



Identifying Factors Affecting Productivity in Architectural Design Offices

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Abstract

Architectural design offices (ADOs), which are the producers of increasingly complex design projects in the rapidly developing construction industry, need not only to work hard, but also to work productively in order to survive in today's competitive market. The ability to complete a task, generate a product, or accomplish an objective while making the best use of available resources is referred to as productivity. It is a measure of how effectively input resources are used to produce the desired output. Workloads in ADOs are frequently heavy, challenging and need to be completed in a short period of time. Furthermore, this industry's projects frequently call for swift adaptation to constantly shifting circumstances and client expectations. In order to maintain success and keep up with the industry's rapid pace, it is vital that ADOs ensure productive work. Thus, this study aims to identify the factors affecting productivity of ADOs. As a result of the research, it was concluded that there is a gap in the literature on the subject. To identify the factors and prioritize them, interviews were held with the experts who are owners of ADOs with at least 10 years of experience. Following expert interviews, the study sheds light on key areas of concern about ensuring productive work in ADOs for future studies.

Keywords: Productivity, Architectural design offices, Construction industry, Organization.

Introduction

The quick development of technology in today's society is altering people's expectations and, consequently, demands. The construction sector, which has always changed to meet the demands of society, is profiting from these developments. So the complexity of construction projects is rising, and this industry's stakeholders are facing more and more competition on a daily basis. Architectural design offices, which are the producers of design projects in the construction industry, should not only produce quality projects but also efficiently utilize their resources, that is, they should be productive. This enables ADOs to remain competitive in the industry and successfully manage complex projects. ADOs are one of the main stakeholders of the construction industry and it is vital that they should be productive to catch the development of today's expectations.

The productivity of ADOs brings a range of benefits. First of all, offices may complete more work in less time and with fewer resources as their productivity rises. The resources could be any combination of labor, capital, materials, energy, and information (Jurison, 2002). This improves client satisfaction and encourages repeat business by ensuring that projects are completed on time and within budget.

Furthermore, productive work gives the office a competitive edge and improves its reputation. Additionally, a productive workplace increases staff morale and encourages innovation, which raises project quality and contributes to the office's long-term success. To sum up, productivity offers ADOs a competitive advantage, satisfied clients, and long-term success.

Thus, in today's complex construction industry, the productivity of ADOs is crucial. To be competitive and meet the industry's rapid-paced demands, ADOs must ensure productive work. Improving ADO productivity requires identifying the factors that influence it. A thorough literature review revealed a knowledge gap on this subject. In regard to this backdrop, the aim of the research is to shed light on the knowledge gap in the literature by identifying and prioritizing the factors affecting productivity in ADOs. To achieve this, expert interviews were held. Responses obtained from the experts who are managers of selected ADOs with at least 10 years of experience in the sector were analyzed, resulting in a total of 21 factors identified.

Literature Review

Concept of Productivity

Productivity is not a single, universal concept and it is crucial to understand that there are various definitions of productivity, each of which is appropriate in a particular situation (Björkman, 1992). The definition of productivity by Sudit (1984) is typically expressed in terms of ratios between inputs and outputs, which contains the classical definition of productivity in the literature. Jurison (2002) says that productivity is a measure of how well resources (which can be any combination of labor, capital, materials, energy, and information) are used to produce different types of goods and services. Productivity, defined as "the ratio of output to input" essentially asks "What did people produce for what they used?" (Moore and Moore, 1981). In practically all societies, increasing productivity is the key to improving both social and economic welfare (Mohanty, 1992). Productivity is significant because, over time, an economy's ability to raise living standards is primarily determined by the growth in the amount of goods and services produced for a given amount of labor and capital (Fabina and Wright, 2013).

Concept of Organization

Everyone understands the answer to the question 'what is an organization', yet it might be tough to find the appropriate words to express it, but as a starting point, it is possible to accept that an organization is a system. The question "a system of what" appears in minds and then unclear recommendations might be developed: a system of people or a system of things (Thyssen, 2009). An organization involves the logical arrangement of the efforts of several individuals to attain a shared and clearly defined objective, achieved through the distribution of tasks and roles, as well as a hierarchical structure of authority and accountability (Schein, 1980). Organizations shape the modern world by acting as the backbone of many sectors and businesses (Mintzberg, 1979). In modern civilization, organizations, which organize and structure the majority of people's everyday activities, are the dominant institutional structure Zucker (2006). As McFarland and Gomez (2016) stated, organizations have become such an integral part of our lives that we can scarcely imagine life without them and many of the goals we set for ourselves as a society can be achieved through organizations, which are responsible for most of what we need and want.

Improving Organizational Productivity and Factors Affecting It

Improved productivity translates into improved cost-competitiveness and long-term profitability for an organization (Sumanth, 1985; Hoehn, 2003) and it is essential for an organization to develop, grow, earn and ultimately ensure the organization's survival (Gaur, 2012). Productivity improvement accomplished by making constant improvements to the distribution and manufacturing processes, which guarantee that the products and services are created and provided in the most efficient way possible (Sahni, 2016). There are many factors that affect the improvement of productivity in an organization. In this part of the study, as a result of the literature review, factors that have been mentioned in the literature by at least three different authors were identified. Factors that are not described by the same name but describe the same situation are classified under the same heading. The seven factors identified and the effects of these factors on the productivity improvement of an organization are explained below.

Communication: Defining clear, challenging, attainable, measurable, and realistic goals and objectives and explaining them clearly can boost organizational productivity (Moore and Moore, 1981). Communication strategies play an important role in removing barriers such as improper information flow among different functional units that work together to increase productivity. (McTavish et. al., 1996). Employees who participate in regular communication sessions and group discussions feel as though they are contributing significantly to the organization's productivity and eventually, the nation as a whole (Gaur, 2012).

System of Management: An organization's ability to increase productivity is a function of its management effectiveness (McTavish et. al., 1996). Several managerial interventions are necessary to achieve productivity, including strategic thinking, leadership behavior, corporate values and culture, structure, communication and decision-making processes, systems and procedures, technology, systems for managing human resources, and other management concerns (Islam, 2021). The most important factor in organization success is organization productivity, which requires that the organization have a realistic goal determined by management and be able to carry it out (Khan et. al., 2023).

Employee's Performance and Productivity: Employers should concentrate on the components that help employees grow and perform better because employee productivity is a key component of organizational productivity (Khan et. al., 2023; Kumar, 2013). Productive employees have the ability to transform a losing company into a profitable one and they could give the company a competitive advantage so improving worker productivity is an issue that needs to be high on any organization's priority list for productivity (Kumar, 2013). Increasing productivity depends on employees, and while motivating employees to strive for maximum productivity is challenging, it is the most sustainable approach (Lee, 2004).

Teamwork: The main factor that influences employee productivity is teamwork (Khan et. al., 2023). An organization that ensures a high degree of teamwork gains a competitive edge, higher margins, better management, and higher production value and capacity (Jiang et. al., 2018). Employee's work naturally gets better, they are more content at work, and their abilities could be put to better use for organizational productivity (Agarwal and Adjirackor, 2016). Because a task or business issue is broken down and accordingly reduced for these people, this encourages workers to increase their knowledge and skill, which boosts output and productivity (Khan et. al., 2023).

Motivation and Job Satisfaction: Organizations should always aim to ensure that their staff are happy and pleased because satisfied workers are happy workers, and satisfied workers are productive workers (Kumar, 2013). Performance and productivity are improved as a result of these motivational efforts and this perspective on motivation is future-focused and stresses long-term productivity benefits (Islam, 2021). Basic determinants of organizational productivity are three: employee ability, employee motivation, and large-scale (context) factors (Pinder, 1984).

Training and Development: Development and training are crucial for an organizational productivity because employees become more productive and successful for the organization when they acquire new skills and information (Ahmad et. al., 2016). Investing in skill development is crucial for enhancing productivity and competitiveness, as a trained workforce not only increases organizational productivity and return on investment but also boosts employee incentive to perform at their best (Sookdeo, 2020). Since an organization's productivity is largely dependent on how successfully its workers perform their jobs, training is crucial to helping it achieve both short- and long-term goals by increasing the value of its human capital (Khan et. al., 2023).

Employee Commitment: All initiatives to increase productivity will be ineffective unless employees at all levels are willing to do so (Guy, 1992). The main factor influencing an employee's willingness to go above is their commitment to the job (Lee, 2004). Employees that are committed to the organization are more capable and passionate, they have a strong belief in the goals and objectives of the organization and they perform better than those who are not as committed which makes them work more to boost organizational productivity (Zincirkiran et. al., 2015; Altaf and Naqvi, 2013). Extra-role behavior from employees, which is possible with commitment, is necessary for productive organizations (Bass, 1985).

It is observed that five of the seven prominent factors, including employee performance and productivity, teamwork, motivation and job satisfaction, training and employee commitment are directly human-centered. This confirms thoughts of Khan et. al. (2023): Employees are an organization's most important component, and an organization's success or failure depends on their employee's performance. However, according to Deming's (1986) 94-6 rule, 94% of an organization's problems are caused by the system (i.e., organization) with employees being accountable for 6% of the issues. Therefore, in order to increase productivity, an organization should focus particularly on improving its system in addition to concentrating on its employees.

Factors Affecting Productivity in Architectural Design Offices

Many times, ADOs have large, difficult workloads that must be finished quickly. Moreover, projects in this sector usually require quick adjustments to continually changing conditions and customer demands. To be competitive and meet the industry's fast-paced demands, ADOs must ensure productive work. Contrary to the importance of the productive work in ADOs, it is thought that there is not enough attention in the literature to contribute to the more productive functioning of ADOs. There are many interests in the literature about the productivity of an organization and factors affecting it (Moore and Moore, 1981; McTavish et. al., 1996; Gaur, 2012; Islam, 2021; Khan et. al., 2023; Kumar, 2013; Lee, 2004; Jiang et. al., 2018; Agarwal and Adjirackor, 2016; Pinder, 1984; Ahmad et. al., 2016; Sookdeo, 2020; Guy, 1992; Zincirkiran et. al., 2015; Altaf and Naqvi, 2013; Bass, 1985). Although ADOs are also organizations; every organization has different dynamics and productivity can mean a different situation for each of them. Therefore, it would be more useful to examine productivity and identify factors affecting it specifically for ADOs (i.e., the aim of the study).

Research Method

In order to identify and prioritize factors affecting productivity in ADOs, expert interviews were held. The selected experts are the managers of seven ADOs that have experience in the industry for at least 10 years. After collecting the data from interviews, both content and statistical analyses were conducted to achieve the aim of the study.

First of all, content analysis applied to the responses of the open-ended question directed at seven office managers, which was, "In your opinion, what are the factors affecting productivity in ADOs?". As a result of content analysis, a total of 21 factors have been extracted and coded. After content analysis, the mean score ranking technique and reliability analysis was applied to prioritize and identify critical factors among the 21 factors extracted. The 21 factors affecting productivity in ADOs provided by seven office managers were rated by them using a 7-point Likert scale with "1" meaning "not strong factor" and "7" meaning "very strong factor".

In order to measure a relationship between literature review and experts' thoughts, also productivity in organizations and productivity in ADOs, the extent to which the seven factors affecting organizational productivity obtained from the literature review correspond to the "factors affecting productivity in ADOs" identified by ADO managers has been analyzed. After this analysis, the mean score ranking technique and reliability analysis was applied to prioritize and identify critical factors among the seven factors obtained from literature. The seven factors affecting organizational productivity obtained from literature were rated by them using a 7-point Likert scale with "1" meaning "not strong factor" and "7" meaning "very strong factor".

Reliability needs to be assessed in order to ascertain the internal consistency of data that use the Likert scale (Nunnally and Bernstein, 2007). Cronbach's alpha (α) coefficient was utilized by using SPSS (Statistical Package for the Social Sciences) software to assess the validity and statistical reliability of the responses provided by the respondents. The acceptable reliability level was determined to be 0.7, with the α coefficient values ranging from "0" to "1" (Cronbach, 1951; Tavakol and Dennick, 2011).

In the mean score ranking technique, the significance of normalized mean values (NMVs) lies in their ability to ascertain the criticalities of the factors. NMVs are determined for each element using Equation 1. A factor is deemed to be a critical factor (CF) if its NMV is more than 0.5 (Liao and Teo, 2017; Zhou et. al., 2019).

Equation 1. Normalized mean value

$$NMV = \frac{(\text{mean of } F - \text{lowest mean})}{(\text{highest mean} - \text{lowest mean})}$$

NMV: normalized mean value, F: factor

Factors that have a normalized mean value of at least 0.50 are deemed as critical factors (CFs).

Findings

In the first step, as a result of the content analysis of responses to the question "In your opinion, what are the factors affecting productivity in ADOs?", a total of 21 factors were extracted and coded.

Narratives from responses expressing similar thoughts have been grouped under the same factor heading (for example, responses such as “satisfaction with the work” and “curiosity about the project” have been combined under the heading "interest in the project" and for another example, responses such as “ergonomics of the office” and “lighting and ventilation of the office” have been combined under the heading “physical facilities of the office”). These 21 factors and the definitions produced according to the answers are presented in Table 1.

Table 1. Explanations of 21 factors that affect productivity in ADOs.

| Factor Code | Factors Affecting Productivity in ADOs | Explanation |
|--------------------|---|---|
| F1 | Communication | The transfer of information, ideas, feelings, or instructions among different individuals, departments, or stakeholders through written, verbal, visual, or various tools. |
| F2 | Employee knowledge and experience | Collective understanding, skills, expertise, and practical know-how that an individual brings to their role. |
| F3 | Organizational skills of management | Ability of managers to efficiently plan, coordinate, and oversee various aspects of office’s operations to achieve its goals effectively. |
| F4 | Interest in the project | Enjoying the project being worked on, feeling curious, and consequently, having the desire to enhance the design. |
| F5 | Teamwork | Collaboration among architects, designers, engineers, and other professionals to collectively create architectural solutions. |
| F6 | Physical facilities of the office | The layout, furniture, equipment, technology, and amenities available for use by employees and visitors within the office space that support its operations and functions. |
| F7 | Performance of individuals | Individual’s ability to effectively carry out their assigned tasks and responsibilities in alignment with organizational goals and standards. |
| F8 | Employee commitment | The level of dedication, loyalty, and engagement that an individual demonstrates towards office and its goals. |
| F9 | Economic satisfaction of employees | The level of contentment or fulfillment that employees experience regarding their financial compensation and benefits provided by their employer. |
| F10 | Variable customer demands | Frequently shifting and fluctuating requirements, expectations, and preferences that clients may have when seeking architectural services. |
| F11 | Manager's attitude towards employees | The manner in which a manager perceives, interacts with, and treats their subordinates or team members. |
| F12 | Technical infrastructure of the office | The array of technological resources, systems, and equipment utilized to support the office's operations and architectural design processes. |
| F13 | Motivation | The drive, enthusiasm, and commitment of individuals within the architectural profession to perform their work effectively and achieve professional and organizational goals. |
| F14 | Customer satisfaction | The level of contentment or fulfillment experienced by clients who have utilized the services of the office. |
| F15 | Involvement of the manager in the project process | The participation and engagement of the manager in various activities such as design process and decision-making within the office. |
| F16 | Customizable working conditions | The flexibility and adaptability of the work environment and policies to accommodate the diverse needs and preferences of employees within the office. |
| F17 | Continuity in the team | The consistency and stability of the team members working together on architectural projects over time. |
| F18 | Limited time periods | Constraints or deadlines within which architectural projects must be completed or specific tasks must be accomplished. |

| | | |
|-----|---|---|
| F19 | Similar generation | Having individuals of similar age groups or from the same generation working within the office. |
| F20 | Conflict between architectural education and industry | Misalignment or discrepancy between the skills, knowledge, and expectations taught in architectural education programs and the actual demands and practices of the architecture industry. |
| F21 | Stress management | The strategies, policies, and practices implemented within the office to help employees effectively cope with and alleviate stressors associated with their work. |

F: factor

In the second step, it was analyzed how many different office managers mentioned each factor and the results are presented in Table 2.

Table 2. 21 factors that affect productivity in ADOs.

| Factor Code | Factors Affecting Productivity in ADOs | Respondents | Number of Mention | | | | | | |
|-------------|---|------------------|-------------------|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| F1 | Communication | 1, 2, 3, 4, 5, 7 | | | | | | | * |
| F2 | Employee knowledge and experience | 2, 3, 4, 5, 6 | | | | | | | * |
| F3 | Organizational skills of management | 1, 3, 4, 6, 7 | | | | | | | * |
| F4 | Interest in the project | 1, 2, 5, 7 | | | | | | | * |
| F5 | Teamwork | 1, 3, 4, 7 | | | | | | | * |
| F6 | Physical facilities of the office | 1, 2, 3 | | | | | | | * |
| F7 | Performance of individuals | 3, 5, 6 | | | | | | | * |
| F8 | Employee commitment | 1, 4, 7 | | | | | | | * |
| F9 | Economic satisfaction of employees | 2, 3, 7 | | | | | | | * |
| F10 | Variable customer demands | 2, 6, 7 | | | | | | | * |
| F11 | Manager's attitude towards employees | 2, 5 | | | | | | | * |
| F12 | Technical infrastructure of the office | 1, 6 | | | | | | | * |
| F13 | Motivation | 4, 6 | | | | | | | * |
| F14 | Customer satisfaction | 5, 6 | | | | | | | * |
| F15 | Involvement of the manager in the project process | 3, 7 | | | | | | | * |
| F16 | Customizable working conditions | 2, 6 | | | | | | | * |
| F17 | Continuity in the team | 5, 7 | | | | | | | * |
| F18 | Limited time periods | 1 | | | | | | | * |
| F19 | Similar generation | 2 | | | | | | | * |
| F20 | Conflict between architectural education and industry | 5 | | | | | | | * |
| F21 | Stress management | 7 | | | | | | | * |

F: factor

As seen in Table 1, there has not been a factor mentioned by all seven office managers. The communication factor (F1) has been the most frequently mentioned factor, which is mentioned by six different managers. Two factors (F2, F3) were mentioned by five different managers, two factors (F4, F5) mentioned by four different managers, five factors (F6, F7, F8, F9, F10) mentioned by three different managers, seven factors (F11, F12, F13, F14, F15, F16, F17) mentioned by two different managers, and four factors (F18, F19, F20, F21) mentioned by a single manager.

In the third step, mean score ranking technique was conducted to identify the critical factors (CFs) among 21 factors. When the findings of this study are analyzed, it is determined that among the 21 factors, 9 of them (F1, F2, F3, F5, F6, F7, F8, F10, F13) are determined as CFs (factors with NMV \geq 0.50). The means, standard deviations (Sd), normalized mean values (NMV) and rankings of factors are presented in Table 3.

Table 3. Ranking of factors affecting productivity in ADOs.

| Factor Code | Factors Affecting Productivity in ADOs | Mean | Sd | NMV | Rank |
|-------------|---|------|------|------|------|
| F1 | Communication (CF) | 6,00 | 1,00 | 1,00 | 1 |
| F2 | Employee knowledge and experience (CF) | 5,29 | 1,70 | 0,82 | 6 |
| F3 | Organizational skills of management (CF) | 5,71 | 0,95 | 0,93 | 2 |
| F4 | Interest in the project | 3,86 | 1,46 | 0,44 | 14 |
| F5 | Teamwork (CF) | 4,29 | 0,95 | 0,56 | 8 |
| F6 | Physical facilities of the office (CF) | 4,43 | 1,13 | 0,59 | 7 |
| F7 | Performance of individuals (CF) | 5,57 | 1,13 | 0,89 | 4 |
| F8 | Employee commitment (CF) | 5,29 | 0,76 | 0,82 | 5 |
| F9 | Economic satisfaction | 4,00 | 1,73 | 0,48 | 12 |
| F10 | Variable customer demands (CF) | 4,29 | 1,38 | 0,56 | 9 |
| F11 | Manager's attitude towards employees | 3,71 | 1,50 | 0,41 | 15 |
| F12 | Technical infrastructure of the office | 3,86 | 0,70 | 0,44 | 13 |
| F13 | Motivation (CF) | 5,71 | 1,11 | 0,93 | 3 |
| F14 | Customer satisfaction | 3,14 | 1,22 | 0,26 | 18 |
| F15 | Involvement of the manager in the process | 3,29 | 0,76 | 0,30 | 17 |
| F16 | Customizable working conditions | 4,00 | 1,16 | 0,48 | 11 |
| F17 | Continuity in the team | 3,29 | 0,76 | 0,30 | 17 |
| F18 | Limited time periods | 4,00 | 1,00 | 0,48 | 10 |
| F19 | Similar generation | 2,14 | 1,22 | 0,00 | 20 |
| F20 | Conflict between architectural education and industry | 2,43 | 0,98 | 0,07 | 19 |
| F21 | Stress management | 3,57 | 0,79 | 0,37 | 16 |

F: factor, CF: critical factor, Sd: standard deviation, NMV: normalized mean value

As seen in Table 3, the results indicate that the range of factors mean values is 2,14 to 6,00. Factors with NMVs of at least 0.50 are recognized as critical factors (CFs). Out of the 21 factors in this group, the results show that 9 factors have normalized values greater than 0.50 and are therefore assumed to be CF: communication (F1), employee knowledge and experience (F2), organizational skills of management (F3), teamwork (F5), physical facilities of the office (F6), performance of individuals (F7), variable customer demands (F10), and motivation (F13). With a mean value of 6,00, "communication" (F1) is found to be the most critical factor affecting productivity in ADOs. Similar generation (F19) is found to be the least critical factor with a mean value of 2,14. When ranking among factors that have the same mean value, the factor with lower standard deviation value from the other has been positioned above (for example, F3 and F13).

The Cronbach α coefficient was used in a reliability analysis to ascertain the internal consistency of the interviews. The data set's α coefficient for the 21 factors that affect productivity in ADOs is calculated "0,792" which is higher than the minimal requirement of "0.7" (Tavakol and Dennick, 2011).

Finally, the degree to which the seven factors affecting organizational productivity obtained from the literature review correspond to the "factors affecting productivity in ADOs" identified by ADO managers has been analyzed in order to assess the relationship between the literature review and expert interviews, as well as productivity in organizations and productivity in ADOs. Factors that describe the same situation, even if named differently, have been considered as the same factor (for example, organizational skills of management and system of management factors have been considered as the same factor). The information about how many different office managers have mentioned each factor obtained from literature is presented in Table 4.

Table 4. Factors affecting organizational productivity.

| Factor Code | Factors Affecting Organizational Productivity | Respondents | Number of Mention | | | | | | |
|-------------|---|------------------|-------------------|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| FL1 | Communication | 1, 2, 3, 4, 5, 7 | | | | | | | * |
| FL2 | System of management | 1, 3, 4, 6, 7 | | | | | | | * |
| FL3 | Teamwork | 1, 3, 4, 7 | | | | | | * | |
| FL4 | Job satisfaction | 1, 2, 5, 7 | | | | | | * | |
| FL5 | Performance and productivity of employees | 3, 5, 6 | | | | | * | | |
| FL6 | Employee commitment | 1, 4, 7 | | | | | * | | |
| FL7 | Training and development | - | | | | | | | |

FL: factor obtained from literature

As seen in Table 4, there has not been a factor mentioned by all seven office managers. The communication (FL1) factor has been the most frequently mentioned factor, which is mentioned by six different managers. One factor (FL2) mentioned by five different managers, two factors (F3, F4) mentioned by four different managers, two factors (FL5, FL6) mentioned by three different managers, and one factor (FL7) not mentioned by any manager.

According to the results obtained from this table, it can be stated that there is a correlation between the factors affecting productivity in ADOs specified by the participating ADO managers (i.e., experts) and the factors affecting organizational productivity mentioned in the literature. But, suprisingly, although FL7 (training and development) is included in the literature as an important factor affecting organizational productivity, it was not put forward as a factor affecting productivity in ADOs by any ADO managers who participated in the interviews. This might indicate managers of ADOs undervalue FL7 (training and development) factor; the nature of the architectural design requires a master apprentice approach which is also a form of "training and development" by on job training. So we can assert that "training and development" is a built-in factor for ADOs.

Conclusion

The main objective of this study is to contribute to the gap in the literature regarding the factors affecting productivity in ADOs. Through conducted research, a deficiency in the literature concerning this subject has been identified. While there is sufficient research on factors affecting the productivity of organizations in general, there is a lack of adequate information regarding the situation specific to ADOs.

To achieve the aim of the study, seven ADOs with at least 10 years of industry experience were selected and interviews were held with office managers. Upon analyzing the thoughts of managers, 21 factors were identified. These 21 factors were analyzed using mean score ranking and 7-point Likert scale techniques to determine critical ones (i.e., CFs) and rank them based on their impact. When the findings of this study are analyzed, it is determined that among the 21 factors, 9 of them are determined as CFs (factors with $NMV \geq 0.50$): communication, employee knowledge and experience, organizational skills of management, teamwork, physical facilities of the office, performance of individuals, variable customer demands and motivation. When examining the intensity of the impact, with a mean value of 6,00, "communication" is found to be the most critical factor affecting productivity in ADOs. "Similar generation" is found to be the least critical factor with a mean value of 2,14.

It could be concluded that there is a strong relationship between the organizational productivity elements indicated in the literature and the productivity factors in ADOs as reported by the participating ADO managers (communication, system of management, teamwork, job satisfaction, performance and productivity of employees, employee commitment). Surprisingly, however, none of the ADO managers who took part in the study mentioned "training and development", despite the fact that it is mentioned in the literature as a significant element influencing organizational productivity. This may be due to training and development being an innate part of the architectural design process.

It should be noted that the results obtained from this study are limited to the experiences of the seven ADO managers who participated in the interviews. In the future, new and more extensive studies on the subject will make the findings of this study more meaningful and contribute to the expansion of the literature in productivity and organization of ADOs.

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