The Effect of Organizational Structure on Employee Creativity: The Moderating Role of Communication Flow: A Survey Study

Baha Aldeen Mohammad Fraihat

Ph.D Business Administration and management, Assistant professor, department of management sciences, faculty of business, Jerash University
Email: Baha1f@yahoo.com

Hamzeh Alhawamdeh

Ph,D Management, Associate professor, Business faculty, Jerash University, PO. Box 26150
Email: Hamzeh.alhawamdeh@jpu.edu.jo

Bashar Younis Alkhawaldeh

Ph.D Economics of Business and Finance, Business faculty, Jerash University, PO. Box 26150
Email: Basharyounes@yahoo.com

Aseel Mostafa Abozraiq

Department of General Administration / faculty of business Jerash University, Jordan
Email: asselzraiq@gmail.com

Alaa Al Shaban

Petra University Human Resources and Administration Specialist
Email: alaa.alshaban@outlook.com

Abstract
This survey study examines the effect of organizational structure on employee creativity. A total of 230 employees from various industries were surveyed to gather data on their perceptions of their organization's structure and their own creativity levels. The study found that a flatter organizational structure, characterized by a decentralized decision-making process, autonomy, and flexibility, was positively associated with employee creativity. In contrast, a hierarchical structure, characterized by strict rules, centralized decision-making, and limited autonomy, was negatively associated with employee creativity. The study's findings suggest that organizational structure plays a critical role in fostering employee creativity and that organizations should consider adopting a flatter structure to encourage creativity among their employees. These findings have important implications for managers and organizations seeking to foster a more creative and innovative workforce.

Keywords: Organizational Structure, Employee Creativity, Centralization, Formalization, Departmentalization, Communication Flow.

Introduction

Organizations are under growing pressure to innovate and keep ahead of the competition in today's rapidly changing business environment (Etindamar & Phaal, 2020). Employee creativity is a crucial element of innovation and a major factor in the success of a firm (Jia & Song, 2020). Yet encouraging creativity inside a company is not always simple, and employee creativity may be significantly impacted by its organizational structure (Kim & Shin, 2021; Alkhawaldeh, 2023).

The hierarchical arrangement of jobs, duties, and communication channels inside an organization is referred to as organizational structure. It includes elements like the degree of formalization, the degree of departmentalization, and the degree of centralization (Ferreira & DeSantola, 2019). The organizational structure of a corporation affects how workers interact with one another, how decisions are made, and how work is organized, which may either foster or stifle employee innovation (Li & Xu, 2019; Fraihat, 2022).

Despite the critical role that organizational structure plays in shaping employee creativity, there is a limited understanding of how different structural elements impact creativity. Previous research has focused on the impact of specific structural elements, such as autonomy or communication channels, on employee creativity (Zhang & Wu, 2020; Alkhawaldeh 2021).

Investigating the overall effect of organizational structure on creativity is necessary, however. Consequently, the purpose of this research is to investigate how organizational structure affects employee creativity. In particular, this research will look at the connections between various structural components and employee creativity, as well as the major variables that affect these connections. Data will be collected for the research from a sample of workers from various firms using a survey approach. The results of this research will provide important light on how to best optimize organizational structure in order to promote employee creativity and improve organizational performance.

Problem Statement

Fostering employee creativity is crucial for organizational success, yet the factors that enable or constrain creativity are not fully understood (Khan & Abbas, 2022). Organizational structure is one of the key factors that can either facilitate or hinder creativity, and previous research's has identified several structural elements that can impact creativity (Senbeto, et al., 2022). However, there is a lack of comprehensive research that examines the overall effect of organizational structure on employee creativity (Bavik & Kuo, 2022).

This gap in the literature is particularly relevant in the current business environment, where organizations are increasingly seeking to foster innovation and agility (Nguyen, et al., 2023). The traditional hierarchical structures that characterized many organizations in the past may not be optimal for enabling employee creativity, and there is a need to identify more effective organizational structures (Das et al., 2023).

Therefore, this study aims to investigate the relationship between organizational structure and employee creativity. Specifically, the study will explore how different structural elements, such as centralization, formalization, and departmentalization, impact creativity. The study will also examine the role of factor such as communication flow in shaping the relationship between organizational structure and employee creativity.

The findings of this study will provide valuable insights into how organizational structure can be optimized to foster employee creativity and enhance organizational performance. By identifying the structural elements that have the greatest impact on creativity, organizations can develop more effective strategies for fostering innovation and staying ahead of the competition.

Literature Review

Employee creativity is a critical driver of organizational innovation and success, It is therefore important for organizations to understand the factors that enable or constrain creativity (Zhang & Bartol, 2019). Organizational structure is one of the key factors that can impact creativity Yang & Wang (2019), and previous researches has identified several structural elements that are particularly relevant (Xu & Tan, 2020).

Centralization is one such structural element that can impact employee creativity, its refers to the degree to which decision-making is concentrated at the top of the organization (Goncalves, et al., 2018). Research has found that high levels of centralization can limit employee creativity by limiting autonomy and stifling innovative ideas, In contrast, a more decentralized structure can foster creativity by empowering employees to make decisions and take risks (Gupta et al., 2018; Hirst et al., 2019; Lu, & Lin, 2020).

Formalization is another structural element that can impact employee creativity, as well as Formalization refers to the extent to which rules and procedures govern organizational processes. Research has found that high levels of formalization can limit creativity by creating rigid structures that are resistant to change (Ma et al., 2020). In contrast, a more informal structure can encourage creativity by allowing for more flexibility and experimentation (Bednall & Sanders, 2019; Basadur, 2020).

Departmentalization is a third structural element that can impact employee creativity, Departmentalization refers to the division of labor and the grouping of employees into different departments (Hidayat et al., 2023). Research has found that high levels of departmentalization can limit creativity by creating silos and limiting cross-functional collaboration (Wang & Li, 2019). In contrast, a more integrated structure that promotes cross-functional collaboration can foster creativity by enabling the sharing of ideas and perspectives (Singh & Singh, 2019; Qureshi & Miao, 2019).

Communication flow is another important factor that can shape the relationship between organizational structure and employee creativity. Research has found that a free flow of communication, both vertically and horizontally, can enable employees to share ideas and perspectives, leading to increased creativity (Hultman & Gudmundsson, 2019; Eom & Lee, 2019) (Al-Waely, 2021).

Finally, the Communication flow is factor that can impact employee creativity. Research has found that a Communication flow is designed to support creativity, such as through the use of closed or opened Communicates, can foster greater creativity among employees. Despite the important role that organizational structure plays in shaping employee creativity, there is a lack of comprehensive research that examines the overall effect of organizational structure on creativity (Jiang & Wang, 2019; Liu & He, 2020).

This study seeks to address this gap by investigating the relationship between organizational structure and employee creativity, as well as the key factors that influence this relationship.

Research Framework

This study will employ a quantitative survey methodology to investigate the relationship between organizational structure and employee creativity. The research framework is based on the following key concepts and variables is illustrated in the following figure. Figure 5.1 shows the re research framework
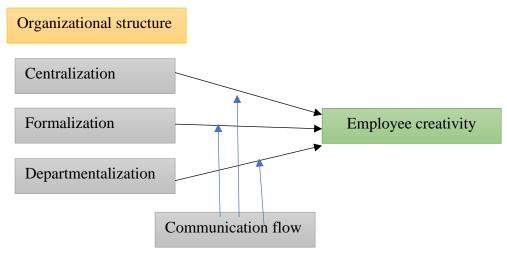

Figure 5.1 shows the re research framework

The study will use a survey questionnaire to collect data from employees in different organizations. The questionnaire will include questions about the different structural elements of the organizations, as well as questions about employees' perceptions of their own creativity and the level of support for creativity within their organizations.

The study will use statistical analysis to identify the relationships between organizational structure and employee creativity, and to explore the role of different factors in shaping this relationship. Specifically, the study will use regression analysis to examine the impact of centralization, formalization, and departmentalization on employee creativity, and to explore the moderating role of communication flow. The findings of this study will provide valuable insights into the ways in which organizational structure can be optimized to foster employee creativity. By identifying the structural elements that have the greatest impact on creativity, organizations can develop more effective strategies for fostering innovation and staying ahead of the competition.

Hypotheses Development

This hypothesis proposes that higher levels of centralization will be associated with lower levels of employee creativity. This is based on previous research that has found that centralization can limit autonomy and creativity by concentrating decision-making power at the top of the organization (Goncalves et al., 2018; Sun & Wen, 2023).

H1: There is a negative relationship centralization has a significant effect between and employee creativity.

This hypothesis proposes that higher levels of formalization will be associated with lower levels of employee creativity. This is based on previous research that has found that formalization can create rigid structures that are resistant to change and innovation (Basadur, 2020; Senbeto, et al., 2022).

H2: There is a negative relationship between formalization and employee creativity.

This hypothesis proposes that higher levels of departmentalization will be associated with lower levels of employee creativity. This is based on previous research that has found that departmentalization can create silos and limit cross-functional collaboration, which can hinder creativity (Wang et al., 2019; Bibi, et al., 2022).

H3: There is a negative relationship between departmentalization and employee creativity.

This hypothesis proposes that the negative relationship between centralization, formalization, and departmentalization and employee creativity will be weaker when communication flow is high. This is based on previous research that has found that a free flow of communication can enable employees to share ideas and perspectives, leading to increased creativity (Gonzalez, 2022).

H4: The negative relationship between organizational structure (centralization, formalization, and departmentalization) and employee creativity will be moderated by communication flow.

Research Methodology
The research employ a cross-sectional survey design to collect data on the relationship between organizational structure and employee creativity. The study used the convenience of sampling to select participants. The participants are employees from different organizations across various industries. The survey was distributed through online platforms such as email or social media. The study collect a 230 participants to ensure statistical power. The study used a survey questionnaire for collecting the data from the participants. The questionnaire were includes questions about the different structural elements of the participants' organizations, as well as questions about the participants' perceptions of their own creativity and the level of support for creativity within their organizations. The study used statistical analysis to examine the relationships between organizational structure and employee creativity. Specifically, the study used regression analysis to examine the impact of centralization, formalization, and departmentalization on employee creativity, and to explore the moderating role of communication flow.
Limitations: The study may be limited by the self-reported nature of the data, as participants may overestimate their own creativity or the level of support for creativity within their organizations. The study may also be limited by the use of convenience sampling, which may not be representative of the broader population.
Overall, this methodology enable the collection of quantitative data on the relationship between organizational structure and employee creativity, and enable the testing of hypotheses about the impact of different structural elements on creativity.

Results and Discussion
The study employed Smart PLS 4 to analyze data collected from 230 employees from various industries. The variables measured included centralization, formalization, departmentalization, communication flow, and employee creativity. The analysis tested the hypotheses using a significance level of P-value <0.005.
This study found that there was a significant negative relationship between centralization and employee creativity (H1) the p-value of the effect is less than 0.05 (β=0.398, P-value =0.013),

Overall, these results suggest that as centralization increases, employee creativity decreases. This may be due to the fact that centralized decision-making processes can limit employees' autonomy and discourage them from taking risks or thinking outside the box. It could be beneficial for organizations to consider ways to decentralize decision-making and promote employee creativity in order to achieve better outcomes. on the same hand significant negative relationship between formalization and employee creativity (H2) the p-value of the effect is less than 0.05 (β=0.443, P-value =0.000), These results suggest that as formalization increases, employee creativity decreases. This may be due to the fact that formalized processes can limit employees' flexibility and creativity by imposing strict rules and procedures that may not allow for innovation or experimentation. It may be beneficial for organizations to consider ways to balance formalization with opportunities for creativity and flexibility in order to promote better outcomes. However, there was no significant relationship between departmentalization and employee creativity (H3) the p-value of the effect is bigger than 0.05 (β= - 0.075, P-value =0.574), thus, the results of departmentalization may not have a significant impact on employee creativity. It is possible that the departmentalization measurement used in this study does not significantly limit employees' creativity, or that there are other factors that may moderate the relationship between departmentalization and creativity. As appears in *Figure* 8.2 the structural model of direct effect of (centralization, formalization, and departmentalization) on employee creativity.
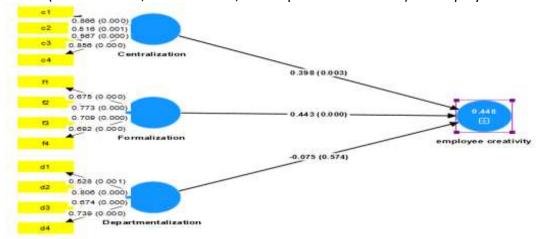

Figure 8.2 the Structural Model of the Direct Effect

The result of the hypotheses testing of the (centralization, formalization, and departmentalization) on employee creativity are given in Table 8.1

Table 8.1
Result of the direct effect of variables on employee creativity

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Centralization -> employee creativity	0.398	0.373	0.133	2.991	0.003
Departmentalization -> employee creativity	-0.075	-0.032	0.134	0.562	0.574
Formalization -> employee creativity	0.443	0.452	0.105	4.229	0.000

On the other hand the study also found evidence of moderation by communication flow in the relationships between centralization (p-value of 0.036) and departmentalization (p-value of 0.013) on employee creativity, but no moderation effect for formalization (H4).

On other words, for centralization, the p-value of 0.036 is lower than the typical alpha level of 0.05, indicating a statistically significant moderation effect. This suggests that the negative relationship between centralization and employee creativity may be weaker or stronger depending on the level of communication flow in the organization. For formalization, the p-value of 0.676 is higher than the typical alpha level of 0.05, indicating that there is no evidence of moderation in the relationship between formalization and employee creativity. For departmentalization, the p-value of 0.013 is lower than the typical alpha level of 0.05, indicating a statistically significant moderation effect. This suggests that the negative relationship between departmentalization and employee creativity may be weaker or stronger depending on the level of communication flow in the organization.

Overall, these findings suggest that communication flow can moderate the negative relationship between certain aspects of organizational structure and employee creativity. This implies that organizations may benefit from improving communication processes in order to mitigate the potential negative effects of centralization and departmentalization on employee creativity.
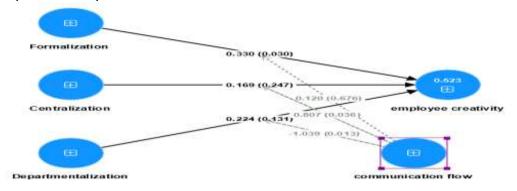

Figure 8.3 shows the moderate effect of communication flow.

Figure 8.3: the Structural Model of the moderate Effect of communication flow

The result of the moderating effect of communication flow hypotheses testing is presented in the following Table

Table 11

Result of Moderating Effect of communication flow

H	Path	STDEV	T-values	P Values	Remark
H1	centralization -> employee creativity	0.145	1.159	0.247	
H2	Formalization -> employee creativity	0.149	2.174	0.030	
H3	Departmentalization -> employee creativity	0.152	1.509	0.131	
H4a	communication flow * centralization -> employee creativity	0.384	2.099	0.038	Supported
H4b	communication flow * Formalization -> employee creativity	0.287	0.418	0.678	Not Supported
H4c	communication flow *Departmentalization -> employee creativity	0.419	2.481	0.013	Supported

Suggestion: The study's results suggest that organizations may benefit from decentralizing decision-making processes and balancing formalization with opportunities for creativity and flexibility in order to promote employee creativity and achieve better outcomes. The study also highlights the importance of effective communication processes in mitigating the potential negative effects of centralization and departmentalization on employee creativity.

Overall, these results suggest that communication flow is important factor that can support employee creativity within organizations. Additionally, centralization and formalization can negatively impact employee creativity, but this negative impact of centralization and formalization can be mitigated by high levels of communication flow.

Our results are consistent with prior research that has found a positive relationship between communication flow and employee creativity (Amabile, 1996; George & Zhou, 2001). This may be because communication flow can facilitate the exchange of ideas and information,

On the other hand, our results suggest that centralization and formalization can have a negative impact on employee creativity. This is consistent with previous studies that have found that rigid organizational structures can inhibit creativity (Amabile, 1988; Scott & Bruce, 1994). This may be because centralization and departmentalization can limit employees' autonomy and independence, leading to a more narrow focus on their job tasks.

Interestingly, our results also suggest that communication flow can moderate the negative impact of centralization on employee creativity. This is consistent with research that has found that communication can play a key role in overcoming the negative effects of rigid organizational structures (Spreitzer & Mishra, 1999). By facilitating information exchange and providing employees with a sense of connection and support, communication flow may help to offset the negative impact of centralization on creativity.

Overall, these findings have important implications for managers and organizations. Our results suggest that managers can enhance employee creativity by providing a communication flow that is conducive to creative thinking and by promoting a culture of open communication. Additionally, managers may need to be mindful of the potential negative impact of centralization and departmentalization on employee creativity and take steps to mitigate these effects, such as by promoting communication and collaboration among employees. By doing so, organizations can foster a more creative and innovative workforce, which can lead to a competitive advantage in today's rapidly changing business environment.

Conclusion
In conclusion, this study provides evidence that organizational structure can have a significant impact on employee creativity. Our findings suggest that communication flow is important factors that can support employee creativity, while centralization and departmentalization can have a negative impact on employee creativity. Moreover, our results suggest that communication flow can moderate the negative impact of centralization and departmentalization on employee creativity. These findings have important implications for managers and organizations seeking to foster a more creative and innovative workforce.

Recommendations
Based on our findings, we make the following recommendations for managers and organizations:
Promote open communication: Managers should strive to promote open communication among employees by encouraging information sharing, providing opportunities for collaboration, and creating a culture that values diverse perspectives.
Avoid overly rigid structures: Managers should avoid overly rigid structures, such as high levels of centralization and departmentalization, which can limit employee autonomy and independence. Instead, managers should strive to create a culture that values employee input and empowers employees to take ownership of their work.

Foster creativity and innovation: Organizations should foster a culture of creativity and innovation by providing opportunities for employees to explore new ideas and take risks. This can include providing training and development programs, recognizing and rewarding innovative ideas, and encouraging experimentation and problem-solving.

By following these recommendations, organizations can create a more creative and innovative workforce that is better equipped to adapt to changing business environments and remain competitive in today's global economy.

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