

Investigating the role of staffing practices as a mediating variable between supply chain flexibility and organizational excellence in the pharmaceutical manufacturing companies in Egypt

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Abstract

Purpose: The purpose of this research is to investigate the mediating role of staffing practices in the relationship between supply chain flexibility and organizational excellence in the Egyptian pharmaceutical manufacturing companies.

Design/methodology/approach Based on the review of relevant literature, The survey list was relied upon to collect the primary data that served the purpose of the study, and through the Cronbach alpha scale, the stability of the study variable scales was confirmed. Using structural equation modeling (SEM), the study model and hypotheses were tested.

Findings: the results of the study show that supply chain flexibility has a statistically significant impact on organizational excellence through the partial mediation of staffing practices in Egyptian pharmaceutical companies.

Keywords: pharmaceutical supply chains, supply chain flexibility, pharmaceutical manufacturing companies in Egypt, staffing practices and organizational excellence.

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دراسة دور ممارسات التوظيف كمتغير وسيط في العلاقة بين مرونة سلاسل الامداد والتميز المؤسسي في شركات صناعة الادوية المصرية

المستخلص

الهدف: يهدف هذا البحث إلى دراسة الدور الوسيط لممارسات التوظيف في العلاقة بين مرونة سلاسل الإمداد والتميز المؤسسي في شركات تصنيع الأدوية المصرية. **التصميم/ المنهجية/ المنهج:** بناء على مراجعة الأدبيات ذات الصلة، تم الاعتماد على قائمة الاستقصاء لجمع البيانات الأولية التي خدمت غرض البحث، ومن خلال مقياس ألف كرونباخ تم التأكد من ثبات مقاييس متغيرات الدراسة. وباستخدام نمذجة المعادلات البنائية (SEM)، تم اختبار نموذج الدراسة وفرضياتها. **النتائج:** توصلت النتائج إلى أن مرونة سلاسل الامداد لها تأثير ذو دلالة إحصائية على التميز المؤسسي من خلال الوساطة الجزئية لممارسات التوظيف في شركات صناعة الأدوية المصرية. **الكلمات المفتاحية:** شركات صناعة الأدوية المصرية، مرونة سلاسل الامداد، ممارسات التوظيف، والتميز المؤسسي.

1.Introduction

In today's changing business environment, depending entirely on traditional supply chain management strategies can limit a company's potential to obtain a competitive advantage (Bargouthi, 2023).

Achieving flexibility within the supply chain allows companies to maintain both competitiveness and efficiency (Stevenson and Spring, 2007).

Supply chain flexibility evolved because of many conditions involving markets, organizations, products, and customers; these conditions increased competitive pressures along with high levels of disturbance and environmental uncertainty (Hawary et al, 2017).

From the previous researchers, the researcher conclude that Supply chain flexibility refers to the ability to respond to supply chain disruptions, changes in demand, and external market fluctuations, where Many firms require the ability to quickly flex and grow their supply chain to thrive and achieve a competitive advantage.

Staffing practices reflect a unique method for the formation and shaping of the work attitudes and behaviors of employees to enhance organizational performance. To ensure the success of their supply chain management, firms need to commit to the human dimension (Pahos and Galanaki, 2018).

Thus, it can be concluded that Humanity is a vital pillar of development in any organization. Staffing is the continuous process of recruiting, selecting, and establishing working relationships with current or potential personnel.

Organizational excellence reflects the ability of organizations to adapt and adjust to the contingencies of change and recover the stability of organizational systems through their own dynamic processes (Felicio et al, 2022). Therefore, it is a term that evokes images of high-performing companies, satisfied customers, and engaged employees.

The researcher could identify that there is a lack of studies that study the impact of supply chain flexibility on organizational excellence through the mediating role of staffing practices in the pharmaceutical manufacturing companies in Egypt, and there is a need to explore and understand the mediating role of staffing practices in the relationship between supply chain flexibility and organizational excellence in pharmaceutical manufacturing companies in Egypt. Thus, this research aims to clarify the mediating role of staffing practices in the relationship between flexible supply chains and organizational excellence in pharmaceutical manufacturing companies in Egypt.

Therefore, this study is intended to answer the following questions (RQs):

RQ1: What is the role of supply chain flexibility in staffing practices in the Egyptian pharmaceutical manufacturing companies?

RQ2: What is the role of staffing practices in achieving organizational excellence in the Egyptian pharmaceutical manufacturing companies?

RQ3: What is the relationship between supply chain flexibility and organizational excellence in the Egyptian pharmaceutical manufacturing companies?

RQ4: Do staffing practices mediate the relationship between flexible supply chains and organizational excellence in the Egyptian pharmaceutical manufacturing companies?

2.literature review, Conceptual model, and development of hypotheses

2.1. Supply chain flexibility.

Many scholars and researchers defined supply chains in different ways, but in aggregate, many of them agreed on the main components of the definition. But among supply chain scholars, there is a lack of consensus on conceptualizing and defining supply chain flexibility as a distinct construct. Instead, they concentrate on a specific aspect or dimension of supply chain flexibility (Manders et al, 2017).

(Liao, 2020) define supply chain flexibility as the nature of supply chain structure as well as market orientation. In this research, supply chain flexibility is defined as the firm's ability to configure and manage the supply chain through collaboration with supply chain partners in response to a rapidly changing environment in an effective and efficient manner.

(Shashi et al, 2020) define supply chain flexibility as the reason why, where the supply chain exists in an uncertain environment, many organizations have adopted supply chain flexibility to develop adaptive change to satisfy market requirements so that they can achieve competitive advantage and superior business performance. and according to (Singh et al, 2019). Thus, the researcher can conclude that supply chain flexibility is a source of competitive flexibility that is derived from a combination of other resources linked to the main resources. Supply chain flexibility, or the ability to flexibly modify production levels, raw material procurement, and transportation capacity, has numerous advantages over traditional supply chain management. According to (Lummus et al, 2003) the importance of resilience and supply chain flexibility is due to the following reasons:

1. permanent, rapid, sometimes drastic change.
2. Modern trends such as globalization and consumer-demand-driven production are driving customization out of the need to provide supply chains with the right amount of flexibility to

deliver the products they need without significantly increasing costs.

3. Some industries require the ability to increase or decrease the speed of production.

4. Many innovative products, such as fashion and electronics, face high levels of uncertainty in the business environment.

According to (Manders et al, 2017), being flexible makes the company vary according to its needs. Provides the company with the ability to adapt. Companies must realize the real competition (Grigore, 2007). And to be useful in achieving company objectives, flexibility should be viewed from a value chain perspective (satisfying customer needs) rather than from an equipment or process perspective (Grigore, 2007).

So, the researcher can conclude that supply chain flexibility is critical because of the contingency plan to maintain consumer demand. As the pandemic has had a knock-on effect on today's delays in supply chains, the need for greater flexibility has greatly increased.

2.2 Staffing practices

There are many different researchers who have attempted to provide their own definitions of staffing practices. According to (Galanaki, 2019) staffing is the tool that employers use to decrease information asymmetry when hiring employees. (Pahos and Galanaki, 2018) define staffing practices as the employees who receive the organization's long-term investment through staffing practices of recruiting and selection, training, and evaluation to feel obligated to repay and to decrease information asymmetry when hiring employees. (Kianto et al, 2017) clarify that staffing practices substantially enhance a company's capability to innovate. Indeed, recruiting and selection, training and development, performance evaluation,

and compensation are all major determinants of organizational behavior and effectiveness.

(Ployhart ,2006) defines staffing as "the process of attracting, selecting, and retaining competent individuals to achieve organizational goals.

Recruitment, selection, and placement practices

Recruitment, selection, and placement practices are regarded as the most important aspects of a company's global resourcing strategies for identifying and protecting the people required for the company to survive and thrive (Terpstra and Rozell ,2018; Pahos and Galanaki, 2018). Recruitment is the process by which a corporation attempts to attract a pool of prospective candidates. They will draft job descriptions, publicize the position, and find potential candidates (Ployhart, 2006; Tabiu et al, 2016)

Selection Once the applicants are in, the organization must choose the best fit. This includes assessing applicants, holding interviews, and potentially administering skills tests (Ployhart, 2006; Tabiu et al, 2016).

Placement: Once a candidate has been picked, the company brings them on board. This involves onboarding protocols, introducing them to the team, and ensuring they have the necessary resources to succeed in their role (Tabiu et al, 2016), therefore Successful staffing practices are critical for enterprises. It enables them to locate strong individuals who can contribute to the company's objectives.

2.3 organizational excellence

Organizational excellence is the result of a continuous journey from quality manual inspection to sustainable excellence (Akanmu et al, 2022). The concept of business excellence emerged in the 1980s, based on total quality management (TQM) principles (Asikhia et al, 2021), and evolved as a concept for three primary reasons. (Arbab and Abaker, 2018)

define organizational excellence as the movement of processes and procedures toward excellence and making efforts to generate an analytical and scientific culture of quality in the organization. An excellence organization is one in which the enhancement of all aspects is respected, all units and sections equally move toward excellence and organizational procedures are properly defined and established. (Felício et al ,2022) defined organizational excellence as " organizations that are able to overcome high expectations".

According to (Palo and Padhi, 2003) organizational excellence is the organization that can communicate the vision to employees, empower those employees, link excellence to activities and processes, assess excellence, foster technology-related skills, and encourage learning. So, the researcher can conclude that organizational excellence may be considered as an organization's growth and enhancement in all aspects so that it can balance all benefits and expectations.

Excellence model for the European Foundation for Quality Management (EfQM)

Based on the EFQM, there are two sets of organizational excellence dimensions, the first group deals with the enablers and includes leadership, strategy, people, resources, and processes. The second group is concerned with results. "Results" are caused by the "Enablers". including results related to customers, people, and society (Haerizadeh, 2022; Calvo-Mora et al, 2020; Uygur and Sümerli, 2013).

Leadership excellence

The goal, vision, and values of an organization are created by its leaders. The future is shaped and laid down by the leaders of excellent organizations (Dahlgard and Anninos, 2022; Alsarayrah, 2021; Jabnoun, 2019; Dubey, 2015).

Strategy excellence

A key step toward quality is the strategy's structure. Through monitoring market possibilities and dangers and informing staff members of all procedures, companies can develop a policy (Dahlgaard and Anninos, 2022; Dubey, 2015; Jabnoun, 2019).

Subordinates' excellence

Organizations can only compete and survive in highly competitive market conditions if they have adequate human resources. An outstanding firm should provide its employees with the chance to participate in the decision-making process and showcase their abilities (Dahlgaard and Anninos, 2022; Dubey, 2015; Jabnoun, 2019).

Resources and process excellence

Proficient companies organize and oversee their collaboration with outside partners. Following an analysis of the organization's resources and collaboration, the external partner's cooperation (Dahlgaard and Anninos, 2022; Dubey, 2015; Jabnoun, 2019).

2.4 The relationship between supply chain flexibility and organizational excellence

A flexible supply chain is no longer a luxury in the fast-paced corporate environment of today; rather, it is a critical component of attaining organizational success. Requiring organizational excellence, a flexible supply chain is now essential in the ever-changing and uncertain business environment of today. These two ideas have a complex and mutually beneficial relationship in which they both improve the other over time (Gu et al, 2023; Anh et al, 2019; Urtasun et al, 2014).

Flexibility means being able to efficiently reconfigure operations, processes, and commercial relationships while flourishing in an environment of constant change. Companies must prepare for a paradigm shift in how they design, manufacture, and market their products (Bennett and O'Kane,

2006). Supplier cooperation must improve to fulfil the demand for rapid decision making, and these suppliers must collaborate to achieve the overall goal of enhancing manufacturing.

Flexibility plays a vital role in increasing organizational skills to develop and adjust strategies in response to emergencies and changes in the environment. Supply chains prepare the organizations to deal with an uncertain environment and risk (AlHalaseh and Ayoub, 2021). Supply chain flexibility is the capacity to adjust to environmental changes swiftly and efficiently. This covers changes in client preferences, supply disruptions, demand swings, and technology improvements to achieve business excellence (Gu et al, 2023; Anh et al, 2019; Urtasun et al, 2014). Based on the given analyses, following hypothesis is proposed:

H1: Supply chain flexibility has no significant impact on organizational excellence in the pharmaceutical manufacturing companies in Egypt.

2.5. The relationship between supply chain flexibility and staffing practices

Over the last decade, where Technology has changed the concept of production by enabling companies to share information across the globe.

In today's changing market, a strong and flexible supply chain is essential to any successful firm (Anh et al, 2019). The flexibility of supply chains is contingent upon its capacity to promptly adjust and react to evolving demands, interruptions, and opportunities. This flexibility is closely linked to the workers, who oversee the movement of goods and information, rather than being limited to technology and procedures. This is where staffing procedures come into play, being vital in coordinating the fruitful dance between people and procedures (Khanuja and Jain, 2021; Magova and Kessy, 2020).

Human resources are critical to successfully implementing organizational strategies and policies. As a result, successful integration of environmental thinking into a company's operations and vision necessitates employee training in environmental practices and initiatives (Khanuja and Jain, 2021; Magova and Kessy, 2020; Anh et al, 2019). Based on the given analyses, following hypothesis is proposed:

H2: supply chain flexibility has no significant impact on staffing practices in the pharmaceutical manufacturing companies in Egypt.

2.6. The relationship between staffing practices and organizational excellence

Previous researchers have investigated the relationship between supply chain flexibility and Human resource management practices (staffing practices) and other researchers have investigated the relationship between Human resources management practices and organizational excellence.

where (Gu et al, 2023; Al Ma"aitah & Tarawneh, 2020; Dilgash et al, 2020; Arbab and Abaker, 2018) have agreed upon the direct relationship between human resource management practices and organizational excellence.

Effective staffing procedures are essential to an organization's success and creating a workforce that is knowledgeable and flexible.

Human resources, technological knowledge, and physical resources are the most important elements for organizations (Haraisa and Tarawneh, 2020).

Staffing decisions that are not based on strategic plans have long-term negative consequences, such as high training costs, high turnover, and poor service quality, which will affect employee morale and hinder the organization's competitiveness.

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Organizational excellence is dependent on the adoption and implementation of a planned staffing strategy, beginning with the recruitment and placement of qualified people to motivate them to achieve company goals. As a result, organizational excellence is a worthy and valuable goal for any organization to strive for. (Haraisa and Tarawneh, 2020).

H3: staffing practices has no significant impact on organizational excellence in the pharmaceutical manufacturing companies in Egypt.

2.7. The Mediating role of staffing practices

Previous researchers have investigated the relationship between supply chain flexibility and human resource management practices (staffing practices), and other research has investigated the relationship between human resource management practices and organizational excellence.

(Gu et al, 2023; Alma"aitah and Tarawneh,2020; Dilgash et al, 2020; Arbab& Abaker, 2018) have agreed upon the direct relationship between human resource management practices and organizational excellence.

Where (Anh et al, 2019; Khanuja and Jain, 2021; Magova and Kessy, 2020) discuss the impact of supply chain flexibility on human resources practices. Over the last decade, technology has changed the concept of production by enabling companies to share information across the globe.

(Gu et al, 2023; Anh et al, 2019; Urtasun et al, 2014) have discussed supply chain flexibility dimensions, organizational excellence is considered one of the needs because of high technological development.

Based on the given analyses, the following hypothesis is proposed:

H4: Staffing practices mediate the relationship between supply chain flexibility and organizational excellence in pharmaceutical manufacturing companies.

Based on the above arguments, the theoretical framework that guides the present study is presented in Figure 1

3. Research methodology.

3.1. proposed research framework.

The researcher developed the following model to assess the mediating role of staffing practices in the relationship between supply chain flexibility and organizational excellence in the Egyptian pharmaceutical manufacturing companies as shown in

Proposed Research Framework

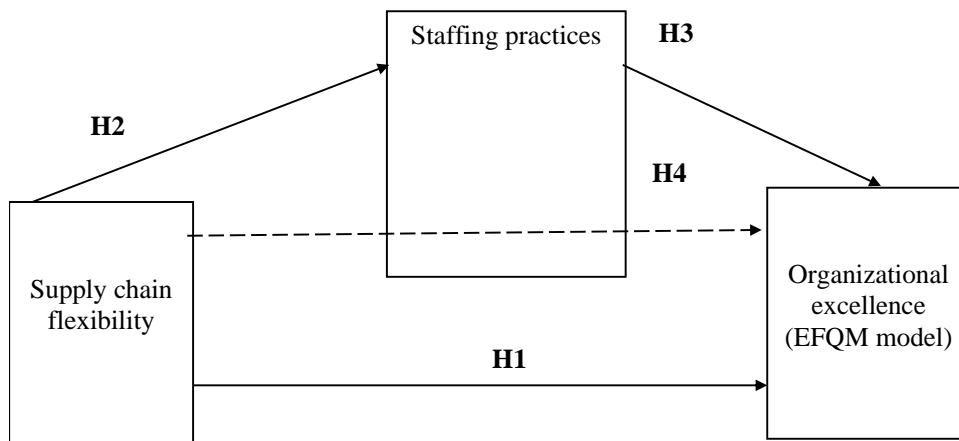


Fig (1) proposed research framework.
Source: developed by the researcher

3.2 Data collection and sampling process

3.2.1. Data Collection

A simple random sample is the sampling technique of this study, which is a subset of a statistical population in which each member of the subset has an equal chance to be chosen. respondents based on their expertise in supply chain flexibility and organizational excellence. The data was collected through a paper and online survey. All constructs were measured on a Likert-five scale, which is organized from strongly disagree to strongly agree and has a weight of 1–5. All questions are based on literature and modified to suit this research objective.

3.2. 2. Data collection techniques

The data was analyzed using SPSS 24, a statistical software for the social sciences and the Amous tool. Cronbach's alpha coefficient was used to assess validity and reliability. A value above 0.70 indicates strong dependability. The study utilized the sign test, a non-parametric hypothesis test, for assessing general attitudes in non-normally distributed samples. The study utilized logit regression; a non-parametric regression method employed when the dependent variable does not fit the normal distribution. The study analyzed the association between green human resource practices and sustainable performance aspects using the Spearman correlation coefficient, which is commonly used to examine relationships between ordinal variables (James et al,2017).

3.3. Population and sample

3.3.1. Research population.

The main aim of this research is to examine the impact of supply chain flexibility on organizational excellence in Egyptian pharmaceutical manufacturing companies. Therefore, it is important to elicit responses from many Egyptian companies to generate valid and reliable information. The study population represents pharmaceutical manufacturing companies operating in Greater Cairo, of which 90 are listed according to

the Chamber of Pharmaceutical Industry 2022. The selection of these sectors was based on that.

Pharmaceutical manufacturing firms are considered an important strategic sector. The volume of investments in this sector has a unique role in expanding economic opportunity because it is universal to human life and health. The industry operates at multiple levels of society.

3.3.2. Research Sample

For this research, the data was collected through a paper and an online survey, with a sample taken from the Egyptian pharmaceutical companies in Greater Cairo as the population. Potential participants in this study were supply chain managers, operations managers, and other decision-makers. A simple random sample from the total population was taken.

A simple random sample is the sampling technique of this study. Simple random sampling was the most suitable one for this research, which is a subset of a statistical population in which each member of the subset has an equal chance to be chosen. The researcher has distributed 410 questionnaires. The sample consisted of all the employees of the Egyptian pharmaceutical manufacturing sector. The researcher received 406 questionnaires, but the number analyzed was 402, representing 98% of the total sample size.

3.4. Hypotheses testing and Statistical Analyses

the relationship between the variables using structural equation models. In this case, the three variables (independent, dependent, and mediator) are latent variables (Unobserved, endogenous variables), using the goodness of fit of the model and its adequacy in explaining the relationship.

Finally, studying the significance of the paths proposed by the study model and the effect of mediation, whether direct or indirect, and whether it is complete or partial.

3.5. measurement results

Reliability and Validity test

Testing the questionnaire reliability and validity, reliability refers to the degree to which the results obtained by measurement and procedure can be replicated, while validity expresses the degree to which a measurement measures what it purports to measure (Bolarinwa, 2015).

Table (1) the reliability and self-validity for questionnaire sections

variables	Number of statements	Reliability coefficient (Cronbach's Alpha coefficient)	Validity coefficient
The independent variable (Supply chain flexibility)	18	0.779	0.883
The mediating variable (Staffing practice)	10	0.646	0.804
The dependent variable (Organizational excellence)	19	0.787	0.887

Source: researcher based on SPSS Output

Table (1) shows The Reliability coefficient (Cronbach's Alpha coefficient) for Section one of the questionnaire "Supply chain flexibility" is (0.779) and Validity coefficient is (0.883).

The Reliability coefficient (Alpha) for Section Two of the questionnaire "Staffing practices" is (0.646) and Validity coefficient is (0.804).

The Reliability coefficient (Cronbach's Alpha coefficient) for Section Two of the questionnaire "Organizational excellence" is (0.787) and Validity coefficient is (0.887).

Based on the previous results, it could be concluded that the study instrument is reliable and valid.

3.5.2. Model testing.

The Empirical Model

Figure (2) shows the Full Empirical Model which is (Empirical Path Model between fear of Supply chain flexibility, Organizational excellence, and Staffing practice).

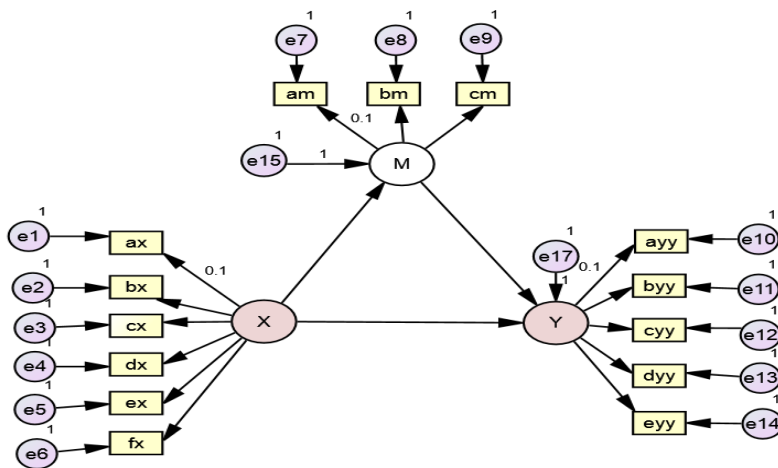


Figure (2)

Source: researcher based on AMOS Output

where,

ax ,bx ,cx ,dx ,ex and fx are the dimensions of the independent variable, which is (Supply chain flexibility).

am ,bm and fm are the dimensions of the dependent variable, which is (Staffing practice).

ayy ,byy ,cyy ,dyy and eyy are the dimensions of the dependent variable, which is (Organizational excellence).

3.5.3. Goodness of fit indicators

Based on the structural equation modeling method, and to know the goodness of fit of the measurement model with the information related to the study, using indicators called goodness of fit indicators.

Table (2) Goodness of fit indicators

Index	The standard result	The result	comment
CMIN/DF	Between 1 and 2 the model is good with a significant level ≤ 0.01 . Between 2 and 5 the model is acceptable with a significant level ≤ 0.01 . More than 5 of the model is rejected	2.198	Accepted
Root Mean Square Error of Approximation (RMSEA)	0.08 or less	0.055	Accepted
Goodness-of-Fit Index (GFI)	0.9 or more	0.946	Good
Adjusted Goodness-of-Fit Index (AGFI)		0.926	
Normed Fit Index (NFI)		0.917	
Comparative Fit Index (CFI)		0.953	
Tucker-Lewis Index (TLI)		0.943	

Source: researcher based on AMOS Output

Figure (3) shows the results of the structural model for the study variables.

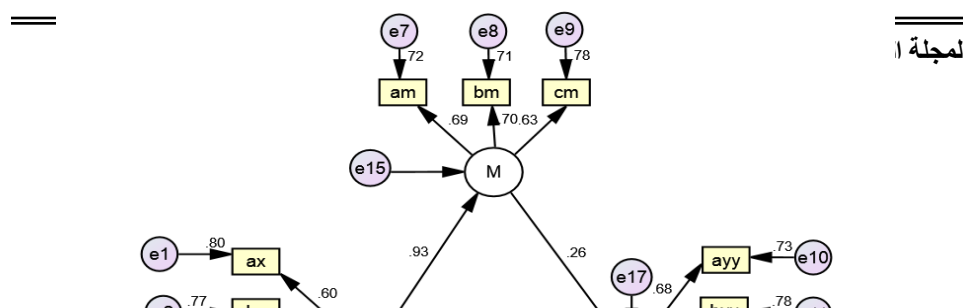


Fig.3

Source: researcher based on AMOS Output

Table (3) shows the paths for the relationships between the study variables.

Hypothesis	path	Standard Path coefficient	p	Decision
H1	X ---> Y	0.681	0.008***	Supported
H2	X ---> M	0.932	0.000***	Supported
H3	M ---> Y	0.263	0.000***	Supported

Source: researcher based on AMOS Output.

*** Significant at a level of significance less than 1%

From Table 3 note that all standard values between the independent variable (Supply chain flexibility), the mediating variable (staffing practices), and the dependent variable

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(organizational excellence) are significant because their probability values are all less than 1%.

Based on the above, we reject the null hypothesis and accept the alternative hypothesis for each of the three main hypotheses of the study, meaning that there is a significant relationship between the three variables.

Table (4) shows the paths between each latent variable and its dimensions.

path	Standard Path Coefficient	p	Decision
X ---> ax	0.605	0.000***	Supported
X ---> bx	0.639	0.000***	Supported
X ---> cx	0.625	0.000***	Supported
X ---> dx	0.553	0.000***	Supported
X ---> ex	0.544	0.000***	Supported
X ---> fx	0.68	0.000***	Supported
M ---> am	0.693	0.000***	Supported
M ---> bm	0.703	0.000***	Supported
M ---> cm	0.63	0.000***	Supported
Y ---> ayy	0.68	0.000***	Supported
Y ---> byy	0.63	0.000***	Supported
Y ---> cyy	0.717	0.000***	Supported
Y ---> dyy	0.647	0.000***	Supported
Y ---> eyy	0.575	0.000***	Supported

Source: researcher based on AMOS Output.

*** Significant at a level of significance less than 1%

The results of table 4 show that each dimension of the independent variable, which is supply chain flexibility, has a significant effect ($P = 0.000 < 0.01$ for all dimensions) on the independent variable; therefore, both the mediating variable and the dependent variable will be affected by those dimensions. This leads to the rejection of the hypotheses of the first and third hypotheses, which means that there is a significant effect between supply chain flexibility and both staffing practices and organizational excellence. Also, each dimension of the

mediating variable, which is staffing practices, has a significant effect on the mediating variable, and therefore the dependent variable will be affected by those dimensions. This leads to the rejection of the second hypothesis, which means that there is a significant effect between the staffing practices and organizational excellence.

Table (5) used to indicate the direct and indirect effect and whether the mediation is (partial or complete).

Relationship	Direct effect	Indirect effect	Decision
X--->M--->Y	0.681 (P=0.008)	0.245 (P=0.000)	Partial mediation

that the direct effect is significant ($P = 0.008 < 0.01$) and indirect effect is significant ($P = 0.000 < 0.01$), which means that the mediation is partial.

This means that employment practices affect the relationship between supply chain flexibility as an independent variable and institutional excellence as a dependent variable. Also shows the extent to which the variables contribute to the estimation of each variable as a latent variable.

4. Findings, discussion, and conclusion

The main objective is to investigate the mediating role of staffing practices in the relationships between supply chain flexibility and organizational excellence in Egyptian pharmaceutical companies. Even though earlier research has offered empirical evidence supporting the connections between deviant supply chain management and organizational excellence and other studies have offered empirical evidence supporting staffing practices and organizational excellence, none of the earlier studies attempted to incorporate these three variables into a comprehensive model that would capture the intricate interactions between supply chain flexibility, staffing

practices, and organizational excellence in Egyptian manufacturing companies.

More precisely, by examining the research model shown in Figure 1 using a structural equation modeling (SEM) approach.

The analytical results of the hypotheses are:

Regarding the first hypothesis the null hypothesis is rejected, and the alternative hypothesis is that there is a significant impact of supply chain flexibility on achieving organizational excellence. By reviewing the value of the significance level of the test, it was found that it reached 0.000, which is less than 0.05.

The results agreed with the findings of (Magova and Kessy ,2020; Anh et al ,2019; Urtasun-Alonso et al ,2014), concluded that Supply chain flexibility plays a crucial role in achieving organizational excellence.

Regarding the results of the second hypothesis, the null hypothesis is rejected, and the alternative hypothesis is accepted that there is a significant impact of supply chain flexibility on staffing practices. By reviewing the value of the significance level of the test, it was found that it reached 0.000, which is less than 0.05, indicating a clear relationship between supply chain flexibility, human resources practices, and staffing practices. Furthermore, industrial companies emphasize the importance of flexibility in supply chains, particularly in a dynamic environment. As a result, Egyptian pharmaceutical manufacturing companies that have experienced multiple supply chain disruptions in recent years should stress the significance of supply chain management as a vital prerequisite for enhancing supply chain flexibility and performance.

This finding aligns with the research conducted by Where (Khanuja and Jain, 2021; Magova and Kessy, 2020).

Regarding the results of the third hypothesis, the null hypothesis is rejected, and the alternative hypothesis was accepted that there is a significant impact of staffing practices on achieving organizational excellence. By reviewing the value of the significance level of the test, it was found that it reached 0.000, which is less than 0.05.

This result is in line with the findings of (Ahmed and Ismail, 2023; Al-Ma'aitah, 2020; Haraisa and Tarawneh, 2020 ; Siagian et al , 2021 Arbab and Abaker, 2018).

Regarding the results of the fourth hypothesis, the null hypothesis is accepted that there is a partial mediation of staffing practices in the relationship between supply chain flexibility and organizational excellence in Egyptian pharmaceutical manufacturing companies. It reached (0.000), which is less than 0.05.

Using SEM, staffing practices partially mediate the relationship between supply chain flexibility and organizational excellence.

Supply chain flexibility allows companies to adapt to fluctuations in demand, raw material availability, and regulations. Staffing practices, when designed strategically, support this adaptation by ensuring the right people with the right skills are available at the right time. However, other factors besides staffing also influence organizational excellence, such as leadership, technology, and overall business strategy.

Additionally, the research has discovered that supply chain flexibility raises customer satisfaction levels, response rates, and organizational excellence. But flexibility is a dynamic concept that calls for both substantial preparation and human capabilities. The results of this study indicate that staffing practices can partially mediate the relationship between supply chain flexibility and organizational excellence. And the ability of the company to respond to market demands is referred to as

flexibility in supply chains. Therefore, if the company wants to react to erratic demand, free capacity is always required. Setting up a flexible supply chain, having capacity accessible when needed, and taking into consideration the staffing practices necessary to sustain organizational excellence.

5.conclusion

Through the analysis of the literature, the study has conceptualized supply chain flexibility, staffing practices, and organizational excellence in a way that seems more practical and useful in business. However, integration and flexibility capabilities are dynamic and change depending on the demands of the market, the gap between supply and demand, business requirements, and the level of partner involvement. Organisations are under increasing pressure to evolve from being recoverable to becoming operationally flexible to achieve organizational excellence through the partial mediation of staffing practices. The researcher has created a questionnaire to collect data. The questionnaire's validity and reliability have been tested. The correlation and simple regression methods were used to test the research hypothesis, After discussing the results of the hypotheses of this research, the following is concluded:

The results show that staffing practices have a statistically partial mediation effect on the relationship between supply chain flexibility and organizational excellence in Egyptian pharmaceutical manufacturing companies.

5.Recommendations, Implications, and limitations

The recommendations could be explained in detail in the following action in table (6)

Table 6 Action plan

Recommendations	Responsibility	KPI	Time
1. Develop flexible	Human	Customer-	6-12

staffing models:	resources, IT, and R&D departments.	accessible information can be updated. quick reaction to evaluations and comments from customers.	months.
2. Assess training programs.	HR and top management commitment	Fit in with the requirements for training. Put employee satisfaction first. Verify that your training materials are current.	From 1 to 3 years.
3. Invest in talent acquisition and management:	HR, R&D Departments.	Increasing employees' productivity and satisfaction,	continuous monitoring of security
4. Commit to excellence.	Effective coordination between all departments	Achieving organizational excellence	1-2 years
5. Align staffing practices with your specific organizational context and supply chain needs.	Supply chain, HR departments, and management commitment.	relationship will be in a better position to accomplish their objectives, adapt to changing market conditions, and keep a competitive advantage.	1-3 Years

Research limitations.

Investigating the role of staffing practices as a mediating variable between supply chain flexibility and organizational excellence in the pharmaceutical manufacturing companies in Egypt

This study examines the mediating role of staffing practices in organizational excellence. It is limited to pharmaceutical manufacturing companies in Greater Cairo, making its results ungeneralizable. The research's findings could change if the data comes from different industries. The study's application period is 2022-2024.

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