

ORGANIZATIONAL AGILITY AND EMPLOYEE INNOVATIVE WORK BEHAVIOR IN HIGHER EDUCATION OF PAKISTAN: THE MEDIATING ROLE OF CREATIVE SELF-EFFICACY

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Abstract

Pakistan Higher Education Institutions (HEIs) are working in an ever dynamic and complicated environment whereby there has been a rapid change in technology, there has been an augmenting competition globally, and there has been an augmented expectation of socio-economic impact. Even with reforms on the policy level and quality assurance measures, a significant number of universities remain bureaucratic in nature and their structures of governance show centralized and inflexible nature to encourage employee-level innovation. Based on the Social Cognitive Theory, this paper evaluates the impact of organizational agility on the innovative behavior of employees and explores the mediation of creative self-efficacy in the Pakistani higher education industry. The sample size used was 390 academic staff members in the private universities within Lahore and Islamabad, thus a quantitative, cross-sectional research design was used in this study. The hypothesized relationships were tested using Structural Equation Modeling, which was generated using the Partial Least Squares approach (PLS-SEM). The findings reveal a large positive impact of organizational agility on employee innovative behavior, which implies that flexible structures, flexible processes, and responsive decision-making positively influence innovation within academic staff. Moreover, creative self-efficacy moderates this relationship to some extent, which reflects the significance of employee trust in their creative abilities in putting organizational conditions into innovative practices.

The study can add to the body of research on organizational agility and innovation by offering empirical data of an emerging country, where in many cases institutions of higher education are limited by structural and cultural barriers. In practice, the conclusions highlight the necessity of a university leadership and policymakers to facilitate agile governance processes and enrich creative self-efficacy by enabling facilitating supportive policies and constant professional development programs to encourage sustainable innovation at higher education institutions in Pakistan.

Keywords: Organizational Agility; Creative Self-Efficacy; Employee Innovative Behavior; Higher Education Institutions; Pakistan

1. Introduction

The world is experiencing radical and multidimensional changes in Higher Education Institutions (HEI) due to accelerating technological changes, globalization of knowledge, digital disruption and growing demands to empower society and the economy. Universities are no longer viewed as teaching and credentialing institutions; instead, they are supposed to be innovation-based knowledge institutions that would facilitate research excellence, employability, entrepreneurship, and national development (Khan, 2022; Rasheed et al., 2025). In this regard, innovation has become a strategic need of institutional sustainability, competitiveness as well as relevance.

Higher education is even more important in developing nations like Pakistan as the potential of industrial research is limited, the resources of the population are constrained, and the growth of knowledge and development of human capital becomes more dependent on universities (Khan, 2022). Even with policy efforts by regulatory agencies and increased investment in higher education, Pakistani HEIs have been experiencing the same problems of bureaucratic inflexibility, centralized decision-making, and academic cultures. These

institutional constraints tend to make institutions less responsive, less experimental, and less open to having their academic staffs practice innovations.

Over the recent years, organizational agility has gained increasing academic interest as a critical organizational skill in the context of organizations that are volatile and uncertain. Organizational agility can be defined as the ability of an institution to be aware of changes in its external and internal environment and respond to them in a way that is flexible through structures, adaptive processes, and decentralized decision-making (Thurlings et al., 2015; Hatunoğlu, 2024). The relevance of agility to higher education is based on the ability of universities to react to the market demand, embrace new technology, form cross-disciplinary groups, and be proactive to the needs of the stakeholders. Agile institutions are more likely to address crisis, changes in technology and changes in policies that define modern systems of higher learning.

However, agility in the organization might not be enough to create an innovation without employees having the psychological willingness to undertake creative and innovative processes. This paper relies on Social Cognitive Theory, and focuses on the creative self-efficacy as one of the fundamental psychological processes that have the ability to connect organizational conditions with employee behavior. Creative self-efficacy shows that a person believes that he or she can produce and apply creative ideas. Highly creative self-efficacy employees are also better placed to continue with tasks involving innovation, to withstand the uncertainty, and convert ideas into action (Lu et al., 2023).

Creative self-efficacy is especially significant in institutions of higher education with a hierarchical organization and a culture of risk-aversion. Organizational structures may not be very rigid; however, employees may not be innovative enough when they lack confidence in their innovative skills, or when they are afraid of the pitfalls of failure (Qian & Kee, 2023). On the other hand, creative self-efficacy and promotion of innovation behavior among academic staff can be reinforced by agile organizational environments that offer autonomy, learning, and psychological safety.

In spite of the fact that organizational agility and creative self-efficacy have been studied separately, there are limited empirical investigations that have explored the combination of these two factors in influencing innovative behavior of employees in the higher education setting particularly in a developing country situation. Majority of the available research concentrates on either organization or individual psychological characteristics alone, which does not provide a comprehensive picture of the process of innovation within the academic institutions. This particular disjuncture is particularly intense in the Pakistani paradigm, where structural requirements and cultural practices greatly lose control over the behavior of employees.

Based on this, the proposed research intends to test the direct impact of organizational agility on employee innovative behavior, and to test the mediating role of creative self-efficacy in Pakistani private higher education institutions. Combining organizational and psychological approaches to the same framework, the proposed study aims to offer a more detailed explanation of the means of how innovation might be developed in institutions of higher learning that are under resource stress and institutional complexity.

2. Literature Review and Hypotheses Development

2.1 Organizational Agility and Employee Innovative Behavior

The concept of organizational agility has long been defined as an ability of an organization to perceive the changes in the environment and respond in a quick and efficient manner with the help of flexible structures, adaptable processes, and decentralized decision-making (Thurlings et al., 2015; Akhtar et al., 2016). Agility is also considered a requirement to institutional survival and innovation in knowledge-based industries including higher education. The

environment of the universities consists of high rates of technological change, demands of the labor market, and changing policies, which presuppose constant changes.

Organizational agility is practiced in various ways in higher education institutions, such as the possibility to redesign academic programs, adopt digital learning technologies, encourage interdisciplinary cooperation, and simplify administrative procedures. Agile universities foster experimentation, minimize process obstacles, and allow academic personnel to be autonomous. These traits provide an atmosphere of legitimization of the innovations and employees who are expected to suggest and introduce new ideas (Wang et al., 2021).

Empirical studies indicate that organizational agility has a positive effect on worker innovative behavior through lessening bureaucracy and perceived organizational support (Nazir, 2024; Khan et al., 2020). Employees will have better opportunities to generate ideas, promote change processes, and engage in innovation-related activities in case their institutions are seen as flexible and responsive. On the contrary, strict and strict hierarchical systems are more likely to suppress creativity and deny any risk-taking, especially in the academic environment where the rules and traditions are highly established.

Organizational agility is still not well developed in the Pakistani context of higher education as a result of centralized rule, high regulatory frameworks and low autonomy of the managers. The conditions usually limit the innovation since they restrict the freedom and sensitivity of the employees. Thus, the study of organizational agility as a precondition of innovative behavior in employees is of special significance in relation to the efforts to understand how the Pakistani HEIs may increase their innovation capacity.

H1: Organizational agility positively impacts the innovative behavior of employees.

2.2 Creative Self-Efficacy as a Mediating Mechanism

The Social Cognitive Theory underlines that personal behavior is determined by the mutual interactions of personal factors, conditions of environment, and results of behavior (Bandura, 1997, 2001). In this context, self-efficacy is one of the key cognitive processes that affect the way people perceive environmental stimuli and turn them into action. Creative self-efficacy is in reference to the individual thought that he or she is able to produce new and productive ideas and that he or she is able to implement the ideas in his or her work situation.

The background literature shows that creative self-efficacy is a key prerequisite of innovative behavior at any organizational (including higher education) context. Employees having high creative self-efficacy show higher intrinsic motivation, persistence, and ambiguity tolerance all of which are indispensable in cases of innovation in academic settings (Amjed and Tirmzi, 2016; Khan, 2015). Conversely, the low levels of creative self-efficacy have been linked to avoidance of experimentation, resistance to change, and dependence on conventional ways of doing things especially in hierarchical and high-evaluation institutions like universities.

The literature also indicates that creative self-efficacy should be well developed not in a vacuum but under the strong influence of organizational conditions. Autonomy, supportive leadership, learning opportunities, and constructive feedback have been cited as important stimulating factors of creative self-efficacy. In this respect, organizational agility is crucial as it provides a facilitating environment making experimentation legit and reduction of the perceived risk of innovation possible. The agile institutions enable the employees to experiment with new methods, understand failure, and improve their practice on a continuous basis, enhancing confidence in the ability to be creative (Jeong & Jeong, 2025).

Liu et al. (2024) explain that the creative self-efficacy can take on greater significance in a higher education institution because of the intellectual, reputational, and performance-based risks of being involved in innovation. The academic employees tend to work under the pressure in regard to teaching reviews, research performance, and peer acknowledgment. Therefore, despite the presence of structural flexibility, innovative behavior might still be

restricted when the faculty members do not believe in their creativity. The reviewed literature highlights that psychological empowerment especially creative self-efficacy helps the academic staff to defeat fear of failure and can evolve in long term innovation (Khan, 2015; Amjed & Tirmzi, 2016).

Building on these insights, this study conceptualizes creative self-efficacy as a mediating mechanism that explains how organizational agility influences employee innovative behavior. Bagheri et al. (2022) demonstrate that organizational agility establishes the external conditions necessary for innovation, while creative self-efficacy determines the extent to which employees utilize these conditions. By integrating organizational and psychological perspectives, this study responds to calls in the literature for more comprehensive models of innovation in higher education.

H2: Creative self-efficacy mediates the relationship between organizational agility and employee innovative behavior.

2.3 Conceptual Framework and Hypothesized Model

Based on the reviewed literature and the theoretical foundations of Social Cognitive to the theoretical underpinnings of Social Cognitive Theory, the proposed conceptual framework of this study will be based on the fact that organizational agility correlates with employee innovative behavior via the mediating factor of creative self-efficacy He (2022). Organizational agility is theorized as a higher-order organizational capacity that defines the working environment through flexibility, responsiveness and decentralized decision making. Employee innovative behavior is the behavioral result that is reflected in the idea generation, idea promotion and idea implementation (Scott and Bruce, 1994; Thurlings et al., 2015).

The aspect of creative self-efficacy is placed as a major psychological process that can explain how the conditions in organizations can be turned into individual innovative behaviour. The framework also presumes that agile organizational settings would make employees more confident about their creative skills, and this will raise their chances of behaving innovatively. Also, the direct correlation between organizational agility and the innovative behavior of employees is suggested, which makes the prospects of structural flexibility as an independent driver of innovation possible (Nazir, 2024; Khan et al., 2020).

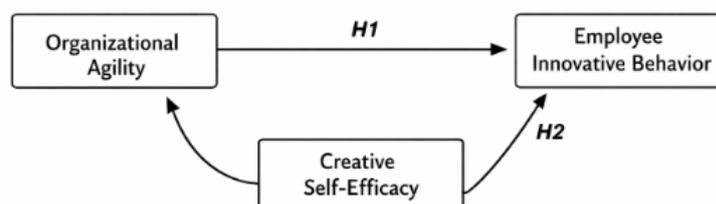


Figure 1. Conceptual framework illustrating the mediating role of creative self-efficacy in the relationship between organizational agility and employee innovative behavior (adapted from Bandura, 1997; Thurlings et al., 2015).

3. Methodology

3.1 Research Design

This research utilized a quantitative, cross-sectional approach to systematically investigate the theoretical connections between organizational agility, creative self-efficacy, and employee innovative behavior, as it is a standard methodological procedure in the innovation research in a higher education setting (Creswell, 2014). It was decided that a cross-sectional approach is suitable because it is possible to systematically capture the perception held by employees regarding the organizational conditions and personal psychological condition at one moment, which is why it is an effective and convenient method of analyzing the structural relationships of the variables in the study.

In addition, the design is specifically appropriate to study psychological and organizational constructs, including creative self-efficacy and innovative behavior, which are affected by the present state of affairs at the workplace and leadership approaches. The data gathered at a single instance will help the study recognize trends of relationship between organizational agility and employee outcomes and this will provide the starting point of empirical evidence to support the theoretical model. This methodology is similar to the past literature in the field of higher education and organizational innovation, where the cross-sectional survey has been a common tool to study the association between personal capabilities, organizational variables, and innovation-related practices (He, 2022; Liu et al., 2024; Qian and Kee, 2023).

3.2 Sample and Data Collection

The study population was academic personnel of the Lahore and Islamabad private universities, which is a wide range of disciplines and experience. The sampling method used was simple random sampling so that every member of the population would have an equal possibility of being picked and 290 respondents would be included in the data collection. The study was conducted on a voluntary basis and the respondents were assured of the strict confidentiality of their responses to motivate them to give honest report and to minimize possible biases of answers that might arise. Such actions were not only meant to maintain ethical research standards, but also reduce the chances of the common method bias so that the reliability and validity of the gathered data can also be increased.

3.3 Measurement Instruments

A well-established and validated scales used to measure all study constructs were based on previous research studies to determine reliability and content validity. Organizational agility was measured with the use of items that include important dimensions of flexibility, responsiveness, and adaptability on a scale which was developed and tested to measure higher education situations (Gul and Çetin, 2022). The items used in assessing creative self-efficacy were items indicating confidence in people in generating, developing and implementing new ideas which were adapted by Tierney and Farmer (2002) and the scale was widely used. Operationalization of employee innovative behavior was implemented using items that covered the concept of idea generation, idea promotion and idea implementation, based on the tested scale described by Janssen (2000). The scale used was the five-point Likert scale, where 1 indicated strongly disagree and 5 strongly agree, which is in line with the previous empirical studies in research on organizations and education. This method made sure of comparability to past studies as well as rigor of measurement and the relationships between organizational agility, creative self-efficacy, and innovative behavior could be assessed accurately.

3.4 Data Analysis Technique

The Structural Equation Modeling (SEM) was performed as the Partial Least Squares (PLS) method with the help of SmartPLS software, which is the best when dealing with complex models and predictive studies and moderate sample sizes. The evaluation process was based

on two steps. The initial step involved the measurement model in terms of reliability and validity through Cronbach alpha, composite reliability (CR), average variance extracted (AVE) and discriminant validity through Fornell-Larcker criterion and HTMT ratio.

The second step was the evaluation of the structural model to test the hypothesized organizational agility, creative self-efficacy, and employee innovative behavior relationships. The predictive power of the model was analyzed using bootstrapping to investigate path coefficients, t-values, significance levels, R^2 and effect sizes (f^2). The strategy provided the strength of the measures, as well as, the validity of the tested theoretical relationships.

4. Results

4.1 Measurement Model Assessment

The measurement model was assessed for indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. All factor loadings exceeded the recommended threshold of 0.70. Composite reliability and Cronbach's alpha values were above 0.70, indicating satisfactory internal consistency. Average Variance Extracted (AVE) values exceeded 0.50, confirming convergent validity, while discriminant validity was established using the Fornell-Larcker criterion.

Construct	Cronbach's α	CR	AVE
Creative Self-Efficacy (CSE)	0.886	0.929	0.814
Organizational Agility (OAG)	0.815	0.890	0.729
Employee Innovative Behavior (EIB)	0.858	0.900	0.649

4.2 Structural Model and Hypothesis Testing

The structural model explained 36.5% of the variance in EIB ($R^2 = 0.365$) and 41.3% of the variance in CSE ($R^2 = 0.413$).

- Direct Effects: Organizational agility showed a significant positive effect on EIB ($\beta = 0.143$, $p = 0.011$).
- Mediation Analysis: CSE significantly mediated the relationship between OAG and EIB (Indirect effect = 0.042, $p = 0.008$), indicating partial mediation.

The structural model evaluation showed that organization agility influenced employee innovative behavior positively, and this supported H1 well. This observation is consistent with the previous studies that showed that agile organizations are flexible, responsive, and adaptive, which provide an environment that supports innovation (Bagheri et al., 2022). In addition, the mediation analysis showed that the relationship between organizational agility and employee innovative behavior was partially mediated by creative self-efficacy which supports H2. This aligns with the research that indicates that the perceived ability of employees to be creative improves the conversion of the organizational support into physical innovative performance (He, 2022; Liu et al., 2024).

These findings may indicate that organizational agility promotes innovation directly and indirectly because it enhances the confidence of employees in their creative potential. The joint effect of the organizational conditions and the psychological resources of an individual is more likely to manifest through the participation of the employees in the process of idea generation, promotion, and implementation when they make themselves feel that their organization is agile. The results support how imperative agile organizational practice is in institutions of higher learning, as a structural facilitator of innovation, as well as a procedure of contributing to increase the creative self-efficacy of

the workers in a sustainable and high-impact way of innovative behavior (Jeong and Jeong, 2025).

5. Discussion

This research paper explores how organizational agility affects the innovative behavior of staff in Pakistani private higher education institutions (HEIs) and in which employee innovative behavior is a key determinant that creative self-efficacy mediates. The results affirm that agile forms, i.e. those that are decentralized, flexible, and reduce bureaucratic barriers, are important in enhancing the intention of academic personnel to generate and establish new ideas. Organizational agility can be created by reducing the strictness of the procedures prevalent in Pakistani HEIs and allows autonomy and collaboration to flourish accordingly.

One of the key contributions of the study is the empirical confirmation that creative self-efficacy plays the role of being the bridge between the institutional structure and the individual action psychologically. This finding shows that structural agility is not enough to facilitate innovation, but should be coupled with psychological empowerment. Employees feel assured in their creative skills when they are given a platform to experiment and draw constructive criticisms. This increased self-confidence is described as a kind of psychological amplifier, encouraging employees to make the imaginative risk required to be innovative, in spite of the hierarchical pressures that are common in academic institutions in developing countries.

The paper also states that innovation in higher education is a systemic phenomenon on a multilevel scale as opposed to an isolated phenomenon. The study combines the Social Cognitive Theory in showing that successful innovation is a product of the top-down organizational design and bottom-up individual motivation. This view questions the efficiency of reforms which are solely based on policies, indicating that, in order to become a stable culture and not an occasional phenomenon, institutions should ensure that their formal organization is aligned to the psychological willingness of their employees.

Finally, the results provide a refined structure of Pakistani HEIs, which highlights that agility institutionalization is a precondition of long-term enhancement. The study contributes to the current body of knowledge by explaining how and why agile environments get improved results: by making the process of experimentation normalized and by making the academic staff feel that they are capable of creating things on their own. This encompassing strategy offers a conceptually-based roadmap to subsequent reforms in such knowledge-intensive sectors that are innovation-based.

6. Conclusions and Implications.

This paper has explored the connection between organizational agility and innovative behavior in employees working in Pakistani institutions of higher education in the private sector, as well as explored the mediation of creative self-efficacy. The results show that organizational agility is a profound predictor of innovative behavior of employees, either directly or indirectly, by increasing creative self-efficacy. This explains why it is important that agile organizational practices are encouraged to ensure that the institutions are not only in a position to respond to dynamic challenges effectively, but also enable the academic staff to be engaged in creative and innovative processes. The findings have offered an important understanding of the way institutions of higher learning within the context of developing countries can enhance their capability of innovation through structural agility and the cultivation of personal psychological resources.

6.1 Theoretical Implications

Conceptually, the research adds to the literature in the sense that it provides a combination of organization agility and creative self-efficacy into the Social Cognitive Theory framework to illustrate the employee innovative behavior. The study contributes to the existing knowledge on the process by which organizational agility is transformed into innovation, by supporting, through empirical evidence, the idea that creative self-efficacy is the mediator of the relationship between organizational and individual-level variables. Additionally, the research adds to the existing studies done in developed nations by offering a country-specific evidence based on Pakistan, a developing nation where higher institutions of learning encounter special problems regarding resource limitations, governance and employee competences. Such results contribute to the theoretical discussion of innovation management in higher education as it highlights the dual significance of organizational flexibility and personal self-belief in the creation of innovation.

6.2 Practical Implications

To the leaders, administrators, and policymakers of universities, the findings provide an insight into the need to develop lean governance frameworks and mechanisms that are capable of responding fast to the changing academic, technological and societal needs. Also, by investing in professional development activities that could improve the creative self-efficacy of academic staff, that is, through workshops, mentoring, and collaborative projects, it is possible to build their confidence and ability to produce, propagate, and execute creative ideas. Promoting the culture of experimentation, knowledge sharing, and lifelong learning can also support innovative behavior at the departmental level. Through these measures, universities are not only able to optimize the performance of individuals, but also the competitiveness of the institution, teaching quality and research outputs and finally aid the overall objective of knowledge based development in the nation.

6.3 Future Research & Limitations.

Although it has its contributions, the study has a number of weaknesses. To start with, cross-sectional research design limits the possibility to make causal inferences and the relationships observed can be due to temporal aspects or unmeasured factors. Second, the emphasis on the private universities in the Lahore and Islamabad does not allow the generalizability of the findings in other kinds of institutions or geographical areas. Future studies may conduct longitudinal studies to investigate the role of organizational agility and creative self-efficacy on innovative behavior in the future. Also, it might be beneficial to add universities or other institutions of the public sector in other regions, which would improve external validity. Future research can also consider other mediating/moderating variables, including digital leadership, organizational culture, or employee motivation to give a more refined analysis of the factors that prompt innovation in higher education.

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