



Exploring the Linkages between Organizational Resilience, Corporate  
Diversification Strategy, and Slack Resources

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**ABSTRACT**

**Objective:** Organizational resilience is crucial for the success of any business. However, the existing research on the subject is limited, and a more well-defined and unified paradigm is needed. Therefore, the central goal of this research study is to inspect whether the level of slack resources significantly influences the association between diversification strategy and the organization's ability to build resilience. **Methodology:** The investigation analyzed a study sample of 291 employees from three different telecommunications firms in Jordan using a quantitative, descriptive, and correlational design to achieve its objectives. Structural Equation Modeling with the Amos 26 software was used to test the research hypotheses. **Results:** The study has revealed a positive correlation between diversification strategy and organizational resilience. In addition to this, the research has found that slack resources are positively associated with organizational resilience. It has also shed light on the significant mediating impact of slack resources in this relationship. **Recommendations:** These findings indicate that slack resources can amplify the potential benefits of a diversification strategy, which, in turn, enhances an organization's resilience. The study suggests companies

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should utilize their slack resources when diversifying into new markets or products. A diversification strategy can enable them to adeptly tackle any challenges that come their way and become more resilient in the long run.

**Keywords:** Diversification strategy, Slack resources, Organizational resilience, Telecommunication companies, Jordan.

استكشاف الروابط بين المرونة التنظيمية واستراتيجية التنوع والموارد الراكدة

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## ملخص

**الهدف:** هدفت هذه الدراسة الى اختبار ما إذا كان مستوى الموارد الراكدة يؤثر على العلاقة بين استراتيجية التنوع وقدرة المنظمة على بناء المرونة. تكون مجتمع الدراسة من شركات الاتصالات في الأردن والبالغ عددها ثلاث شركات. **المنهج:** تم جمع بيانات الدراسة من خلال استبانة وزعت على عينة قسدية تكونت من 291 موظفا يعملون في الشركات المبحوثة. تم استخدام المنهج الكمي والوصفي والتصميم الارتباطي لتحقيق أهداف الدراسة، كما تم تطبيق أسلوب نمذجة المعادلات الهيكلية باستخدام برنامج Amos 26 لاختبار الفرضيات، **النتائج:** كشفت الدراسة عن وجود علاقة إيجابية بين استراتيجية التنوع والمرونة التنظيمية، كما توصلت الدراسة الى أن الموارد الراكدة ترتبط بشكل إيجابي بالمرونة التنظيمية، و أن التأثير الوسيط للموارد الراكدة في العلاقة بين استراتيجية التنوع والمرونة التنظيمية دال احصائيا، وتشير هذه النتائج إلى أن الموارد الراكدة يمكن أن تزيد من الفوائد المحتملة لاستراتيجية التنوع، والذي بدوره يعزز مرونة المنظمة. **التوصيات:** اوصت الدراسة بضرورة استفادة الشركات المبحوثة من مواردها الراكدة عند تطبيق استراتيجيات التنوع سواء في الأسواق أو المنتجات الجديدة، و أن تطبق الشركات المبحوثة استراتيجية التنوع لمعالجة أي تحديات تعترض طريقها والحفاظ على مرونتها على المدى الطويل.

**الكلمات المفتاحية:** استراتيجية التنوع، الموارد الراكدة، المرونة التنظيمية، شركات الاتصالات، الأردن.

## Introduction

In today's complex and unpredictable business environment, organizations face challenges in maintaining effectiveness and longevity (Asafa et al., 2022). According to Yapicioglu (2023), resilience is a crucial capacity for survival in such a turbulent environment. However, as pointed out by Mert, Akkaya, and Andreea (2023), the construction of resilience in organizations is not keeping pace with the ever-increasing speed of environmental turbulence. Hence, it is likely that resilience research will soon become a priority on organizational management research agendas.

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Resilience is widely used in various theoretical contexts to describe an organization regaining stability after experiencing imbalance. It serves as a framework to describe the processes and mechanisms employed by an organization to recover from disruptions (Hillmann & Guenther, 2021). In the organizational context, resilience refers to an organization's ability to adapt and recover from challenges or disruptions, enabling it to continue to operate and achieve its objectives despite circumstances led by turbulence (Kantur & Iseri-Say, 2015). Adapting to turbulent situations is a matter of survival that requires a specific situation management process to address the direct consequences affecting the organization's performance. Despite the challenges organizations face in maintaining their performance, organizational resilience could be the answer that enables them to thrive (Yapicioglu, 2023).

Today, according to the study by Guan et al. (2023), the diversification strategy is one of the most effective methods of coping with challenges. It significantly reduced negative externalities from turbulent events associated with technological advancements, complex economic and political processes, and the spread of disasters and pandemics, including COVID-19. Turbulent times made it nearly impossible to stabilize and survive. Nevertheless, offering unique products and services ensured fewer adverse effects on companies (Essuman et al., 2023). Moreover, a diversification strategy supported by the necessary resources and organizational structure appeared possible even during adversity (Ahmed et al., 2021; Szemző et al., 2022). The diversification strategy was proven feasible due to the considerable body of research in the domain. Researchers found that business environments are volatile and unpredictable. Hence, purposeful diversification allowed companies to adapt to the changes (Alves et al., 2020; Kong et al., 2021; Menéndez Blanco & Montes Botella, 2016; Snorek et al., 2023).

Nevertheless, the effectiveness of diversification strategy in developing organizational resilience is a topic that requires further exploration. Literature on the subject has presented mixed results, with some studies indicating positive effects while others show negative effects (Liu, 2022; Stevens & Teal, 2023). Additionally, more than relying solely

on a diversification strategy may be needed to build organizational resilience (Essuman et al., 2023). Most research has also focused on the strategic and organizational capabilities required to develop resilience before a disruption. Few studies have addressed post-disruption learning of resilience (Ali, Hanafiah, & Mogindol, 2023).

Given the literature gaps and the challenges posed by the coronavirus pandemic, rapid technological change, and political instability, it is essential to understand how diversification strategy impacts organizational resilience through slack resources. Therefore, this study examines and discusses how diversification strategy can influence organizational resilience, considering the mediating role of slack resources. As one of the first empirical studies on this subject, the study's findings contribute significantly to the literature on organizational resilience, providing insights on enhancing resilience, which is crucial for achieving positive outcomes, even in adversity.

## **Theoretical Background and Hypotheses**

### **Diversification strategy**

Diversification strategy is one of the traditional growth strategies businesses utilize, which involves incorporating new products or services into an existing product line (Munyasya & Muathe, 2023). This strategy is predicated on the offering of innovative goods or entrance into newfangled markets, or sometimes, both. The diversification strategy entails the management's decision to venture into a completely different field of business, distinct from the nature of the business presently carried out by the organization, to realize long-term profits (Oladimeji & Udosen, 2019). In essence, a diversification strategy implies that the business organization expands by offering a new product or service, adding new markets to the existing ones, or incorporating additional production operations into its current operations (Khan & Luiz, 2023).

Organizations often adopt diversification strategies for a multitude of reasons. Firstly, diversification allows companies to achieve specific goals, such as increased profitability (Okegbemiro & Adim, 2023). Secondly, companies may encounter challenges, such as maturity in the

product life cycle or intense competition from rivals, and diversification can help manage these challenges while maintaining acceptable profits (Ramamohan Rao, 2023). Finally, organizations embrace diversification strategies to spread risks, generate cash flows that exceed investment requirements in strategic business units, and increase overall growth rates (Dhir & Dhir, 2015).

The diversification strategy comprises two distinct approaches, namely, related and unrelated diversification (Ansoff, 1958). The related diversification strategy refers to utilizing an organization's strengths to diversify into a new industry associated with the current industry. In this context, diversification in a related sector implies that the products, production processes, and marketing skills required for entry are similar, such as the technology, associated risks, and distribution channels utilized (Nigam & Gupta, 2023). This strategy is commonly applied in developing markets and entails adding a new product or market related to the organization's primary products. Consumers perceive it as one of the core products of the organization. This strategy depends on adding new products connected to the organization's work in one or more aspects, such as technology. It also involves the firm's entrance into innovative activities that are interconnected and well-matched with its primary function in terms of technology, markets, or production (Yan, Mmbaga & Gras, 2023).

The unrelated diversification strategy, also known as conglomerate diversification, is another type of diversification. Unlike related diversification, this method is achieved when the new business is not related to the existing one and may involve an acquisition or merger with a firm that is entirely different in terms of its activity type (Simone, 2022). The primary motive for following this strategy is often financial considerations, particularly for organizations with a strong financial position seeking more profitability and not finding attractive growth opportunities in similar industries (Yan et al., 2023).

### **Slack resources**

Slack resources, or organizational slack, is a term used to describe the resources available to an organization that surpass the lowest limit of

inputs needed to manufacture a specific organizational output (Heubeck & Meckl, 2023). Additionally, it refers to exceeding the required resources needed for an organization's operations. Slack resources can be used, transferred, or redistributed to accomplish the organization's aims (Voss, Sirdeshmukh & Voss, 2008).

Studies have confirmed that slack resources lead to numerous benefits, such as expanding organizational capabilities (Sun, Du & Ding, 2020), increasing flexibility to adjust to internal and external challenges, and finding alternative options to protect organizations from the risks of failure (Cheng & Kesner, 1997). In addition, it encourages taking calculated risks to prevent organizational deterioration, provides the necessary information to achieve compatibility between structural and strategic slacks that impact the organization's ability to adapt to its environment, reduces conflict among members of the organization, and encourages innovation while providing motivation and incentives for development (Bradley, Shepherd & Wiklund, 2011). This, in turn, enables organizations to maintain their competitive distinction.

Companies can access slack resources in three ways. Bourgeois and Singh (1983) defined the first resource type as "available" because it is readily available to the company. This resource type is unexplored and can be used in new strategies and innovations (Agusti et al., 2023). It is also easier to reallocate and distribute to another strategic activity for the company's interests (Bourgeois & Singh, 1983). This is because the resource may be "recoverable" and can be recovered, allocated to the company's activities, and further integrated into the productive resource. This type of resource may be available to human resources, which may be challenging to reallocate and available to do another strategic activity that the company desires (Bourgeois & Singh, 1983). Finally, the "potential" resource slack may be the resource that the acquiring market, such as financing and loans, may have. This resource is readily available and may be available for the company to develop its strategies (Lefebvre, 2023).

Slack resources have garnered significant attention in recent years, resulting in various classifications in contemporary administrative thought. One of the most commonly used classifications is the absorbed

and unabsorbed classification of slack resources (Singh, 1986). Slack resources have attracted increased interest in recent decades, and as a result, common classifications have emerged in modern administrative thought. The most frequently used classification is the absorbed and unabsorbed classification of slack resources (Singh, 1986). This categorization of slack resources can be associated with the method the firm incorporates them. Resources can be “absorbed,” indicating they are entangled in the firm’s actions, production, and human resources (Nohria & Gulati, 1996). These are, therefore, excess and idle costs that can be recovered and reallocated to other activities (Voss, Sirdeshmukh & Voss, 2008). The literature shows that absorbed resources can enable more exploitation activities in incremental innovations (Sharfman et al., 1988). Reducing overhead expenses and talent reallocation can express a company’s strategy to optimize and leverage this absorbed resource (Bourgeois & Singh, 1983). There are also “unabsorbed” resources, such as cash with immediate liquidity. These have not been used in the company’s activities. Unabsorbed resources can influence radical innovations, as their easy allocation facilitates decision-making for exploration (Sharfman et al., 1988). For example, these resources can assist in developing a new product (Nohria & Gulati, 1996), entering a new market (Wan, Jin & Ji, 2023), innovation projects (Lefebvre, 2023), and even investing in new technologies (Tan & Peng, 2003).

### **Organizational Resilience**

Recently, there has been an increased focus on resilience in organizational research and management. Resilience is essential for business success during instability and uncertainty, enabling organizations to handle various disruptions, from unfavorable circumstances to major crises (Duchek, 2020; Yahia Marzouk & Jin, 2022).

The concept of resilience has been widely discussed in various fields, such as psychology and ecology, with numerous studies (e.g., Williams et al., 2017). Resilience is, therefore, determined based on the research field in which it is situated. The most common definition in management literature often presents resilience as the aptitude to rebound after experiencing a tragedy (Powley, 2009). As defined by Hollnagel (2008),



organizational resilience demonstrates the company's capacity to endure and recuperate from a threat, returning to a state of stability. Somers (2009) describes organizational resilience as the capability of a firm to rebound from an unexpected and intermittent situation, which produces weakness and necessitates an uncommon response. According to Wildavsky (1991), resilience denotes coping with unpredicted hazards after they have occurred by knowing how to recover. In other words, organizational resilience represents a firm's aptitude to familiarize, recuperate, and prosper in disturbances, emergencies, or unpredicted environmental fluctuations. Mileti (1999) and Burby et al. (2000) posit that organizational resilience is the ability to engross the influence or reduce the effects of a crisis, limiting the resulting losses. Powley (2009) suggests that resilience is a latent capacity that only becomes active in times of crisis. Haimes et al. (2008) and Therrien et al. (2015) confirm that organizational resilience is the capability of a system to endure a significant disturbance while maintaining a satisfactory level of degradation and recovering within a suitable timeframe and cost.

Prior research explains that companies showing high levels of resilience have two features. The first is stability, which keeps the key institution's features, such as functions and core structure, working despite the breakdown. The second is flexibility, which is the ability to produce alternative solutions to negate the impact of uncertainty (Sajko et al., 2021). Furthermore, the literature suggests that anticipation, reaction, and adaptation are primary constituents of an organization's resilience (Duchek, 2020; Vakilzadeh & Haase, 2020).

There are several vital benefits arising from organizational resilience. Among them is improving a company's capability to react efficiently and effectively to environmental changes, allowing it to act in such events (Ortiz-de-Mandojana & Bansal, 2016). Likewise, it permits the continuity of the company's effectiveness by embracing adaptive approaches with modifications in the work setting to bypass predicted complications (Vakilzadeh & Haase, 2020). Further, it enriches the firm's capability to react to diverse crises, aligns its strategic plans for the surrounding circumstances, and contributes to the establishment of essential aptitudes

to diversify the workplace's culture (Linnenluecke, 2017). Also, the company's resilience inspires ingenuity and invention based on change, allowing the company to deliver fresh resolutions that fulfill the challenges of the environment (Kantur & İşeri-Say, 2012). On the contrary, the lack of resilience results in substantial casualties for the company and may lead to its leaving the market (Linnenluecke, 2017). Lastly, companies' absence of resilience in retort to trouble conditions, such as infectious and global epidemics like the Corona pandemic, constitutes an intense hazard to these companies (Djalante et al., 2020).

### **Hypothesis Development**

Companies' capacity to grow, adjust, and maintain sustainability can be attributed to diverse facets, with strategic diversification for products and services as a fundamental driver. Prior literature demonstrates that strategic diversification of services and products is positively linked with a company's resilience (Alves et al., 2020; Menéndez Blanco and Montes Botella, 2016). Similarly, diversifying services and products and researching unexplored markets can improve a company's resilience. Precisely, strategic diversification has been discovered to raise the resilience of all types of businesses without exclusions (Ahmed et al., 2021). Diversification stimulates companies to build new linkages across diverse settings and present creative goods, "products or services" (Szemző et al., 2022). This strategy also authorizes growth into various sectors or markets, mitigating hazards while preserving abundant cash reserves, greatly contributing to a company's general resilience (Snorek et al., 2023). Earlier investigations by Kong et al. (2021), Snorek et al. (2023), and Szemző et al. (2022) have uncovered that strategic diversification positively and significantly affects the resilience extent of a company. Established on the above, the first hypothesis was formulated as follows:

**H1:** Corporate diversification strategy positively affects organizational resilience.

Product and service diversification can provide invaluable Slack resources to businesses. For illustration, it offers firms heightened

anticipated returns and diminished threats, resulting in excess liquidity (Qinglei et al., 2015). Also, diversification yields resources that, once employed by the firm, can be switched during trouble, such as a surplus workforce (Orlando et al., 2018). Likewise, by diversification, businesses can acquire outer resources, such as debt financing (Bourgeois & Singh, 1983). Companies can also obtain the capacities required for creation, such as administrative abilities, staff aptitudes, and the latest technologies via strategic diversification (Dinh et al., 2023; Kreugel et al., 2023; Nguyen et al., 2019). Accordingly, the second hypothesis was formulated as follows:

**H2:** Corporate diversification strategy positively affects slack resources.

Organizational slack has proven its ability to enable companies to adapt to changes in the surrounding environment (Tan & Peng, 2003). Such changes cause managers to use slack resources to adjust the company to a model that better fits the market (Hu et al., 2023; Vitale et al., 2023; Zhang et al., 2022). In this regard, Voss et al. (2008) confirm that slack resources lead to increased new product processing and exploration in response to environmental threats. Moreover, the availability of organizational slack resources affects companies' decisions about future investments, such as diversifying into other sectors. It alike encloses a firm's strategic decision about the timing of presenting a unique service or product to the market (Richtnér & Ahlström, 2006). Organizational slack is also crucial in designing fresh product projects (Lefebvre, 2023). Furthermore, Nohria and Gulati (1996) showed that organizational slack increases R&D and innovation rate performance. The overwhelming empirical evidence provided by previous studies (e.g., Conz et al., 2023; Du et al., 2022; Mao et al., 2023; Vitale et al., 2023) indicates a positive relationship between surplus resources and organizational resilience. Based on the above, it is evident that slack resources are crucial in increasing organizational resilience by facilitating innovation performance and providing new products in response to external threats. Therefore, the study's third hypothesis is:

**H3:** Slack resources have a significant and positive impact on organizational resilience.

The impact of diversification strategy on organizational resilience has been a topic of debate. While some studies suggest that diversifying operations can hurt a company's resilience, others argue that it can have a positively impact. The resource allocation theory explains that diversification achieved by investing in other markets or sectors can decrease available cash and increase the company's future loans, thus lowering its resilience (Liu, 2022).

Despite the studies stream that found positive results, previous studies also have highlighted that diversification can positively and negatively affect a company's resilience. Diversified companies can distribute risks across multiple marketing channels, making them more resilient to unique shocks. However, they must also allocate their efforts and resources across various actions, which can decrease their effectiveness. Moreover, diversification outside value-creation activities can reduce a company's resilience, while diversification within the value chain can enhance it (Stevens & Teal, 2023).

However, there must be more than a diversification strategy to guarantee organizational resilience (Essuman et al., 2023). Previous studies have shown that slack resources have a robust positive effect on organizational resilience, and the success of a diversification strategy depends heavily on the presence of slack resources. Therefore, slack resources can act as a mediator in the relationship between diversification strategy and organizational resilience. In light of these findings, the fourth hypothesis in this study is that:

**H4:** Slack resources mediate the relationship between diversification strategy and organizational resilience.

## **Research Method**

### **Research design**

The research approach used in this study was quantitative research. It used the descriptive and predictive correlational research design and survey study strategy. Descriptive research is one of the strategies used to describe a specific population's characteristics or relationships among its

variables (Gil, 2017). This study used this approach to describe the characteristics of a diversification strategy, the organizational resilience concept, and slack resources within various telecommunication companies. The quantitative approach was ideal for evaluating the effects presented in the theoretical research model. It was specifically used to measure the study variables to determine their relationships with each other (Hair et al., 2011).

### **Study population and sample**

The study was conducted on three Jordanian telecommunication companies. A simple random sample of employees from various units, including strategic planning, R&D, operations, marketing, logistics, and finance, were selected regardless of their job position, whether senior or junior. To ensure the study's accuracy, GPower, an independent power analysis program often utilized in social, behavioral, and biomedical sciences, was used to determine the minimum sample size by adopting the parameters and criteria outlined by Faul et al. (2009). The software considered the relationships between independent and dependent variables at a desired significance level and an acceptable error rate. The minimum sample size required to measure the data was 164 valid responses, with a confidence level of 0.95 and an error rate of 0.05, using two predictors (Diversification strategy and Slack Resources) for the dependent variable (Organizational Resilience). The total number of valid questionnaires was 291, subjected to statistical analysis.

### **Characteristics of the Sample**

The sample selection was random, targeting individuals employed at three communication companies in Jordan. A total of 291 respondents participated in the study, with 54% being women. The predominant age group consisted of individuals in the 26–35 age range, constituting 43%. The second-largest group was individuals in the 36–45 age range, accounting for 32%, while those aged 25 and below made up 19%. Respondents in the 46–55 age range constituted 4%; the remaining individuals were employees aged 56 and above. Most respondents held specialist positions -not managing a subordinate team- 77%. The

remaining respondents held managerial positions. 69% of the respondents have a bachelor's degree. A significant 73% worked in operation, marketing, and financing functions, 13.5% in strategic planning, 9% in research and development, and the rest in distribution functions. Regarding experience, individuals have job tenure with an average of 15 years and a standard deviation of 4.3 years.

### **Data collection**

Data was gathered for research purposes from May 11 to September 15, 2023. An online questionnaire was sent to a select group of participants who work at three Jordanian telecommunication companies. Of the participants, 291 completed questionnaires were received and then thoroughly reviewed for accuracy and completeness. Consequently, all completed questionnaires were included in the final analysis of the research data.

### **Measures**

The measure for diversification strategy used in this study was adopted from Asman (2013) and consists of 5 items. Higher scores indicate higher levels of diversification activities. The slack resources were measured using a 4-item scale introduced by Atuahene-Gima (2005). Organizational resilience was evaluated using a 9-item scale developed by Kantur and Iseri-Say (2015). Participants' responses were rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree."

### **Data analysis**

Several statistical techniques were used in this study, but most frequently, Structural Equation Modeling and Partial Least Squares were applied. These approaches allow researchers to measure and establish the relationships between the variables, making it possible to determine mediators and control the influence of measurement errors. Moreover, these methodologies are essential options for investigating complex phenomena and validating the predictive and measuring ability of theoretical data models. PLS-SEM works well when it is necessary to evaluate complicated relationships and predict the outcomes with the help

of a minimum amount of presented data and non-established relationships. The tool may help predict the desired outcomes using the conditions where statistical data do not align with the normality criterion or sample size specification. Thus, this is a perfect chance to use it for an exploratory and predictive study presented in this paper.

This study also processed the data using the SPSS 26 and Amos 26 software programs. SPSS 26 was used to analyze outliers and missing data and to examine the normality of data related to the main variables. Moreover, descriptive statistics, reliability analysis, and correlation analysis were performed using SPSS 26. Amos 26.0 was employed for factor analysis of variables, fitness analysis, and verification of mediating effects between independent and dependent variables. Bootstrap analysis was conducted for mediating effect verification in Amos 26.

### **Evaluation of Common Method Bias**

A principal component analysis was conducted according to Podsakoff et al.'s (2003) method to evaluate common method bias. The results showed that the first component accounted for 19.97% of the total variance, less than 50%. Therefore, it was determined that common method bias did not significantly threaten the survey data analysis.

### **Descriptive analysis of the model dimensions**

The data that was collected has been summarized using descriptive statistics. The software SPSS was utilized to compute the minimum, maximum, mean, and standard deviation values of the model constructs under investigation. The statistical analysis results are presented in Table 1.

**Table (1):** Descriptive Statistics of the Model Dimensions.

Constructs	Items	Minimum	Maximum	Mean	Standard Deviation
Diversification strategy	5	1	5	4.38	0.711
Slack resources	4	1	5	4.02	0.793
Organizational resilience	9	1	5	4.19	0.849

The data presented in Table 1 shows that individual's responses to the statements in each construct were consistent, with scores ranging from 1 to 5. This demonstrates that each person had a clear perception of the statements presented in each dimension. Moreover, the mean values for all constructs were higher than 4, indicating a high-frequency level of agreement with the content of the statements. The standard deviation values for each construct were between 0.70 and 0.85, indicating that the responses to the statements composing each construct were relatively homogeneous.

### **Correlation Analysis**

The results of the correlation analysis between variables are shown in Table 2. Specifically, diversification strategy and slack resources positively correlate with  $r = 0.549$  ( $p < 0.01$ ). Diversification strategy and organizational resilience are correlated with  $r = 0.563$  ( $p < 0.01$ ), and slack resources and organizational resilience are associated with  $r = 0.588$  ( $p < 0.01$ ), indicating positive relationships. Typically, if the correlation coefficient between variables exceeds 0.8, there is a risk of multicollinearity. However, no variables suggest multicollinearity, and the Variance Inflation Factor (VIF) obtained through multiple regression analysis confirms that all measurement variables are less than 5, indicating no multicollinearity issue exists (Hair et al., 2011).



**Table (2):** Correlation Analysis.

<b>Construct</b>	<b>Diversification strategy</b>	<b>Slack resources</b>	<b>Organizational resilience</b>
Diversification strategy			
Slack resources	0.549**		
Organizational resilience	0.563**	0.588**	

“\*\*\*p≤0.001 \*\*p≤0.01 \*p≤0.05”

### **Validation of the Measurement Model Fit**

Confirmatory factor analysis (CFA) was employed to evaluate the adequacy of the measurement model for the latent variables that include diversification strategy, slack resources, and organizational resilience. Moreover, scrutinizing the measurement model through appropriate fit indices is essential to ensure precise estimation of the conceptual elements of a research model and to examine the influence between variables through structural model analysis. Therefore, this study conducted a measurement model analysis for the variables included to confirm whether coefficients were showing substantial errors, estimates of negative error variances, or high correlations ( $\pm 0.90$  or higher) between estimated coefficients. No estimates violating assumptions were found, and all assumptions were satisfied (Shek & Yu, 2014).

Various statistics are used for model fit assessment, including “absolute fit indices, incremental fit indices, and parsimonious fit indices such as chi-square, RMR (Root Mean Square Residual), GFI (Goodness Fit Index), RMSEA (Root Mean Square Error of Approximation), Normed chi-square, TLI (Tucker-Lewis Index), and CFI (Comparative Fit Index).” Chi-square, RMSEA, TLI, and CFI are widely utilized for the goodness of fit. A chi-square (CMIN) value with a p-value above .05 is considered a good fit, and RMSEA values below 0.1, TLI values above 0.9, and CFI values above 0.9 are considered good fits. The fit indices for the measurement model in this study were satisfactory, with  $\chi^2 = 16.141$  (p=0.224), RMSEA=0.075, TLI=0.982, and CFI=0.989, indicating an

adequate level of fit (Collier, 2020). The confirmatory factor analysis results for the paths between diversification strategy, slack resources, and organizational resilience were statistically significant at the 0.001 significance level. The above results are presented in Table 3.

**Table (3):** Results of Confirmatory Factor Analysis.

Latent Variable	Items	Estimate		S.E	C.R
		B	B		
Diversification strategy	“The organization deals in more than one product or service.”	1.440	0.921	0.182	10.211***
	“The organization has developed new products or services that appeal to its existing customer groups.”	1.150	0.907	0.188	9.892***
	“The organization is producing new products to fully utilize the potential of the existing technological capacity.”	1.282	0.903	0.161	9.355***
	“The organization has expanded its geographical market to other regions or	1.611	0.908	0.163	8.971***

Latent Variable	Items	Estimate		S.E	C.R
		B	B		
	countries other than its original market.”				
	“The organization deals in unrelated but profitable products or services.”	1.115	0.910	0.158	11.013***
Slack resources	“This firm has uncommitted resources that can quickly be used to fund new strategic initiatives.”	1.332	0.900	0.098	10.661***
	“This firm has few resources available in the short run to fund its initiatives (reverse scored).”	1.501	0.893	0.095	14.857***
	“We are able to obtain resources at short notice to support new strategic initiatives.”	1.082	0.849	0.105	12.335***
	“We have substantial resources at the discretion of management for funding new	1.094	0.885	0.084	7.922***

Latent Variable	Items	Estimate		S.E	C.R
		B	B		
	strategic initiatives.”				
Organizational resilience	“Our organization stands straight and preserves its position.”	1.418	0.914	0.079	9.110***
	“Our organization is successful in generating diverse solutions.”	1.397	0.881	0.084	13.470***
	“Our organization rapidly takes action.”	1.224	0.895	0.068	11.021***
	“Our organization develops alternatives in order to benefit from negative circumstances.”	1.007	0.851	0.091	10.661***
	“Our organization is agile in taking required action when needed.”	1.210	0.883	0.035	11.143***
	“Our organization is a place where all the employees are engaged to	1.050	0.911	0.021	10.558***

Latent Variable	Items	Estimate		S.E	C.R
		B	B		
	do what is required of them.”				
	“Our organization is successful in acting as a whole with all of its employees.”	1.114	0.893	0.049	9.449***
	“Our organization shows resistance to the end in order not to lose.”	1.207	0.872	0.053	10.731***
	“Our organization does not give up and continues its path.”	1.060	0.886	0.067	12.773***

“ $\chi^2 = 16.141$  ( $p=0.224$ ), CFI=0.989, TLI=0.982, IFI=.923, RMSEA=0.075, \*\*\* $p<.001$ .”

### Structural Model Analysis

The results obtained from the structural model analysis indicate that the corporate diversification strategy ( $\beta = 0.609$ ,  $p < 0.01$ ; Hypothesis 1) and slack resources ( $\beta = 0.481$ ,  $p < 0.05$ ; Hypothesis 2) significantly influence organizational resilience. Therefore, it can be stated that Hypothesis 1 and 2 are validated. Furthermore, the direct effect of the corporate diversification strategy on slack resources was found to be significant ( $\beta = 0.714$ ,  $p = 0.001$ ), so hypothesis 3 was supported.

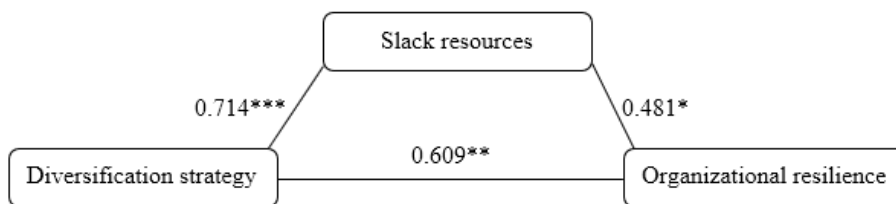
In light of the above, corporate diversification strategy and slack resources significantly influence organizational resilience. It was also

found that the corporate diversification strategy has a positively significant influence on slack resources. The results of the structural model analysis are presented in Table 4, and the standard path coefficients of the structural model are visually depicted in Figure 1.

**Table (4):** Results of Structural Model Analysis.

Paths	Estimate		S.E	C.R
	B	B		
Diversification strategy → slack resources	0.762	0.714	0.228	6.112***
Diversification strategy → organizational resilience	0.882	0.609	0.401	3.588**
Slack resources → organizational resilience	0.693	0.481	0.398	3.114*

“Note: \*\*\* $p \leq 0.001$  \*\* $p \leq 0.01$  \* $p \leq 0.05$ ; S.E: standard error; C.R: coefficient of regression.”



**Figure (1):** Structural Model.

### Mediation Effect Verification

A mediation analysis examined the mediating role of slack resources in the relationship between corporate diversification strategy and organizational resilience. To explore this mediation effect, a bias-corrected bootstrapping analysis was performed with 5,000 resamples. The results obtained from the mediation effect estimate analysis with bootstrap 95% confidence demonstrated that slack resources ( $\beta = 0.594$ ,  $p < 0.05$ ; Hypothesis 4), with the absence of zero value in the intersection of the confidence interval values (0.215 to 3.031) at 95% confidence level,

significantly mediate the relationship between corporate diversification strategy and organizational resilience, confirming the validity of H4 as shown in Table 5.

In light of the above, it was further determined that there is a mediation effect for slack resources in the relationship between corporate diversification strategy and organizational resilience. This suggests that the slack resources are vital to maximizing the organization's diversification strategy benefits to achieve high resilience levels.

**Table (5):** Results of Mediation Analysis.

<b>Path</b>	<b>Estimate</b>	<b>S.E</b>	<b>95% Confidence Interval</b>
Diversification strategy → slack resources → organizational resilience	0.594	0.397	0.215 – 3.031

### **Discussion**

The discussion of the results obtained in this study aligns with the proposed hypotheses. Regarding the diversification strategy, diversifying products, services, and markets positively and significantly impacted the organization's resilience. The estimates show that implementing a diversification strategy increases the company's resilience. This result aligns with prior studies (e.g., Alves et al., 2020; Essuman et al., 2022; Menéndez Blanco & Montes Botella, 2016), which demonstrate that vertical and horizontal diversification results in enhancing organizations' financial sources, enabling them to prepare strategies and plans to mitigate the environmental disruption rapidly, and backs to the stable stage. This is also supported by the idea that diversification strategies are positive for companies during turbulent situations and that companies with more exploratory strategies targeting new products and markets tend to handle disruption better (Alves et al., 2020; Menéndez Blanco & Montes Botella, 2016). Previous studies have also shown that implementing the diversification strategy allows the company to distribute the risk among

several business directions, thus eliminating the threat of an immediate loss of the company that could arise from the loss of a single business profile (Snorek et al., 2023). Moreover, diversification enables companies to cope with competition, reducing or minimizing costs, increasing profits, entering new markets, acquiring scarce resources, gaining technology or technical knowledge, and adjusting production to declining demand and increased uncertainties by narrowing or diversifying their product portfolios (Essuman et al., 2022; Snorek et al., 2023; Szemző et al., 2022), which all are essential for firm resilience.

The results of testing the second hypothesis confirmed that the diversification strategy positively affects the slack resources. These findings are in line with prior research performed by Dinh et al. (2023), Kreugel et al. (2023), Nguyen et al. (2019), and Qinglei et al. (2015), which stress a positive connection between the diversification strategy and the slack resources. Additionally, previous studies have demonstrated that firms execute strategic diversification by utilizing their existing resource combination (Qinglei et al., 2015). Next, companies obtain and create new resources and transform them into dynamic capabilities to maintain prosperity in a dramatically changing business environment (Kreugel et al., 2023). These resources acquired by strategic diversification can involve underutilized material resources, hidden abstract resources, and external and internal economic resources that generate cash (Nguyen et al., 2019).

The results obtained from testing the third hypothesis showed that the slack resources positively affect the companies' resilience. These results align with previous research (e.g., Conz et al., 2023; Du et al., 2022; Hu et al., 2023; Mao et al., 2023; Vitale et al., 2023; Zhang et al., 2022), which proved that specific types of slack resources are vital for firms' resilience. More specifically, a solid financial position, sufficient managerial capabilities, and expertise are crucial for success during turbulent times because there are different types of slack resources (financial, innovative, and managerial) specific to firms that can be perceived as indicators of resilience, and these resources are essential for supporting companies' efforts in coping with a constantly changing environment (Hu et al., 2023;



Mao et al., 2023; Vitale et al., 2023; Zhang et al., 2022), thereby achieving success on short and long term.

Finally, the fourth hypothesis test confirms the mediation role of slack resources in the connection between diversification strategy and organizational resilience. According to Penrose (1959), organizations are encouraged to grow through diversification if they have resources that are not fully utilized in their core activities and can be used in other areas. Considering this, companies may invest in diversification to increase their resilience during shock events using their slack resources (Pettus, 2001). Moreover, Resource-based view arguments emphasize that diversified firms use slack resources more efficiently to mitigate adverse events (Montgomery, 1994).

### **Conclusion**

The growing demands of customers, turbulent global markets, globalization, and increasing competition are familiar to those professionally involved in management, regardless of the size of the enterprise. What still surprises professionals are disruptions that have their sources inside and outside the organization. Therefore, organizations must anticipate disruptions, coexist with disruptions, and return to equilibrium after disruptions occur by developing their resilience. This research addresses the topic of organizational resilience and fills essential research gaps identified in this area. As a result, this study, drawing on data gathered from telecommunication companies operating in Jordan, has proven that corporate diversification strategies supported by slack resources positively impact organizational resilience. More precisely, when organizations have the appropriate and adequate slack resources that support and promote diversification strategy, organizations have more potential to implement diversification strategy, resulting in increased resilience.

### **Practical and theoretical implications**

The impact of disruptions on organizations, which are produced by political risks, economic fluctuations, technological advancement, and the untamed nature, can take various scales and depends not only on the type of disruption but also on the strategy of the organization and its resources.

Such disruption shows that organizations must be prepared for the unknown. Therefore, In response to these disruptions, organizational resilience can be utilized. Hence, organizations must build their resilience using different means and approaches, including diversification strategy and slack resources. Several theories, such as the resource-based view, confirm that enhancing organizational agility, flexibility, adaptability, and resilience depends heavily on the resources and capabilities that can be acquired from a diversification strategy. This perspective emphasizes the role of a resource-based view in developing a company's resilience. Concerning the above, the present research has practical and theoretical implications for organizations and academicians. Firstly, companies that strive to expand their resilience should embrace strategic diversification to mitigate their risk and depend on different sources to generate revenues by penetrating new markets or presenting fresh services or products, which results in maintaining their growth and sustainability. Secondly, companies need to utilize their slack resources effectively and efficiently in stormy times and dedicate those resources to enhance their resilience. Thirdly, realizing the positive effect of slack resources in the connection between diversification and resilience enriches related literature and contributes to developing organizational resilience theory, presenting insights into how internal resources affect an organization's capability to thrive under challenging circumstances. Finally, understanding this relationship helps managers realize the significant role of effective resource management in making their companies more adaptive to challenges produced by the dynamic environment.

The above description informs companies how to boost their performance and expansion in today's tumultuous business environment. In addition, businesses need to focus on a positive correlation between diversification strategy and organizational resilience. In other words, it is recommended that firms embrace diversification and allocate slack resources effectively when implementing the diversification strategy to boost their resilience.

## **Limitations and future research**

This study, like others, has some limitations, providing potential areas for further research. More precisely, this study used a sample of 291 employees working at three telecommunications firms in Jordan, which may hinder the results' generalizability to other economic sectors or organizational settings. This study also was conducted in a single country, Jordan, which could restrict the generalizability of the results to different regions or countries. Another limitation is that a quantitative approach, descriptive methodology, and correlational design have been utilized in this study. As a result, the comprehensive understanding of the underlying mechanisms in the relationship between diversification strategy, slack resources, and organizational resilience will be limited. Based on the above, there is a need for further research to verify and robust the present findings by using diverse and representative samples from different sectors and geographical areas. Additionally, there is a need to understand the processes and mechanisms by which diversification strategy, slack resources, and organizational resilience are linked; therefore, future research can use a qualitative approach to address this need. Finally, future research should focus on conducting longitudinal studies to investigate how the relationship between diversification strategy, slack resources, and organizational resilience has evolved in various sectors worldwide.

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## **Competing Interests**

The author declares that there is no competing interests.

## **Data Availability Statement**

The data are available from the author upon reasonable request.

## **Institutional Review Board Statement**

The study was approved by the Institutional Review Board/ Ethics Committee of Mutah University on 6/11/2023 (Ref. No 150/2023).

## Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

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