



## Examine the alignment between organizational design components: Empirical evidence from the general directorate of Sulaimania municipalities

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### ABSTRACT

The primary aim of this research is to examine the alignment between organizational design components and their influence on organizational performance to achieve efficiency and effectiveness. A survey was used as the data collection instrument, and empirical data were obtained from the general directorate of Sulaimania municipalities. The findings supported all hypotheses, indicating that environmental features and organizational context, including leadership style and climate, significantly influence the development of organizational design components. The results of the mediation analysis demonstrated the indirect influence of organizational design components on organizational performance through the mediating role of organizational strategy. This research has practical implications as it provides unique evidence to leaders and managers, highlighting that organizational design components, with the mediation role of strategy, have significant implications for organizations' ability to enhance efficiency and innovate new services. This research is original in that it constructed the model and investigated the impact of environmental features and organizational context (leadership style and climate) on organizational design components, while also testing the mediating role of organizational strategy in the relationship between organizational design components and organizational performance (efficiency and effectiveness).

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## **1. Introduction**

Currently, organizations are dealing with continually changing environmental factors. Therefore, their managers are constantly seeking efficiency and effectiveness through various means and methods. One of the practices employed by organizations and managers is the concept of fit or alignment between organizational design components (Alsayah, 2022; Hernaus, Aleksic & Klindzic, 2013). Effective design and organizational fit enhance performance by preserving the factors that all organizations need, such as organizational smoothness, which ensures a comprehensive presence. Organizational design is a vital and relevant topic in alignment theory (Miterev, Jerbrant & Feldmann, 2020). The highly competitive environment, along with the constant interaction of increasing complexity and interdependence, creates an ongoing demand for organizational fit that can address new coordination mechanisms (Galbraith, 2012). Organizational theory also provides a practical framework for design, defining and explaining how organizations operate. In complement, organizational design relies on organizational theory to understand organizational efforts. While organizational theory is a positive science that aims to understand structure, behavior, and organizational effectiveness, organizational design is a normative science that endorses what can be designed to increase an organization's effectiveness and efficiency (Burton & Obel, 2004).

Subsequently, design facilitates the arrangement of organizational structure dimensions. It is a process characterized by vitality and continuity, particularly in the case of open systems that interact with the environment and seek a balance between stability and adaptability. This pursuit involves both efficiency and productivity through regular activities and adaptation through flexibility (Alonso, Wouter & Niko, 2015). Organizational design is influenced by various situational variables, such as size, technology, environment, strategy, and the strategic choices made by managers. Effective coordination mechanisms are employed to achieve a combination between organizational components and divisions, which are characterized by high variance and differentiation (Donaldson & Joffe, 2014). According to Galbraith (2014), effective organizational design supports the elimination of duplicate work and facilitates procedures and processes throughout the organization. Since organizational design supports decision-making even at the lowest levels of the organization to support staff, it is considered a branch of human resources management. Therefore, the organization must be well-organized and managed. Organizational design is not only concerned with organizational structures and job file preparation; it is also the primary driver for the organization's success. Based on the aforementioned points, the purpose of this research is to build a model that examines the alignment between organizational design components (ODC) and their influence on organizational performance to achieve efficiency and effectiveness, based on empirical data obtained from the general directorate of Sulaimania municipalities.

In summary, this research is structured into six sections. The first section provides a brief introduction. The second section focuses on the literature review and hypothesis development, including the research model. The third section presents the research methodology. The fourth section presents the results, while the fifth section provides discussions. Finally, the sixth section covers conclusions, theoretical and practical implications, limitations, and suggestions for future research.

## **2. Literature Review and Hypotheses Development**

Organizations constantly develop and respond to challenges and clients' needs. In addition to external environmental factors, organizational strategy, environmental features, and organizational context have been recognized and incorporated to address new strategic requirements. These components must be integrated into the overall structure of the organization, which often involves organizational restructuring (Galbraith, 2014). For example, the strategic need to enhance service quality may necessitate breaking down functional divisions, creating teams, and reassigning authority (Koldewey, 2022; Matko & Takacs, 2017). In this regard, organizations and their leaders must align all departmental components to ensure control, coordination, and collaboration across departments (Alsayah, 2022). Furthermore, departments need to work together through reporting relationships and teams to avoid conflicts and problems while meeting client needs (Alonso et al., 2015). Therefore, organizational designers must incorporate elements such as authority, chain of command, management foundations, decision-making flexibility, responsiveness, resource allocation, and talent management to enhance performance (Donaldson & Joffe, 2014).

In this perspective, alignment theory is applied to support organizational efficiency, which focuses on inputs, the use of organizational assets, and expenses (Burton, Eriksen, Hakonsson & Snow, 2006). Efficiency is also related to measuring the assets used to achieve organizational goals, such as the amount of raw materials and cash required to generate a certain degree of return (Lohr, 2007). According to Daft (2021), efficiency refers to the number of resources utilized to achieve organizational objectives. Effectiveness is a common goal in administrative and organizational research, as organizations aim to achieve high effectiveness through the use of organizational design and structure (Lohr, 2007; Wu, Song & Liu, 2022).

The present research also aims to examine the mediating role of organizational strategy in the relationship between organizational design components (ODC) and organizational performance. Several researchers have explored organizational strategy in terms of exploitation and exploration. An organization's long-term strategies and orientations have a significant impact on organizational design, which serves as the vehicle for implementing strategy effectively (Koldewey et al., 2022). Exploration is described as the process of seeking technological innovation or new ways of doing things, while exploitation involves short-term improvements, efficiency, selection, and execution. Exploitation focuses on refining and expanding existing competencies and technologies, leading to positive and continuous returns (Geiger & Makri, 2006). Environmental features are considered in terms of complexity and unpredictability. Complexity is measured by the number of factors in the organizational environment and the interdependence among them. As the number of factors and the mutual dependence between them increase, environmental complexity also increases (Burton et al., 2011). The organizational environment is influenced by diverse external elements, leading to various levels of complexity. Environmental uncertainty presents significant opportunities for formal structure and internal practices (Daft, 2021).

The current research model also included organizational context factors such as leadership style and climate influencing effective organizational design. Peter (2016) referred to two-dimensional leadership styles, guiding behaviors, and supportive behaviors. Guiding behaviors help group members achieve goals by giving directions, setting goals, evaluating methods, setting timelines, defining roles, and showing how to achieve goals. Directing behaviors explain, often through one-way communication, what needs to be done, how it is done, and who is responsible for doing it. Supportive behaviors help group members feel better about themselves, their co-workers, and the situation. Supportive behaviors include two-way communication and responses that show social and emotional support for others. The organizational climate also is a set of measurable characteristics of the work setting that are based on and validate group perceptions of employees to understand the level of influence on motivation, behavior, and human resources performance (Goraya & Laghari, 2015).

The development of organizational configurations can be viewed from a time perspective, considering the need for flexibility in relation to the cost of information. As the demand for information processing increases across functions, coordination becomes crucial, particularly in matrix configurations. By reducing the information processing burden and returning to the mechanistic structure of bureaucracy, organizations can address the costs associated with information processing and adopt more organic regulatory forms (Burton et al., 2011).

Regarding distribution, Burton, Salvador & Fabrizio (2014) state that two dimensions can describe it: optimal sourcing and local response. Optimal sourcing refers to the decision of locating operations in a place that offers the company the greatest advantages in terms of customer contact, cost efficiency, the need for specific human resource skills, or other objectives. On the other hand, local response refers to the decision to distribute work across multiple locations or consolidate it in one or a few major sites. For example, a highly distributed workforce, such as a group of mobile phone vendors, software programmers, or service operators, exemplifies this approach (Burton et al., 2008). Therefore, task design involves breaking down work into sub-tasks while considering coordination among them to achieve organizational goals. In the past, task design was sometimes referred to as "technology design" by organizational designers (Burton et al., 2011).

The human element plays a significant role in organizational design. Human resources (HR) design various tools for managers to effectively manage their business units. HR designs the rules and procedures that can be applied to job design. Human resources also manage systems that control the institutional structure (Abdullah et al., 2020). In an inter-organizational public-sector context,

organizational coordination aims to align the tasks and efforts of multiple units to achieve defined goals. It aims to create policy coherence, minimize redundancy, gaps, and contradictions within and between policies (Peters, 1998).

Information systems play a vital role in supporting management procedures and operations. They assist workforces and managers in decision-making and support plans for business competitiveness (O'Brien & Marajas, 2008). However, information systems are based on achieving specific goals by collecting necessary information/data, processing it, and generating outputs, with a focus on feedback to ensure goal attainment. Information systems need to be complete, attentive, and mindful of the internal and external environments (Khanore et al., 2011). They help enhance strengths, diagnose and address weaknesses by providing timely and accurate information. The information provided should be characterized by accuracy, comprehensiveness, objectivity, correlation, and relevance (Asemi et al., 2011).

### **2.1 Environment Features and ODC**

Organizational design theories have demonstrated the significance of environmental features in enhancing organizations. These features, which encompass both internal and external factors, reflect the level of uncertainty that organizations face and influence their work and design (Burton et al., 2011). Warren, van Bree & Zybach (2019) conducted research on organizational design challenges and found that environmental features contribute to the improvement of organizational design components (ODC). Burton et al. (2014) explored the relationship between big data and organizational design and established causal connections between environmental features and ODC. Furthermore, Burton & Obel (2018) analyzed the science of organizational design, focusing on the alignment between structure and coordination. Their results demonstrated correlations between ODC and how environmental features enhance these components. Based on the aforementioned theory and empirical findings, the following hypothesis is proposed:

**H1:** Environment features exert influence on the development of organizational design components.

### **2.2 Organizational Context and ODC**

Organizational context and its impact on organizational design components (ODC) have been explored in various theories. These theories indicate that leadership style and climate have an influential role in shaping ODC (Daft, 2021; Galbraith, 2012). The significance of leadership in achieving organizational objectives is reflected in its consideration of the overall efficiency of team activities and the leader's capabilities. In the contemporary context, effective leadership is essential for both organizations and individuals (Contu, 2020). It is crucial for companies and organizations to exercise effective leadership, as without it, they may struggle to achieve their goals. Leadership plays a vital role in interacting with members of the organization (Ahmad and Karadas, 2021). Abubakr and Bader (2013) conducted an analysis of the relationship between climate, organizational design components, and performance, and their findings demonstrated that a supportive climate has a positive and significant influence on organizations and their performance. Based on these theories, the following hypothesis is proposed:

**H2:** Organizational context positively influences organizational design components.

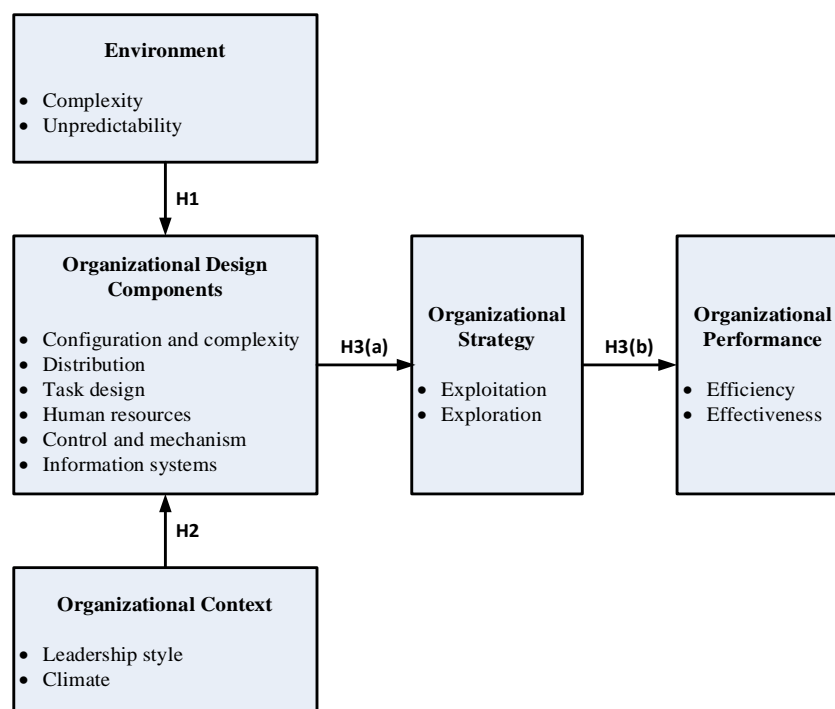
### **2.3 The Mediating Role of Organizational Strategy**

The organizational strategy plays a crucial role in shaping organizational design components. The organizational structure serves as a means to effectively implement the organizational strategy and improve performance. Studies have been conducted to explore the relationship between organizational strategy and ODC (Daft, 2007). The strategic behavior of senior management also determines the level of stability and flexibility in the structure. Therefore, organizational strategy acts as a mediator between ODC and organizational performance (Galbraith, 2012). Exploitation involves short-term improvements, efficiency, selection, and execution. It entails refining and expanding existing competencies and technologies, resulting in positive and infinite returns that enhance organizational performance (Bierly et al., 2009; Geiger & Makri, 2006). Exploration, on the other hand, refers to the strategic approach of certain variables or factors that generate increased value for the organization.

Additionally, recent models for measuring organizational performance have emphasized the examination of people's behavior to enhance overall outcomes (Barra and Gomez, 2013). Based on these considerations, we propose that organizational strategy positively mediates the relationship between organizational design components and organizational performance. Therefore, the following hypothesis is put forward:

**H3:** Organizational strategy positively mediates the relationship between organizational design components and organizational performance.

As depicted in Figure 1, the research conceptual model has been developed based on the literature and the aforementioned hypotheses. Positive alignments among these variables are expected to enhance organizational effectiveness, performance, and work efficiency. Organizational design has significant implications for organizations, including their ability to handle emergencies, effectively manage employee diversity, improve efficiency, and innovate new services (Galbraith, 2012). Furthermore, organizational design determines an organization's responsiveness to various environmental factors and its ability to acquire and utilize scarce resources. Lastly, an organization can shape its structure to enhance environmental control (Daft, 2007). The research model incorporates five primary constructs and their components: organizational performance (efficiency and effectiveness) as the outcome variable, organizational strategy (exploitation and exploration) as the mediating variable, environment features, and organizational context (leadership style and climate) as influential factors for ODC.



**Fig. 1.** Conceptual research model

### 3. Research Methodology

In this research, alignment theory and a quantitative research approach were utilized to examine the alignments between ODC. Empirical data was collected from participants in the general directorate of Sulaimania municipalities. The adoption of alignment and organizational theories provided a practical framework for understanding ODC and how organizations can effectively enhance their performance. Quantitative research is typically employed in the social sciences and statistics, allowing for systematic data analysis (Hair et al., 2010). Quantitative researchers often publish mathematical frameworks and theories related to the studied variables (Mustafa et al., 2020). The results obtained through this approach are logical, statistical, and impartial.

The research adopted a relational design, which is commonly used to test relationships between model constructs. Data was collected using a structured survey questionnaire, ensuring a representative sample of the entire population. The samples for the research were obtained through the random sampling method. Random sampling involves selecting samples randomly, representing all elements of the research population, with each element having an equal chance of being included in the sample. Random sampling ensures the validity of research results by acquiring data in a random manner. The appropriate sample size was determined by dividing the study population by the desired sample size (Tyrrell, 2009).

In this particular study, the population consisted of all mayors, heads of departments, and heads of divisions at the general directorate of Sulaimania municipalities. Data collection commenced with meetings with some participants and sending invitation letters via email to 290 prospective respondents. The use of random sampling ensured that the sample mean ( $\bar{y}$ ) served as a balanced estimator of the population mean ( $\mu$ ). The population mean ( $\mu$ ) is determined by calculating the average of the y-values in the entire population.

$$\bar{y} = \frac{1}{N}(y_1 + y_2 + \dots + y_N) = \frac{1}{N} \sum_{i=1}^n y_i \quad (1)$$

The sample mean  $\bar{y}$  is the average of the y-value in the sample:

$$\bar{y} = \frac{1}{n}(y_1 + y_2 + \dots + y_n) = \frac{1}{n} \sum_{i=1}^n y_i \quad (2)$$

The questionnaires were administered electronically via a professional internet survey to all mayors, heads of departments, and heads of divisions. In the final step of data collection, 285 completed questionnaires were submitted. However, five of the 285 questionnaires were removed due to missing data, resulting in a final sample size of 280.

### 3.1 Measurement of the Main Constructs/ Scale Development

The model constructs were defined for the operational measurement and testing of the proposed hypotheses. These constructs were adopted from articles related to ODC, and their indicators had already been tested by previous studies, demonstrating reliability and validity, as shown in Table 1.

The first part of the questionnaire included demographic variables and profiles of the research subjects. The second part consisted of performance (efficiency and effectiveness), strategy, environment features, organizational design components, and organizational context. Performance was assessed using two items: efficiency and effectiveness. Organizational strategy was measured by six indicators. Environment features were measured by complexity and unpredictability. Similarly, configurations, complexity, and organizational distribution were each measured through eight indicators, which assessed activities, work organization, employee skills, defined roles and responsibilities, orientation towards function specialization, and precise job definition.

**Table 1.** Survey Questionnaire Components

| Constructs                       | Indicators  | Scale Symbol   | References              |
|----------------------------------|---|----------------|-------------------------|
| Demographic variables            | Gender, age, level of education, overall experience, and position | Not applicable | By researchers          |
| Organizational Performance       | Efficiency and Effectiveness                                      | EF1- EF2       |                         |
| Organizational Strategy          | Exploitation and Exploration                                      | EXP1- EXP6     |                         |
| Environment Features             | Complexity and Unpredictability                                   | ECU1- ECU2     | Burton et al. (2011).   |
|                                  | Configuration and Complexity                                      | CC1- CC8       |                         |
|                                  | Organizational Distribution                                       | OD1- OD8       |                         |
| Organizational Design Components | Task Design   | TD1-TD3        |                         |
|                                  | Human Resources   | HR1- HR6       |                         |
|                                  | Control and Coordination Mechanism                                | CCM1- CCM11    |                         |
|                                  | Information Systems   | IS1-IS5        | Abdullah et al. (2020). |
| Organizational Context           | Leadership Style  | LS1- LS5       | Burton et al. (2011).   |
|                                  | Organizational Climate  | OC1- OC5       |                         |

For the distribution component, our aim was to assess the department's position and decision-making process from a standard perspective and the development of specialized groups or experiences. Task design was measured using three indicators to define the nature of work tasks. Human resources, as a significant element of organizational design, were measured using six items. Control and coordination mechanisms were measured using eleven indicators adapted from Burton et al. (2011). Additionally, as the final component of organizational design, information systems were measured using five items to indicate the equipment and software available within the municipality and its departments, as well as the use of modern information systems. These measurements were all adapted from Abdullah et al. (2020). Organizational context, including leadership style and organizational climate, was measured using five indicators. Participants in the survey were asked to what extent they agreed with the statements, and their responses ranged from (1) Very Low to (7) Very High. Many researchers recommend using a seven-point scale as it is considered more reliable than lower scales (Mustafa et al., 2020).

### 3.2 Research Subjects

The research subjects are the respondents in the general directorate of Sulaimania municipalities. In order to provide reliable research samples, we obtained information from the research subjects.

**Table 2.** Respondents' profiles

| Profile            | Description        | Frequency | Percentage | Total |
|--------------------|--------------------|-----------|------------|-------|
| Gender             | Male               | 223       | 79.6       | 280   |
|                    | Female             | 57        | 20.4       |       |
| Age                | Less than 30 years | 9         | 3.2        | 280   |
|                    | 31-40 years        | 110       | 39.3       |       |
|                    | 41-50 years        | 99        | 35.4       |       |
|                    | 51-60 years        | 58        | 20.7       |       |
|                    | 61 years and above | 4         | 1.4        |       |
| Academic Degree    | Master             | 5         | 1.8        | 280   |
|                    | Bachelor           | 115       | 41.1       |       |
|                    | Diploma            | 87        | 31.1       |       |
|                    | High School        | 73        | 26.1       |       |
| Overall Experience | Less than 5 years  | 5         | 1.8        | 280   |
|                    | 5-10 years         | 48        | 17.1       |       |
|                    | 11-15 years        | 66        | 23.6       |       |
|                    | 16-20 years        | 93        | 33.2       |       |
|                    | 21 years and more  | 68        | 24.3       |       |
| Job Position       | Mayor              | 32        | 11.4       | 280   |
|                    | Head of Department | 50        | 17.9       |       |
|                    | Head of Division   | 198       | 70.7       |       |

As shown in Table 2, of the respondents in the general directorate of Sulaimania municipalities who participated in this survey, 79.6% (n= 223) were male, and 20.4% (n= 57) were female. Regarding the age groups, results showed that 39.3% (n= 110) of the survey respondents were aged belong 31-40 years. While 35.4% (n=99) individuals aged fall in the group 41-50 years; 20.7% (n=58) of the research samples aged between 51 to 60 years; though, 3.2% (n=9) aged Less than 30 years. Finally, 1.4% (n=4) aged belong to the group 61 years and above. Table 2 shows that 41.1% (n=115) of the survey respondents in the general directorate of Sulaimania municipalities have bachelor's degrees. While 31.1% (n=87) were diploma degree holders. High school degrees came in third place with 26.1% (n=73), and finally, master's degree holders were 1.8% (n=5); these results indicate that most survey samples have obtained a high academic degree. The results related to the respondents' overall experience revealed that 33.2% (n=93) of individuals experienced between 16 years to 20 years. In the same context, 24.3% (n=68) experience belongs to the group 21 years and more. Furthermore, 23.6% (n=66) of survey respondents' overall experience was between 11-15 years. Accordingly, 17.1% (n=48) experienced 5 to 10 years. While the lowest, 1.8% (n=5) respondents, participated in the survey. Results also showed that 70.7% (198) were heads of the division of the general directorate of Sulaimania municipalities, who willingly contributed to the survey by replying

to the questionnaire indicators related to components of organizational design. Followed by 17.9% (n=50) head of the department. Finally, 11.4% (n=32) respondents were mayors.

### 3.3 Data Analysis

To empirically examine the research hypotheses, the researchers utilized Partial Least Squares (PLS 3) path modeling based on Structural Equation Modeling (SEM). PLS-PM is a crucial program that allows the estimation of complex cause-and-effect relationship models with multiple latent variables. Hair et al. (2010) stated that PLS path modeling requires three necessary tests before testing the model hypotheses, namely model validity, reliability, and measurement model. To establish these, the Average Variance Extracted (AVE) index values should be above 0.50, and the Composite Reliability (CR) index for each construct should be greater than 0.80. Furthermore, the loaded values of the measured model should be equal to or above 0.7, and Cronbach's  $\alpha$  values should be equal to or greater than 0.70 (Sarstedt et al., 2017).

## 4. Results

### 4.1 Establishing Reliability and Validity

To establish the validity and reliability of the model, we examined the loading values of AVE, the CR, and Cronbach's  $\alpha$ . As presented in Table 3, the AVE values for all model constructs are greater than 0.50, ranging from 0.558 to 0.787. The CR values range from 0.824 to 0.951, indicating that all research constructs are reliable. To further assess survey reliability, we examined the values of Cronbach's  $\alpha$ . The values range from 0.750 to 0.847, all exceeding 0.70, which suggests that the survey can be considered highly reliable. These results affirm the validity and reliability of the research model.

**Table 3.** Results of reliability and validity

| Constructs  |             | AVE   | CR    | Cronbach's $\alpha$ | Factor Loadings            |
|---|-------------|-------|-------|---------------------|----------------------------|
| Organizational Performance (Efficiency and Effectiveness) | <i>EF</i>   | 0.658 | 0.887 | 0.808               | Ranged from 0.716 to 0.789 |
| Organizational Strategy (Exploitation and Exploration)    | <i>EXP</i>  | 0.611 | 0.865 | 0.777               | From 0.781 to 0.839        |
| Environment Features                                      | <i>ENF</i>  | 0.599 | 0.873 | 0.767               | From 0.725 to 0.781        |
|   | <i>CC</i>   | 0.689 | 0.902 | 0.811               | From 0.708 to 0.791        |
|   | <i>OD</i>   | 0.705 | 0.912 | 0.816               | From 0.702 to 0.822        |
|   | <i>TD</i>   | 0.558 | 0.829 | 0.783               | From 0.753 to 0.825        |
| Organizational Design Components                          | <i>HR</i>   | 0.754 | 0.921 | 0.847               | From 0.706 to 0.789        |
|   | <i>OCCM</i> | 0.658 | 0.883 | 0.809               | From 0.718 to 0.841        |
|   | <i>IS</i>   | 0.787 | 0.951 | 0.830               | From 0.780 to 0.822        |
| Organizational Context (Leadership Style and Climate)     | <i>LS</i>   | 0.577 | 0.827 | 0.778               | From 0.723 to 0.802        |
|   | <i>OC</i>   | 0.559 | 0.824 | 0.750               | From 0.724 to 0.792        |

We further assessed the measurement model by examining the factor loadings of all indicators. As recommended by Sarstedt et al. (2017), the loading values for indicators should exceed 0.70. The results indicate that the loading values for efficiency and effectiveness are 0.716 and 0.789 respectively. The values for strategy, in terms of exploitation and exploration, range from 0.781 to 0.839. Environment features have values ranging between 0.725 and 0.781. The loading values for the first components of organizational design, configuration, and complexity, range from 0.708 to 0.791. Similarly, the loading values for distribution range from 0.702 to 0.822, indicating values above 0.70. Task design has loading values between 0.753 and 0.825. The factor loading values for human resources range from 0.706 to 0.789, all surpassing 0.7. Control, coordination mechanism, and information systems components also exhibit high loading values, ranging from 0.718 to 0.841. Furthermore, organizational context (leadership style and organizational climate) is loaded with values between 0.723 and 0.802. Based on these results, we can conclude that the research model is highly reliable and accurate in testing hypotheses.



To determine the model fit, several indices such as SRMR, Chi-square, VIF, and NFI were utilized. The results in Table 4 indicate that the loaded value for SRMR is 0.75, which is less than 0.8, indicating a good fit. The loaded value for Chi-square is 2.108, which is considered a good fit as it is less than 3.0. Moreover, the loaded values for the VIF category range from 1.000 to 2.764, all of which are less than 5. Additionally, the NFI demonstrates a good fit with a value of 1.000, exceeding 0.9.

**Table 4.** Model fit tests

| Fitness Test Method | Estimated Model            | Decision criteria | Overall Decision |
|---------------------|----------------------------|-------------------|------------------|
| SRMR                | 0.72                       | < = 0.8           | Fit              |
| $\chi^2$            | 2.108                      | < = 3.0           | Fit              |
| VIF                 | Loaded from 1.000 to 2.764 | <5.0              | Fit              |
| NFI                 | 1.000                      | > = 0.9           | Fit              |

**Note:** SRMR = Standardized Root Mean-Square Residual,  $\chi^2$  = Chi-square, VIF= Variance Inflation Factor, and NFI = Normed Fit Index.

## 4.2 Hypotheses Testing

### 4.2.1 Descriptive Analysis

Descriptive statistics were utilized to observe the perceptions of survey participants. This analysis assesses the key characteristics of model constructs through statistical measures such as means, standard deviations, and agreement weight. The results presented in Table 5 show that the mean values for efficiency and effectiveness are 4.44 and 1.0783, respectively, with an agreement weight of 63.44%. These findings indicate that survey participants agreed that their municipalities and departments reasonably focused on enhancing performance and service outputs while reducing costs and expenses. They also paid attention to fulfilling the goals and expectations of different stakeholders.

Regarding the organizational strategy, the mean values for exploitation and exploration are 4.6339 and 0.80447, respectively, with an agreement weight of 66.19%. These results confirm that the level of work in municipalities and their departments is moderately high. The developed processes, creation of new jobs, and quality of services in terms of standardization and reliability in the municipalities are considered moderate.

The results reveal that task design, organizational distribution, and environment, in terms of complexity and unpredictability as three components of organizational design, exhibit high mean values (4.70, 4.67, and 4.589). The standard deviations for these components are 0.941, 0.758, and 0.866, respectively, with agreement weights of 67.23%, 66.78%, and 65.56%. These results explain that municipalities reasonably maintain task design, distribution, and an environment characterized by complexity and unpredictability.

Furthermore, the results demonstrate that configuration and complexity, control and coordination mechanisms, and leadership style demonstrate acceptable mean values of 4.529, 4.2894, and 4.1943, respectively. The standard deviation scores for these components are 0.956, 0.89, and 1.049, with agreement weights of 64.71%, 61.27%, and 60%. These findings indicate that municipal activities focus on internal operations, organizing work into departments for daily tasks, and shaping municipal services. Departments clearly define roles and responsibilities. As a control and coordination mechanism, the general manager delegates executive decisions to managers or individuals responsible for those actions. To an acceptable degree, subunit managers have discretion in establishing their budgets and determining how their work units will be evaluated. Furthermore, municipalities rely on rules and instructions to manage work processes, providing a detailed description of employee responsibilities.

The results also indicated that general managers empower employees to take responsibility for managing work tasks. For instance, they allow their direct reports to make critical decisions and act on behalf of the municipality. Moreover, they exercise self-control when making crucial decisions regarding municipal work, ensuring no adverse effects and exhibiting a focus on control in managing their direct reports.

**Table 5.** Result of descriptive statistics

| Constructs  |     | Descriptive Statistics |      |      |       |                | Weight of Agreement |
|---|-----|------------------------|------|------|-------|----------------|---------------------|
|   |     | N                      | Min  | Max  | Mean  | Std. Deviation |                     |
| Organizational Performance (Efficiency and Effectiveness) | EF  | 280                    | 1.00 | 7.00 | 4.441 | 1.078          | 63.44%              |
| Organizational Strategy (Exploitation and Exploration)    | EXP | 280                    | 2.50 | 6.67 | 4.633 | 0.804          | 66.19%              |
| Environment Features                                      | ENF | 280                    | 1.00 | 7.00 | 4.589 | 0.866          | 65.56%              |
|   | CC  | 280                    | 1.63 | 6.75 | 4.529 | 0.956          | 64.71%              |
|   | OD  | 280                    | 1.38 | 6.88 | 4.675 | 0.758          | 66.78%              |
|   | TD  | 280                    | 1.00 | 7.00 | 4.706 | 0.941          | 67.23%              |
|   | HR  | 280                    | 1.00 | 9.33 | 3.659 | 1.366          | 52.28%              |
| Organizational Design Components                          | CCM | 280                    | 1.82 | 6.27 | 4.289 | 0.890          | 61.27%              |
|   | IS  | 280                    | 1.00 | 6.80 | 3.899 | 1.259          | 55.70%              |
| Organizational Context (Leadership Style and Climate)     | LS  | 280                    | 1.00 | 6.60 | 4.194 | 1.049          | 60%                 |
|   | OC  | 280                    | 1.60 | 6.40 | 3.772 | 1.060          | 53.89%              |

The descriptive analysis revealed that human resources, organizational climate, and the organizational information system do not adequately support the functions of municipalities. These components exhibited low mean values (3.65, 3.77, and 3.89), and the standard deviations were (1.060, 1.3667, and 1.259), indicating that municipalities and their administrations may not sufficiently encourage human resources to innovate and introduce new ideas. Additionally, rewards may not effectively incentivize the generation of new ideas and knowledge. Consequently, municipalities may not fully embrace the outcomes of employee performance appraisals based on quality assurance programs.

Furthermore, the results showed that municipalities lacked training courses to assess the needs and demands for professional skills among employees. Employees tend to adapt or adjust their work habits to meet unexpected new challenges, and the level of conflict within the municipality is low, which is positive. However, employees recognize that the distribution of rewards is not equitable.

Regarding the information system, the results indicated insufficient hardware and software availability within municipalities and their departments. Municipalities may not effectively utilize modern information systems and methods to facilitate information transfer between departments, as they do not provide adequate operational computer networks. Consequently, municipalities rely on traditional methods rather than an information system for active communication between managers and employees.

#### 4.2.2 Discriminant Validity

For establishing the discriminant validity among the model constructs, we applied Fornell–Larker criteria as an essential step before testing hypotheses. As recommended by Hair et al. (2010) and Sarstedt et al. (2017), the root square values of average variance extracted (AVE), based on Fornell–Larker criteria, must be more than relationship values with other research constructs. Results showed that the values of the AVE root square are all high, indicating that the model established the discriminant validity, see Table 6 below.

**Table 6.** Results of discriminant validity

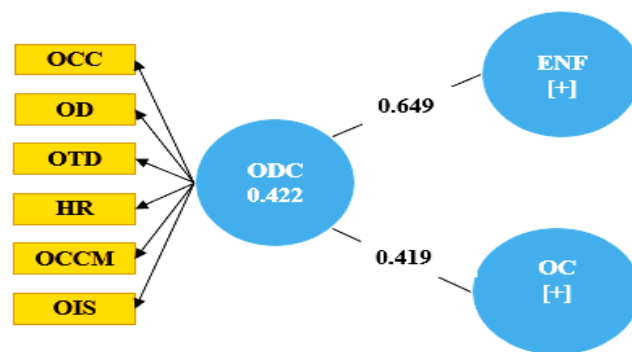
|         | Fornell–Larker Criterion |       |       |       |         |
|---------|--------------------------|-------|-------|-------|---------|
|         | ENF                      | ODC   | OC    | OC    | OP (EF) |
| ENF     | 0.635                    |       |       |       |         |
| ODC     | 0.632                    | 0.761 |       |       |         |
| OC      | 0.588                    | 0.656 | 0.868 |       |         |
| OC      | 0.563                    | 0.748 | 0.707 | 0.751 |         |
| OP (EF) | 0.573                    | 0.663 | 0.692 | 0.684 | 0.698   |

Note. ENF =Environment Features, ODC= Organizational Design Components, OC= Organizational Context, OS= Organizational Strategy (Exploitation and Exploration), OP (EF)= Organizational Performance (Efficiency and Effectiveness).

### 4.2.3 Direct Influence Analysis

Results in Table 7 and Fig. 2 demonstrated that environment features significantly influence the development of ODC with a strong coefficient of impact up to ( $\beta= 0.649, p0.000$ ); therefore, the first hypothesis (**H1**) is accepted; this outcome displays that the development in environment features by 1% will influence the organizational design components by 0.649. In addition, the results showed that organizational context, including leadership style and climate, positively and significantly affected ODC with the coefficient of impact ( $\beta=0.419, p0.000$ ); hence, the second hypothesis (**H2**) is accepted.

As the results shown in Table 7, and Fig. 3 indicate that ODC is positively and significantly related to the organizational strategy with the coefficient of impact up to ( $\beta=0.651, p0.000$ ), the first part of the third hypothesis (**H3a**) is accepted. Furthermore, the results revealed that organizational strategy in terms of exploitation and exploration positively and significantly influences organizational performance or reaching efficiency and effectiveness with a strong coefficient of impact ( $\beta=0.603, p0.000$ ); based on the second part of the third hypothesis (**H3b**) is accepted.



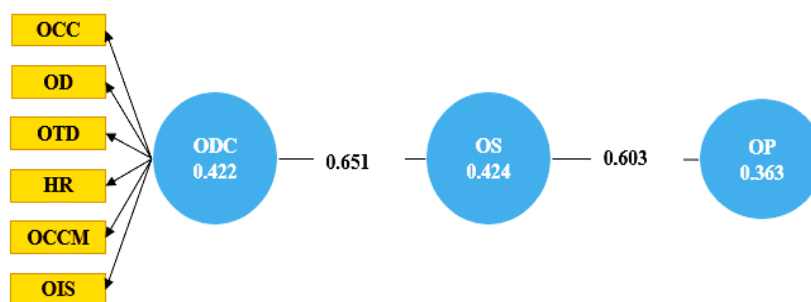
**Fig. 2.** Results of environment features and organizational context impact on ODC.

Note. ENF =Environment Features, ODC= Organizational Design Components, OC= Organizational Context.

**Table 7.** Path analysis coefficient, t-value, and p-value for the SEM.

| Hypotheses | Interaction   | Standardized Path Coefficient | t-value | p-value | Decision  |
|------------|---------------|-------------------------------|---------|---------|-----------|
| H1         | ENF -> ODC    | $\beta = 0.649$               | 14.235  | 0.000   | Supported |
| H2         | OC -> ODC     | $\beta = 0.419$               | 10.606  | 0.000   | Supported |
| H3a        | ODC -> OS     | $\beta = 0.651$               | 14.296  | 0.000   | Supported |
| H3b        | OS -> OP (EF) | $\beta = 0.603$               | 12.599  | 0.000   | Supported |

R<sup>2</sup> Value of ODC is 0.422  
 R<sup>2</sup> Value of OS is 0.424  
 R<sup>2</sup> Value of OP (EF) is 0.363



**Fig. 3.** Results of relational impact between ODC, OS, and OP.

### Mediation Analysis

As established in Table 8, the organizational design components (ODC) are the predicted variable, organizational strategy is the mediation variable, and organizational performance (efficiency and effectiveness) is the outcome variable in the current research model. The results showed that direct relationships were established between organizational design components (ODC) and organizational

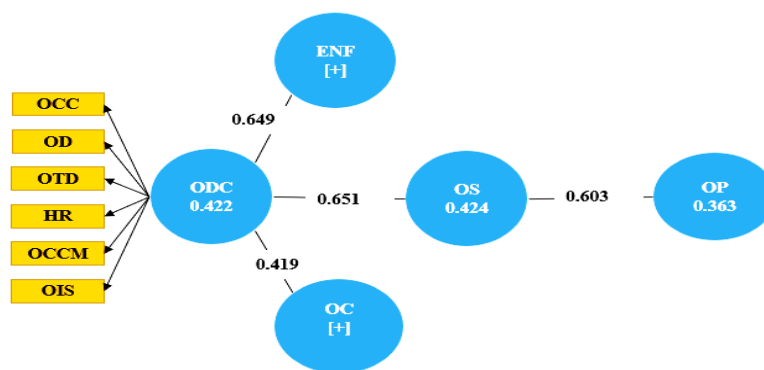
strategy (OS); in addition, OS was significantly related to OP (EF), and the effects were also positive and significant between these constructs.

**Table 8.** Inferences for mediation.

| Hypothesis | Interaction       | Direct Beta w/o Med    | Indirect Beta          | Mediation Type Observed |
|------------|-------------------|------------------------|------------------------|-------------------------|
| H3         | ODC -> OS->OP(EF) | $\beta=0.637, p=0.000$ | $\beta=0.392, p=0.000$ | Partial mediation       |

**Note.** ENF = Environment Features, ODC= Organizational Design Components, OC= Organizational Context, OS= Organizational Strategy (Exploitation and Exploration), OP (EF)= Organizational Performance (Efficiency and Effectiveness).

The results of mediation analysis showed the indirect influence in the existence of mediating role of organizational strategy (OS), and the coefficient of influence is up to ( $\beta=0.392$ ) with the p-values (0.000); this indicates that organizational strategy partially mediated the relationship between organizational design components and organizational performance. Therefore, the third hypothesis (H3) is accepted.



**Fig. 4.** Results of structural equation modeling.

**Note.** ENF =Environment Features, ODC= Organizational Design Components, OC= Organizational Context, OS= Organizational Strategy (Exploitation and Exploration), OP (EF)= Organizational Performance (Efficiency and Effectiveness).

## 5. Discussions

The primary objective of this research was to construct a model that examines the alignment between organizational design components and their impact on organizational performance to achieve efficiency and effectiveness. Before testing the hypotheses, we established the validity and reliability of the model and assessed its measurement. The results provided support for all hypotheses and indicated that survey participants agreed that their municipalities and departments appropriately prioritize enhancing the performance and outputs of their services while reducing costs and expenses. They also focus on achieving their goals. The results concerning organizational strategy in terms of exploitation and exploration revealed that the level of work in municipalities and their departments is moderately high, and the developed processes, new jobs, and quality of services in terms of standardization and reliability are moderate.

The respondents agreed that municipalities reasonably maintain task design, distribution, and environment in terms of complexity and unpredictability. In this regard, municipal activities focus on internal operations, organizing work into departments for daily tasks, and shaping municipal services. Departments clearly define roles and responsibilities. As a control and coordination mechanism, leaders delegate executive decisions to managers or others responsible for those actions. Subunit managers have a certain level of discretion in establishing their budgets and determining how their work units will be evaluated. Furthermore, municipalities rely on rules and instructions to manage work processes, thereby providing detailed descriptions of employee roles.

The results also demonstrated that leaders encourage employees to take responsibility for managing work tasks. They allow their direct reports to make critical decisions and act on behalf of the municipality. Moreover, they exercise self-control when making critical decisions regarding municipal work, ensuring no adverse effects. However, the outcomes indicated that municipalities and their administrations may not sufficiently encourage human resources to innovate and introduce new ideas.

Rewards are also not effective for stimulating the generation of new ideas and knowledge. Consequently, municipalities may not fully embrace the results of employee performance appraisals based on quality assurance programs. In this context, researchers describe HR as a set of activities that put human capital strategies into practice and focus on enhancing performance and improving competencies, skills, and knowledge (Heneman & Milanowski, 2011). The results also revealed that municipalities lack training courses for employees to assess the needs and demands for professional skills. Employees demonstrate a tendency to adapt or adjust their work habits to meet unexpected challenges, and the level of conflict within the municipality is low, which is positive. However, employees recognize that the distribution of rewards is unequal.

Furthermore, the results regarding information systems indicated insufficient hardware and software within municipalities and their departments. As a result, municipalities do not effectively utilize modern information systems or facilitate information transfer between departments. Moreover, due to a lack of sufficient operational computer networks provided by the municipalities, traditional methods rather than an information system are used for active communication between managers and employees.

## **6. Conclusions**

**Conclusions** The results of the relationship analysis revealed alignments between most organizational design components. The impact analysis supported all hypotheses, confirming that environmental features and organizational context influence the development of ODC. Additionally, organizational strategy positively mediates the relationship between ODC and organizational performance (efficiency and effectiveness). Despite consistent theoretical arguments, these hypotheses have not been tested extensively in the context of organizations or municipal services. Thus, our research provides valuable insights into the effects of environmental features on ODC development.

Furthermore, this research highlights the significance of organizational context, including leadership style and climate, in positively influencing ODC. The results indicate a positive and significant relationship between ODC and organizational strategy (exploitation and exploration). Moreover, organizational strategy positively influences organizational performance (efficiency and effectiveness). The mediation analysis results reveal the indirect influence of organizational design components on organizational performance through the mediating role of organizational strategy. This suggests that organizational strategy partially mediates the relationship between organizational design components and organizational performance.

### **6.1 Theoretical and Practical Implications**

This research holds significant implications for leaders and managers in organizations, particularly municipalities, as it provides insights into the influences of environmental features and organizational context factors on the development of organizational design components. Organizational design components, with the mediating role of strategy, play a crucial role in enhancing efficiency and fostering innovation in new services. They also determine how effectively organizations respond to various environmental factors and acquire and utilize scarce resources at their disposal. In this context, organizations can design their structures to increase control over the environment. Organizational design components differ in terms of complexity, formality, centralization, and the composition of staff, including technicians and administrators. They vary in terms of integration or differentiation, professionalism, supervision, specialization, and other factors. Thus, management needs to carefully select and utilize appropriate organizational design components to achieve effectiveness and efficiency in performance (Donaldson & Joffe, 2014). Alignments between organizational design components involve the process of consciously selecting dimensions of the structure, balancing them, and establishing relationships between them. This enables organizations to utilize organizational design components within their framework to fulfill the organization's mission and objectives (Galbraith, 2012). It entails consciously choosing and employing organizational design components to optimize resource allocation and achieve objectives (Alonso et al., 2015). Since organizations face various challenges and opportunities, service organizations need to select the appropriate design for different times and environments and embody it through an organizational structure that aligns and adapts to the environmental circumstances. This necessitates considering a wide range of variables, as analyzed in this research.

## **6.2 Limitations and Suggestions for Future Research**

The current research may have certain limitations for several reasons. Firstly, the empirical data collected from the general directorate of Sulaimania municipalities might be limited in its scope. Therefore, obtaining more comprehensive and diverse data or samples could yield more generalized results. Hence, future research should focus on a larger population sample. As the research population shares a common characteristic, which is the main objective of the research, the researchers aimed to generalize their results. Samples serve as a means of studying the characteristics of the research population. Consequently, the first step in sample selection is defining the population, and this definition serves to determine the individuals it encompasses. Since the sample represents the population and is selected through various methods for study, careful consideration should be given to sample size and representation.

Furthermore, the research suggests conducting similar studies in business organizations or industries to examine whether the findings of the current research hold true across different organizational contexts. This would help establish the stability of the research results among various types of organizations.

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