes play an essential role in applying, and transforming the organizational learning capabilities into higher levels of organizational effectiveness and performance.

The current study has incorporated OR as a mediator on the OLC-OE relationship, especially during disruptive events. Thus, it may also recommend studying other relevant mediators on the above-mentioned relationship; such as organizational change, organizational innovation, corporate entrepreneurship, and employees' intrapreneurship behaviors.

The current study has also incorporated TL as a unified construct, to moderate the OLC-OR relationship; hence, it may be proposed to investigate each of the TL dimensions' effects on the above-mentioned relationship. Moreover, it could be proposed to incorporate other moderators; such as other leadership styles, and compare the findings with the current ones.

Finally, Akpan and his colleagues (2022) have declared that dynamic capabilities increase resilience, especially in the manufacturing organizations. This would further clarify the importance of examining the relationships in different contexts, such as SMEs, and large organizations in various sectors (i.e. banks, universities, communication, and construction sectors); in order to capture the similarities and discrepancies in adopting different OLC and OR approaches within those different sizes, types and sectors.

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تسعي الدراسة الحالية إلي دراسة العوامل المؤثرة على الفعالية التنظيمية خلال الأزمات، وبصفتك أحد العاملين في المنظمة، برجاء الإجابة على الأسئلة المرفقة.

وإذ نشكر لسيادتكم مقدما المساهمة بوقتكم وآرائكم القيمة في هذا البحث، فإننا نود التأكيد على أن ما تدلون به من بيانات سوف يعامل بسرية تامة، ويستخدم لأغراض البحث العلمي فقط، كما سيتم معالجة البيانات البحثية في إطار تجميعي لا يمكن من خلاله مطلقا التعرف على هوية المستقصى منه، لذلك نرجو من سيادتكم التكرم بالاجابة عن الأسئلة التالية في ظل المواقف الفعلية التي حدثت لكم في العمل.

نشكر لسيادتكم تعاونكم الصادق معنا

د. علي عبد الهادي مسلم

أستاذ الدراسات التنظيمية

كلية التجارة- جامعة الاسكندرية

د. غادة عادل عطية

أستاذ ادارة الأعمال المساعد

كلية التجارة- جامعة الاسكندرية

1- فيما يلي عدد من العبارات التي يمكن أن تمثل رأيك بشأن مدى توافر عمليات التعلم داخل المنظمة خلال أزمة كورونا في الأعوام الثلاثة الماضية. برجاء وضع دائرة حول الرقم الذي يعبر عن درجة موافقتك على كل عبارة منها:

م	العبارة	غير موافق إطلاقا 1	غير موافق إلى حد ما 2	محايد 3	موافق إلى حد ما 4	موافق تماما 5
1	يقوم المديرون بإشراك العاملين معهم في عملية صنع واتخاذ القرارات الهامة.	1	2	3	4	5
2	تمثل عملية تعلم العاملين تكلفة على المنظمة بدرجة أكبر من كونها استثمارا.	1	2	3	4	5
3	تبدو ادارة المنظمة قادرة على التعامل مع التغييرات، والتكيف مع المواقف البيئية المستجدة.	1	2	3	4	5
4	تمثل قدرة العاملين على التعلم عاملا هاما وضروريا في هذه المنظمة.	1	2	3	4	5
5	تتم مكافأة الأفكار المبتكرة ذات النفع في هذه المنظمة.	1	2	3	4	5
6	يتوافر لدى العاملين بالمنظمة المعرفة الكاملة بشأن أهدافها.	1	2	3	4	5
7	يكون الجميع في هذه المنظمة على دراية كاملة بكيفية انجاز الأهداف العامة بها.	1	2	3	4	5
8	توجد درجة عالية من الترابط بين أجزاء المنظمة، كما أنها تعمل معا بدرجة عالية من التنسيق.	1	2	3	4	5
9	تقوم المنظمة بتشجيع التجريب والابتكار كوسيلة لتحسين العمليات التي تقوم بها.	1	2	3	4	5
10	تقوم المنظمة بمتابعة ما تقوم به المنظمات المماثلة، وتطبيق تلك الممارسات والتقنيات التي ترى أنها هامة ومفيدة لها.	1	2	3	4	5
11	تمثل الخبرات والأفكار التي يمكن الحصول عليها من خلال المصادر الخارجية (مثل المستشارين، والعلماء، ومراكز التدريب) وسيلة هامة لتحقيق عملية التعلم داخل المنظمة.	1	2	3	4	5
12	يمثل تعبير العاملين عن آرائهم، وتقديم مقترحاتهم بشأن اجراءات وأساليب تنفيذ المهام الخاصة بالعمل جزءا من ثقافة المنظمة.	1	2	3	4	5
13	تتم عادة مناقشة وتحليل الأخطاء وأوجه القصور على كل المستويات داخل المنظمة.	1	2	3	4	5
14	تتوافر لدى العاملين الفرصة للتشاور فيما	1	2	3	4	5

					بينهم بشأن الأفكار الجديدة، والبرامج، والأنشطة ذات النفع للمنظمة.
5	4	3	2	1	15 لا تعتبر فرق العمل طريقة شائعة للأداء في هذه المنظمة.
5	4	3	2	1	16 تتوافر لدى المنظمة بعض الوسائل (مثل الكتيبات، وقواعد البيانات، والملفات، والقواعد الروتينية..) التي تسمح بالاستفادة مما تم تعلمه في المواقف السابقة، حتى في حالة تغيير العاملين.
5	4	3	2	1	17 يتم تشجيع العاملين في هذه المنظمة على القيام بالمخاطرة.
5	4	3	2	1	18 يغامر العاملون في هذه المنظمة بالدخول في مجالات جديدة غير مطروقة من قبل.
5	4	3	2	1	19 تمثل عملية توفير معلومات بشأن ما يحدث خارج المنظمة جزءا حيويا من الأعمال التي يؤديها العاملون داخل هذه المنظمة.
5	4	3	2	1	20 تتوافر في هذه المنظمة بعض الأنظمة والاجراءات لتجميع، وتنظيم، ومشاركة المعلومات التي يتم الحصول عليها من خارج المنظمة.
5	4	3	2	1	21 يتم تشجيع العاملين في هذه المنظمة على التفاعل مع عناصر البيئة الخارجية (مثل المنافسين، والعملاء، والهيئات التكنولوجية، والجامعات، والموردين...).

2- فيما يلي عدد من العبارات التي يمكن أن تمثل رأيك بشأن مدى مرونة المنظمة خلال أزمة كورونا في الأعوام الثلاث الماضية. برجاء وضع دائرة حول الرقم الذي يعبر عن درجة موافقتك على كل عبارة منها:

أوافق	أوافق إلى حد ما	لا أوافق إلى حد ما	لا أوافق	لا أوافق بشدة	العبارة
5	4	3	2	1	
5	4	3	2	1	22 نحن على دراية بكيفية تأثير الأزمة علينا.
5	4	3	2	1	23 نحن نعتقد أنه يجب اختبار وتنفيذ خطط الطوارئ أو الأزمات مسبقا، لكي نضمن فعاليتها في حالة الأزمات.
5	4	3	2	1	24 لدينا القدرة على التحول سريعا من طرق العمل الاعتيادية للاستجابة للأزمات.
5	4	3	2	1	25 نقوم ببناء علاقات مع المنظمات التي يمكن العمل معها في حالة الأزمات.

5	4	3	2	1	تمثل أولويات التعافي والخروج من الأزمة اتجاهها سائدا لدى العاملين أثناء الأزمات.	26
5	4	3	2	1	يتوافر شعور الصداقة، والعمل كفريق في المنظمة التي أعمل بها.	27
5	4	3	2	1	تحتفظ المنظمة بموارد كافية لاستيعاب بعض التغييرات غير المتوقعة.	28
5	4	3	2	1	يتبنى العاملون في المنظمة المشاكل التي يواجهونها حتى يتم التوصل إلى حل لها.	29
5	4	3	2	1	يتوافر لدى العاملين المعلومات والمعرفة التي يحتاجونها للاستجابة للمشاكل غير المتوقعة.	30
5	4	3	2	1	يعد المديرون في المنظمة قذوة للآخرين.	31
5	4	3	2	1	تتم مكافأة العاملين عندما يقومون "بال تفكير خارج الصندوق".	32
5	4	3	2	1	تقوم المنظمة بصنع واتخاذ القرارات الصعبة سريعا.	33
5	4	3	2	1	يستمتع المديرون للمشاكل بعناية واهتمام.	34
5	4	3	2	1	تمتلك المنظمة امكانيات وطاقات عالية للاستمرار في مجال الأعمال.	35
5	4	3	2	1	تمتلك المنظمة امكانيات وطاقات عالية للمحافظة على استمرار العمليات التي تقوم بها.	36
5	4	3	2	1	تمتلك المنظمة امكانيات وطاقات عالية للاستجابة للتغيرات في بيئة الأعمال.	37
5	4	3	2	1	تمتلك المنظمة امكانيات وطاقات عالية لاستغلال الفرص الجديدة المتاحة من الأزمات.	38
5	4	3	2	1	تمتلك المنظمة امكانيات وطاقات عالية لزيادة رضا العملاء.	39

3- خلال الأعوام الثلاث الماضية، إلى أي مدى قامت المنظمة بتحسين قدراتها في المجالات التالية:

م	العبرة	غير موافق إطلاقا	غير موافق إلى حد ما	محايد	موافق إلى حد ما	موافق تماما
40	التكيف مع بيئة الأعمال المتغيرة.	1	2	3	4	5
41	زيادة الانتاجية.	1	2	3	4	5
42	تنمية وتطوير الموارد البشرية بناء على	1	2	3	4	5

					التغيير التنظيمي.
5	4	3	2	1	43 الاستخدام الأمثل للموارد.
					44 زيادة الاستقرار.

4- فيما يلي عدد من العبارات التي يمكن أن تصف مديرك المباشر. برجاء وضع دائرة حول الرقم الذي يعبر عن درجة موافقتك على كل عبارة منها:

م	العبارة	غير موافق إطلاقاً	غير موافق إلى حد ما	محايد	موافق إلى حد ما	موافق تماماً
		1	2	3	4	5
45	يجعل القائد الآخرين يشعرون بالأمان عند وجودهم بالقرب منه.	1	2	3	4	5
46	يؤمن الآخرون بهذا القائد تماماً.	1	2	3	4	5
47	يشعر الآخرون بالفخر لاقتراهم بهذا القائد.	1	2	3	4	5
48	يقوم هذا القائد بالتعبير عما يجب علينا القيام به بأسلوب سهل وواضح.	1	2	3	4	5
49	يقوم هذا القائد بتقديم صورة واضحة عما يمكننا القيام به.	1	2	3	4	5
50	يساعد هذا القائد العاملين في جعلهم يشعرون بأن عملهم ذو قيمة.	1	2	3	4	5
51	يساعد هذا القائد الآخرين على التفكير في المشاكل القديمة بأساليب وطرق جديدة.	1	2	3	4	5
52	يقدم هذا القائد للآخرين طرقاً جديدة للتفكير في الأمور المعقدة.	1	2	3	4	5
53	يساعد هذا القائد الآخرين على إعادة التفكير في أمور لم يتم مناقشتها من قبل.	1	2	3	4	5
54	يساعد هذا القائد الآخرين على تنمية وتطوير أنفسهم.	1	2	3	4	5
55	يخبر هذا القائد الآخرين بوجهة نظره فيما يؤدونه من أعمال.	1	2	3	4	5
56	يولي هذا القائد عناية خاصة للعاملين غير المقبولين من الآخرين.	1	2	3	4	5

5- برجاء الإجابة عن الأسئلة التالية:

57	العمر	أقل من 30 عاماً	30-40 أقل من 40	40-50 أقل من 50	50 فأكثر
58	النوع	ذكر	أنثى		
59	المستوى الوظيفي	إدارة عليا	إدارة وسطى	إدارة تنفيذية	
60	القطاع الذي تعمل به				

خالص الشكر لسيداتكم