

Exploring the Impact of Proactive Personality on Organizational Innovative Performance in Higher Education: The Mediating Role of Innovative Work Behavior



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ABSTRACT: One of the challenges in improving the innovative performance of higher education institutions is the proactive attitude and innovative work behavior of lecturer. This research aims to analyze the influence of proactive personality and innovative work behavior on increasing organizational innovative performance. The data analysis process uses AMOS version 22 with the SEM (Structural Equation Model) application. There are 216 lecturers as the unit of analysis from 17 private universities accredited as superior and A in Jakarta, Indonesia. Research findings show that proactive personality (PP) and innovative work behavior (IWB) have a positive and significant effect on the innovative performance of higher education. In addition, IWB plays a positive and significant role as a mediator in increasing the influence of PP on organizational innovative performance. Therefore, universities need to create a work atmosphere that supports the proactive attitude of lecturers and allows the emergence of innovative work behavior.

KEYWORDS: proactive personality, innovative work behavior, organizational innovative performance, higher education

I. INTRODUCTION

In the digital era 4.0, the global market demands companies to innovate swiftly and flexibly, aligning with evolving market needs and embracing best practices in research and development (Saad and Alnuami, 2022). Companies that fall short in innovation may face setbacks and risk being left behind. Consequently, innovation stands out as the key to gaining a competitive advantage in a highly dynamic business environment and emerges as the primary driver for a country's economic growth (Neely and Hii, 1998). Farrukh *et al.* (2021) emphasize the vital role of innovation in enhancing organizational performance, enabling quick adaptation to market changes, and facilitating the introduction of new products and services. This, in turn, ensures organizational sustainability, growth, and effective leadership with high performance (Dwivedi *et al.*, 2021).

An organization's ability to innovate hinges on both personality factors and innovative work behavior. A proactive personality plays a crucial role in enhancing an organization's innovative performance. Individuals with a proactive personality actively shape their environment, constantly seeking new and more efficient ways to improve performance (Alikaj *et al.*, 2020). Those possessing a proactive personality demonstrate the capacity to generate innovation at work and influence a culture of innovation in the workplace (Li *et al.*, 2022). Notably, individuals with a proactive attitude exhibit superior performance compared to their passive counterparts, driven by their commitment to advancing the organization (Fuller *et al.*, 2010). Encouraging proactive behavior among employees becomes pivotal in elevating an organization's innovative performance, prompting managers to actively foster such behavior to enhance product development and streamline organizational processes (SegarraCiprés *et al.*, 2019).

A proactive personality, as highlighted by Li *et al.* (2020), plays a significant role in enhancing innovative work behavior (IWB). IWB is characterized by individual actions aimed at deliberately introducing new and beneficial ideas, processes, products, or procedures within a work role, group, or organization (de Jong and Hartog, 2008). It emphasizes employee behavior focused on creating, applying, and implementing novel ideas, products, processes, and methods within their job position, department, or organization (Kheng *et al.*, 2013).

Employee IWB is a pivotal factor for improving business performance, contributing to increased profits, sales growth, and employment expansion (Jankelova *et al.*, 2021). It has become crucial across various industries such as manufacturing, finance, and services, enhancing company performance and competitive advantage in terms of technological progress, product quality,

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and market share (Adekanmbi and Ukpere, 2022; Fatoki, 2021). Notably, a proactive personality not only strengthens employees' IWB but also significantly impacts the overall business performance of a company (Li *et al.*, 2022; Jankelova *et al.*, 2021).

Indonesia faces challenges in elevating the innovative performance of higher education institutions. Scimago Innovation Rank (SIR) data from 2018 to 2024 indicates that Indonesian Higher Education still ranks above 4000 globally and 1000 regionally in Asia (SIR, 2018-2024). This is reflected in the limited innovation results from Higher Education in Industry during 2016-2018, producing only nine innovations (Sjachrial, 2019).

This phenomenon highlights a notable challenge: the quality of research and development (R&D) in higher education, born out of innovation, falls short in addressing the developmental needs of Indonesia's population. The country is characterized by a remarkably small R&D expenditure, marked at -0.4/year (Pradana *et al.*, 2021). The government responded to this challenge in 2005 with the introduction of Government Regulation (PP) Number 20 of 2005, focusing on the Transfer of Intellectual Property Technology and Results of Research and Development Activities by Universities and Research and Development Institutions. Despite this initiative, and subsequent efforts in 2018 through the Higher Education Innovation Management (HEIM) policy, the anticipated outcomes in innovation performance have not materialized as expected.

Sumule's (2018) analysis reveals a decade of less-than-optimal results from the implementation of PP No. 20 of 2005. The contribution of Science and Technology (IPTEK) to the industrial sector remains notably low. Furthermore, the outcomes of Science and Technology (S&T) research have not been efficiently utilized, and the intermediation between providers and users of science and technology is not yet optimal. Additionally, there is a lack of financial institutions promoting the use of Intellectual Property Rights (IPR) (Directorate of Innovation Systems, Ministry of Research, Technology and Higher Education, 2018).

This condition raises serious concerns, especially for a country boasting one of the highest numbers of tertiary institutions—4,475 in total, with 2,694 (60.2%) being universities (Kemdikbud-PDDikti, 2023). Achieving a higher ranking than the current state of affairs becomes imperative for Indonesia.

This research aims to dissect the factors contributing to the underperformance of Indonesian higher education institutions. It does so by scrutinizing the role of lecturers' innovative work behavior (IWB) as a mediator, facilitating an understanding of how personal factors, specifically proactive personality traits, influence the innovative performance of these institutions. Innovation is not a sudden occurrence; rather, it stems from human ideas. Innovators within companies or organizations play a pivotal role in producing new products, services, and experiences for consumers and society. Liu *et al.* (2017) assert that at the organizational level, innovation is intricately tied to the innovative work behavior of individual employees. Dedahanov *et al.* (2017) emphasize that innovation in organizations is invariably linked to individuals who introduce, modify, and implement ideas. Consequently, organizations depend on the creativity and innovation of employees to enhance their overall innovation performance.

The novelty of this research lies in several aspects: firstly, it positions innovative work behavior (IWB) as a mediator between personal factors (proactive personality) and the innovative performance of higher education institutions. While existing studies generally treat IWB as the dependent variable influenced by leadership, proactive attitude, and organizational innovative climate, research on IWB as a mediator remains scarce. Secondly, the research departs from the conventional focus on IWB within the context of companies or the business world. Instead, it explores IWB in the realm of higher education, an area rarely investigated by both national and global researchers. This contextual shift is deemed crucial, as emphasized by Farrukh *et al.* (2021). Lastly, the study addresses a significant gap in academic research by delving into IWB within Indonesian higher education. Despite academics showing considerable interest in IWB, evidenced by numerous publications in the business context, this research is among the few that center on the role of IWB in enhancing the innovative performance of higher education institutions. A review of Garuda Reference Digital (Garuda) reveals a dearth of publications on IWB in Indonesian Higher Education, with only 191 articles from 2017 to January 2023, overwhelmingly concentrated (98%) on company contexts. By shedding light on the unique intersection of IWB, higher education, and the Indonesian context, this research aspires to contribute significantly to the advancement of IWB for lecturers in Indonesian universities.

THEORETICAL FRAMEWORK

Proactive Personality (PP)

The theory of proactive personality (PP), initially proposed by Bateman and Crant in 1993, posits that individuals possess the capability to shape their environment or, conversely, resist its influence. This theory introduces a dynamic interaction process where the individual, environment, and behavior mutually influence each other (Bateman and Crant, 1993). Proactive behavior, as outlined by Bateman and Crant (1993), involves direct actions that bring about changes in the environment and can be sustained over time. A proactive person, according to the same source, is characterized by three key attributes: (1) a relative lack of constraint by situational forces, actively influencing environmental changes instead of passively reacting to them; (2) a continuous

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search for opportunities, demonstrating initiative, taking decisive action, and persisting until goals are achieved through transformative change; and (3) active engagement in professional activities that expand interpersonal networks and career potential, along with involvement in volunteer work, charities, and other initiatives aimed at improving society and the lives of others (Bateman and Crant, 1993).

Proactive individuals transcend mere initiative-taking; their behavior originates from a heightened awareness of personal choices aligned with their values. Consequently, these individuals refrain from attributing their circumstances to external factors, as noted by Covey in 2016. The proactive personality, as described by Alikaj *et al.* (2020), signifies individuals actively shaping their surroundings to better meet their needs, perpetually seeking novel and more efficient approaches to enhance performance. Furthermore, individuals with a proactive personality not only possess the capacity to generate innovation in their work but also exert influence on innovative behavior within the workplace, as highlighted by Li *et al.* (2022). This continuum of proactive personality, from its theoretical roots to its real-world applications in shaping environments and fostering innovation, underscores the dynamic and influential role of individuals in their surroundings.

Innovative Work Behavior (IWB)

Referencing Farr and Ford's seminal work in 1990, de Jong and Hartog (2008) define Innovative Work Behavior (IWB) as an individual's intentional initiation and introduction of a new idea, process, product, or procedure within a work role, group, or organization, with the aim of being useful. Building on this foundation, Kheng *et al.* (2013), drawing from West and Farr (1989), characterize IWB as employee actions directed at creating, implementing, and introducing new ideas, products, processes, and methods, not only for individual job positions but also for entire departments, units, or organizations. Al-Omari *et al.* (2019) offer a perspective that views IWB as the result of identifying a problem and generating an idea to create a product, process, or service that serves a practical purpose. Similarly, Jankelová *et al.* (2021) describe IWB as the intentional creation, introduction, and implementation of new ideas to enhance the performance of a work role, group, or organization. Gkontelos *et al.* (2022) contribute to this understanding by framing IWB as an iterative multi-stage process where employees intentionally create new concepts. This process involves exploring various possibilities, implementing plans, and executing actions while ensuring the sustainability of the ideas, all aimed at benefiting the organization in the long term.

Expanding on the works of de Jong and Hartog (2008) and Khang *et al.* (2013), Gkontelos *et al.* (2022) propose four dimensions of IWB: (a) Opportunity Exploration: This involves individuals discovering innovative processes by chance through identifying opportunities, problems, or puzzles that need solving. The trigger for exploration may be an opportunity for improvement or a threat that demands immediate attention; (b) Idea Generation: Individuals, recognizing a need or opportunity, serve as the source of new ideas, developing novel approaches to address these needs; (c) Championing: Innovative individuals must advocate for their ideas, gaining support from their work team or other relevant parties; (d) Application: This dimension refers to improving existing products or procedures or developing entirely new products. Innovative employees invest significant effort and a results-oriented attitude to transform their ideas into reality. By presenting these dimensions, Gkontelos *et al.* (2022) provide a comprehensive framework that captures the intricacies of Innovative Work Behavior and its transformative impact within organizational settings.

ORGANIZATIONAL INNOVATIVE PERFORMANCE

According to YuSheng and Ibrahim (2020), organizational innovative performance in a company or organization is characterized by the introduction of new products, services, technologies, or administrative practices. These innovations are strategically employed to enhance business delivery services or processes, showcasing the organization's capabilities in adapting to technological changes, evolving markets, and competitive models. The dimensions of a company's innovative capability, as outlined by YuSheng and Ibrahim (2020), encompass organizational innovation, product innovation, process innovation, and market innovation. Waheed *et al.* (2019) further elucidate that an organization's innovative performance is intricately tied to key activities, including new product development, the evolution of new processes, the formulation of creative strategies, and economic organization. Berber and Lekovic (2018) define innovative performance as the cumulative outcome of innovation activities within an industry or product category. They emphasize that it can be directly measured through the percentage of turnover derived from the introduction of new or improved products. Organizational innovative performance indicators generally consist of input from research and development (R&D), the number of patents, patent citations, and the introduction of new products. This is evaluated across two dimensions: administrative performance, which gauges the organization's response to environmental changes and its level of innovation in terms of planning procedures, integrated processes, and control mechanisms;

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and technical performance, which measures a company's development of new technology, incorporation of technology into new products, and facilitation of new processes to enhance quality and reduce costs (Berber and Lekovic, 2018).

In the context of Higher Education in Indonesia, the innovative performance is reflected in the five pillars of Higher Education Innovation Management. These include policies related to entrepreneurship education, incentives for lecturers, innovation development, innovation master plans, non-academic curriculum, and part-time workers; resources such as lecturers, teaching staff, students, laboratories, funds, and supporting facilities; institutions associated with incubation, start-up, and spinoff programs, innovation institutions, Intellectual Property Rights (IPR) centers, and entrepreneurship-based business units; networking with industry, government, society, and the international community; and innovation results in the form of patents, licenses, innovation impact and income, Return on Investment (ROI), R&D projects, and innovation awards (Ristekdikti, 2019). However, for the specific focus of this research on the commercialization aspect of innovation, two pillars stand out: resources (pillar 2) and innovation results (pillar 5). This aligns with the vision of the President of the Republic of Indonesia, Ir. Joko Widodo, who emphasizes that higher education innovation should not halt at the prototype stage but must progress towards commercialization (Sekretariat Presiden, 2020).

HYPOTHESIS DEVELOPMENT

Proactive personality and innovative work behavior

Drawing on research findings, Proactive Personality (PP) emerges as a potential predictor for Innovative Work Behavior (IWB). Mustofa *et al.*'s (2020) study conducted on Micro, Small, and Medium-sized Enterprises (MSME) employees in Kebumen Regency, Central Java, establishes a positive correlation between PP and increased IWB among employees. The research suggests that IWB flourishes when employees operate in positive and enjoyable mental and emotional conditions, fostering the creation of novelty and the generation of useful ideas (Mustofa *et al.*, 2020). Mubarak *et al.* (2021) further affirm the significant role played by PP in the IWB of MSME employees, underscoring its positive outcomes for companies. In a related analysis, Zuberi and Khattak (2021) examine PP and Leader-Member Exchange (LMX) as predictors for IWB, concluding that these factors exhibit a robust positive relationship with employee IWB. Park and Jo (2018) contribute to this understanding by highlighting that employees with a proactive attitude tend to initiate actions to alter their environment, actively seek better ways to enhance or modify the status quo, and ardently pursue the implementation of their ideas. Proactive individuals, as described by Le *et al.* (2020), consistently gather information, identify and seize opportunities, and reshape current situations or transition to ideal conditions, effecting substantial changes in the workplace. Individuals with a proactive personality are more likely to exhibit innovative work behavior, aligning with the findings of previous studies and reinforcing the notion that proactive traits contribute positively to the generation of novel and useful ideas in the workplace. Building upon these insights, the following hypothesis is proposed: H1. Proactive personality has a positive and significant effect on innovative work behavior.

Proactive personality and organizational innovative performance

Highlighting the significance of proactive behavior in organizational performance, proactive individuals possess the ability to actively seek and map opportunities, demonstrate initiative, take persistent action, and drive transformative change within the organization (Bateman and Crant, 1993). This viewpoint underscores the crucial role of proactive behavior in enhancing organizational performance. While several researchers have explored the impact of Proactive Personality (PP) on Innovative Work Behavior (IWB), creativity, and job performance, there has been limited examination of its relationship to organizational performance. This research aims to fill this gap and serves as a reference for investigating the role of PP in organizational performance. Tai and Mai (2016) discovered that employee PP significantly contributes to enhancing organizational innovative capability in various national and multinational companies in Thailand. Zahoor (2020) similarly concluded that PP among employees positively and significantly influences company service performance. Irani *et al.* (2023) affirmed this by establishing that managers' proactive handling of guest and employee problems at Cyrus Hotels directly impacts organizational performance. This aligns with Zhang *et al.* (2022), who identified a direct relationship between team proactivity and team performance, generating attitudes and behaviors among employees that foster organizational performance. In analyzing the service performance of 5-star hotels in China, Yang *et al.* (2020) found that proactive employees actively contribute beyond their specified tasks, demonstrating higher motivation for contextual performance. Proactive individuals, leveraging their inherent strengths, respond better to organizational encouragement, thereby enhancing managerial efficiency and aiding resource utilization to achieve organizational goals (Upadhyay and Mishra, 2021). Hsiao and Wang (2020) stated that individuals with a proactive personality are more willing to make sacrifices to improve organizational performance when contributing to the organization. These findings are consistent with Fuller *et al.* (2010), who observed that individuals with a high proactive attitude outperformed

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passive counterparts, driven by a sense of commitment to their work and the organization's progress. Therefore, individuals with a proactive personality positively influence organizational innovative performance, contributing to the organization's overall success and progress.

Based on the aforementioned insights, the following hypothesis is proposed:

H2. Proactive personality has a positive and significant effect on organizational innovative performance.

Innovative work behavior and organizational innovative performance

The impact of employee innovative work behavior on organizational performance is a well-established phenomenon, with various studies providing valuable insights. Guan *et al.* (2019) conducted a study on the IWB of the new generation of entrepreneurs in China, examining aspects of innovation in company production and operations, as well as management system innovation. The results indicated a positive influence of IWB on organizational performance. Similarly, Jankelova *et al.* (2021) analyzed the IWB of managers in various companies operating in Slovakia and identified employee IWB as a key factor for enhancing business performance, encompassing increased profits, sales growth, and employment expansion. Adekanmbi and Ukpere (2022) asserted that employee IWB is a crucial factor in improving company performance across manufacturing, financial, and service industries in Nigeria. Additionally, Fatoki (2021) found that IWB among Micro, Small, and Medium-sized Enterprises (MSME) employees in South Africa contributes to competitive advantage (CA), making companies more profitable than their competitors in terms of technological progress, product quality, market share, and attractiveness in the value and income creation process. Specifically focusing on MSMEs, Ausat *et al.* (2022) discovered a positive and significant influence of IWB on business performance, manifesting as increased customer trust, enhanced productivity, heightened employee commitment, profit and sales growth, and additional employment.

Alarifi and Adam (2023) further established a positive and significant correlation between IWB and Small and Medium-sized Enterprises (SME) resilience, emphasizing the positive impact of innovative employee behavior on short-term business performance and the long-term ability to survive and confront challenges posed by crises. In the context of university lecturers, Khiong and Utomo (2023) found that the IWB of lecturers in Banten Province improved organizational performance, contributing to the development of competent and highly competitive human resources at both national and global levels. This was coupled with the application of science and technology to society. It can be concluded that innovative work behavior of employees positively contributes to the overall innovative performance of the organization, aligning with the collective findings from various studies across different industries and contexts. Based on these research findings, the proposed hypothesis is as follows:

H3. Innovative work behavior has a positive and significant effect on organizational innovative performance.

Proactive personality, organizational innovational performance, and innovative work behavior as mediators

A proactive person is a person who is relatively not limited by situational forces but instead influences environmental changes, can see opportunities, shows initiative, and takes action (Bateman and Crant, 1993). Covey (2013) states that a proactive person has the ability or some kind of responsibility to choose a response to events around him (response-ability) and therefore even though he is still influenced by external stimuli, whether physical, social, or psychological, he gives a response based on values both consciously and unconsciously. A proactive person is driven by values, unlike a reactive person who only acts (responds) based on certain feelings (Covey, 2013). A proactive personality will increase creativity and innovative work behavior at work which will have an impact on improving organizational performance. Roppak *et al.* (2019) found that a leader's proactive attitude strengthens the creativity and innovation behavior of his subordinates, and therefore results in creative performance in the workplace (Choi *et al.*, 2021). The influence of a proactive personality strengthens employees' innovative work behavior, as found by Li *et al.* (2022) on IT sector workers in China. Jankelova *et al.* (2021) found a direct and significant influence of the IWB of company employees in Slovakia on company business performance. Akekanmbi and Ukpere (2022) observed a strong impact of employee IWB on the performance of service-based organizations in Nigeria. The results of the research above found a positive and significant influence of PP on IWB and IWB on organizational performance, so it can be assumed that IWB can mediate the influence of PP on organizational performance.

Apart from that, the study of the role of IWB as a mediator between PP and organizational performance is also based on research references on personality aspects that influence performance through innovative work behavior. Jankelová and Joniaková (2021) in their research on innovative performance in Slovak companies operating in the agrarian sector found that organizational performance increased due to the role of managers who behaved entrepreneurially and were supported by innovative work behavior at work. A person who has an entrepreneurial spirit is one of the characteristics of a proactive person. Farukh and Ansari (2021) examined the role of IWB in moderating psychological capital (psyche) on customer value creation (CCV) as an output of the performance of the hotel industry in Pakistan. According to Pusparini and Aryasa (2021), employees who have freedom,

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independence, and flexibility in working (work autonomy) and a broad mindset such as sensibility, awareness, vision, and willingness to take risks (individual global mindset) tend to have innovative work behavior that helps employees to improve personal and organizational performance. Lu *et al.* (2022) examine employee mental health, namely a state of well-being in which individuals are aware of their abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to their community and its influence on employees' sense of engagement in the company with IWB as mediator. The findings of this research are that the state of positive influence inherent in mental health that appears in innovative work behavior and work engagement is very important for meeting work demands which in turn, these two behaviors are positively related to job performance (Lu *et al.*, 2022). Based on the review of the research results above, the following hypothesis is proposed: H4. Innovative work behavior mediates the positive and significant influence of a proactive personality on organizational innovative performance.

METHODOLOGY, SAMPLE, AND MEASUREMENT

Research models

The conceptual framework in this research is in Figure 1 which shows that PP influences IWB, PP influences OIC, IWB influences OIC and IWB can mediate the influence of PP on OIC.

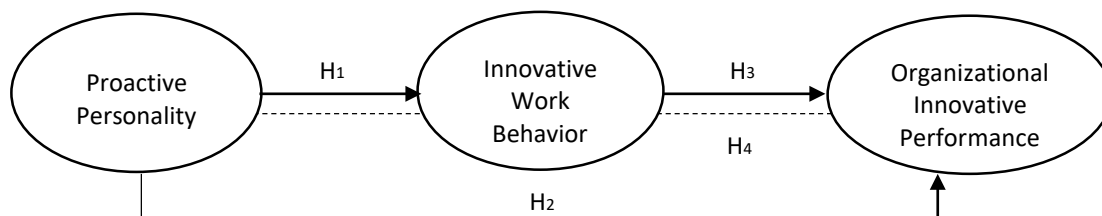


Figure 1. Conceptual framework

This research analyzes the correlation of influence between these variables using descriptive statistics the *Structural Equation Modeling - Analysis of Moment Structures* (SEM-AMOS) method and the AMOS application ver. 22.0. SEM is a statistical model that attempts to explain the relationship between several variables by analyzing the structure of the relationship expressed in a series of equations. This equation describes all relationships between the constructs (dependent and independent variables) and the variables involved in the analysis (Hair, *et al.*, 2019). This research uses primary data collected from respondents with a questionnaire in the form of a *Google form*. The type of research is *one-shot* or *cross-sectional*, that is, data collection is carried out only once within a certain period.

Sampling and data collection

The unit of analysis is 216 permanent lecturers at 17 private universities registered at LLDIKTI Region III, Jakarta which are included in the Superior Institution Accreditation rankings, A and B (BAN-PT, 2023). This research uses a stratified random sampling technique, which is a sampling technique based on certain strata by first dividing the population into homogeneous strata or subsamples (grouping individuals or entities based on the characteristics they have), and then simple random sampling or random sampling. Systematic sampling was used to select cases within each stratum (Friedman and Taub, 2006).

Table 1 shows that the majority of respondents were 123 (57%) men, and 93 (43%) women; 110 (51%) were Gen X, 67 (31%) were millennials; There are 121 (56%) lecturers who are currently or have completed doctoral education, and 95 (44%) are Masters; 107 (49.5%) people have been teaching for more than 10 years. The majority of lecturers only produce 1 publication a year for both national (Sinta 125 (58%)) and international journals (Scopus [125 (57.90%)]); During the last 5 years (2019-2023), there were 177 lecturers (81.94%) who did not have a patent. There are 136 (63%) lecturers who do not yet have IPR only 39 (18%) lecturers who have recognized innovations, and 177 lecturers (82%) who do not have recognized innovations. Descriptive data on lecturers' professional performance shows that lecturers' research results do not have the expected quality so outcomes in the form of publications, patents, innovations, and IPRs are not achieved.

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Table 1. Demographic characteristics of effective samples

Variables	Categories	Frequency	Percentage
Gender	Male	93	43%
	Female	123	57%
Cohort generation	<i>Gen Z</i>	0	0%
	<i>Millennials</i>	67	31%
	<i>Gen X</i>	110	51%
	<i>Baby boomers</i>	39	18%
Level of education	Masters	95	44%
	Doctor	78	36%
	Doctoral student	43	20%
Teaching experience	5 years and below	51	24%
	5-9 years	58	27%
	10 years and above	107	49.50%
Number of publications (2019-2023) in national accredited journal (Sinta) as first author	5 articles and below	125	58%
	5-10 articles	43	20%
	11-15 articles	15	7%
	16-20 articles	4	2%
	21 articles and above	5	2%
	None	24	11%
Number of publications (2019-2023) in international accredited journal (Scopus) as first author	5 articles and below	125	57.90%
	5-10 articles	12	5.60%
	11-15 articles	0	0.00%
	16-20 articles	1	0.50%
	21 articles and above	1	0.50%
	None	77	35.60%
Number of Patents (2019-2023) 1 patent	22	10.19%	
	2 patents	8	3.70%
	3 patents and above	9	4.17%
	None	177	81.94%
Number of Intellectual Property Rights (IPR) (2019-2023)	1 IPR	32	15%
	2 IPRs	12	6%
	3 IPR and above	36	17%
	None	136	63%
Number of recognized innovations (2019-2023)	1 innovation	28	13%
	2 innovations	3	1%
	3 innovations and above	8	4%
	None	177	82%

Variables and measurements

Proactive personality variable was adapted from Bateman and Crant (1993) with 17 statements; The measurement of the innovative work behavior variable adapted from de Jong and Hartog (2008) has 4 dimensions (opportunity exploration, idea generation, championing, and implementation) with 10 indicators; the measurement of the organizational innovative performance variable adapted from the Higher Education Innovative Management indicator (Ristekdikti, 2019) has 2 dimensions (resource dimension and innovation result dimension) with 19 statements. Measurement for each variable uses a Likert scale from 1 (strongly disagree) to 5 (strongly agree).

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RESULTS

Descriptive analysis and Confirmatory Factors Analysis (CFA)

Descriptive statistics (table 2) show that respondents gave a relatively high assessment of the research indicators (mean variable proactive personality between 3,542 – 4,444; mean innovative work behavior ranging between 3,831 – 3,889; and mean organizational innovative performance between 3,046 – 3,559).

Table 2. Descriptive Statistics and Respecification of the Confirmatory Factor Analysis Model

Variable	Indicator	Mean	Standard Deviation	Loading Factor	Cronbach's Alpha	Construct Reliability	Variance Extracted
Proactive Personality	PP1	4,444	0.568	0.676	0.919	0.928	0.5
	PP2	4,134	0.732	0.775			
	PP4	3,838	0.707	0.757			
	PP5	3,866	0.725	0.715			
	PP6	4,370	0.580	0.643			
	PP8	4,120	0.692	0.671			
	PP10	3,699	0.770	0.761			
	PP11	4,176	0.576	0.678			
	PP12	3,722	0.805	0.702			
	PP13	3,542	0.867	0.635			
	PP15	3,690	0.729	0.807			
	PP16	3,676	0.751	0.734			
	PP17	4,023	0.650	0.609			
Innovative Work Behavior	EXP	3,831	0.645	0.789	0.919	0.923	0.75
	IDEA	3,889	0.598	0.907			
	CHAM	3,831	0.644	0.880			
	IMPL	3,878	0.596	0.883			
Organizational innovative performance	POWER	3,559	0.691	0.698	0.703	0.705	0.543
	INOV	3,048	0.724	0.776			

Respecification of the CFA model shows that the factor loading value is above 0.60, meaning that the indicators included in the model validly reflect the measurements (Chin, 1998). *Proactive Personality* loading factor with Cronbach's Alpha between 0.643 - 0.807 and Composite Reliability > 0.70. The *Innovative Work Behavior* variable has a loading factor between 0.789 – 0.907 with an acceptable level of reliability above 0.70. The *Organizational innovative performance* variable has a loading factor between 0.691 and 0.724 with a reliability level of 0.705 > 0.70. Overall the CFA model is acceptable and has convergent validity as indicated by Variance Extracted (VE) > 0.50. In this way, the variation of indicators contained in the research variables is fulfilled.

Discriminant validity

Discriminant validity (table 3) explains that theoretically the variable is different from other variables and has been tested statistically. The HTMT (Heterotrait Monotrait ratio) method recommended by Henseler, Ringle, and Sarstedt (2015) shows that this method is stronger in detecting discriminant validity than the Fornell Lacker and Cross Loading methods. The estimation results show that the HTMT value for the pair between variables is <0.90. These results confirm that discriminant validity is met.

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Table 3. Discriminant Validity

Variables	Proactive Personality	Innovative Behavior	Work	Organizational innovative performance
Proactive Personality				
Innovative Behavior	0.806			
Organizational innovative performance	0.414	0.772		

HYPOTHESIS TESTING

Following are the results of hypothesis testing at table.4.

Hypothesis	Hypothesis Statement	Estimates (Unstandardized)	Estimates (Standardized)	S.E	CR	Pvalue	Information
H1	Proactive Personality --> Innovative Work Behavior	1,089	0.797	0.120	9,079	0,000	Accepted
H2	Proactive Personality --> Organizational innovative performance	0.393	0.250	0.193	2,038	0.042	Accepted
H3	Innovative Work Behavior --> Organizational Innovative performance	0.639	0.555	0.149	4,277	0,000	Accepted
H4	Proactive Personality --> Innovative Work Behavior --> Organizational innovative performance	0.695	0.443	0.193	3,601	0.008	Accepted

Based on Table 4, it can be concluded that hypothesis 1 (H1) is accepted: proactive personality has a significant effect on innovative work behavior ($P < 0.05$). This means that every change in proactive personality will increase innovative work behavior. Hypothesis 2 (H2) is accepted: proactive personality also has a significant effect on increasing organizational innovative performance ($P < 0.05$). The influence of proactive personality is higher on innovative work behavior ($r = 0.797$) than the influence on organizational innovative performance ($r = 0.250$). Hypothesis 3 (H3) is accepted: innovative work behavior has a significant effect on organizational innovative performance with a path coefficient of 0.555.

Mediation testing uses a bootstrapping process with *the bias-corrected and accelerated (BCa) bootstrap method* which can scale data when the data is not normally distributed. The test results show a significant mediation coefficient of 0.695 and a p-value of $0.008 < 0.05$ (hypothesis 4 is accepted). These results confirm that innovative work behavior plays a significant role as a mediating variable. The mediation effect size is calculated according to the recommendations of Lachowicz *et al* (2018) by squaring the mediation coefficient and calculating (effect size = 0.483) in high mediation quality.

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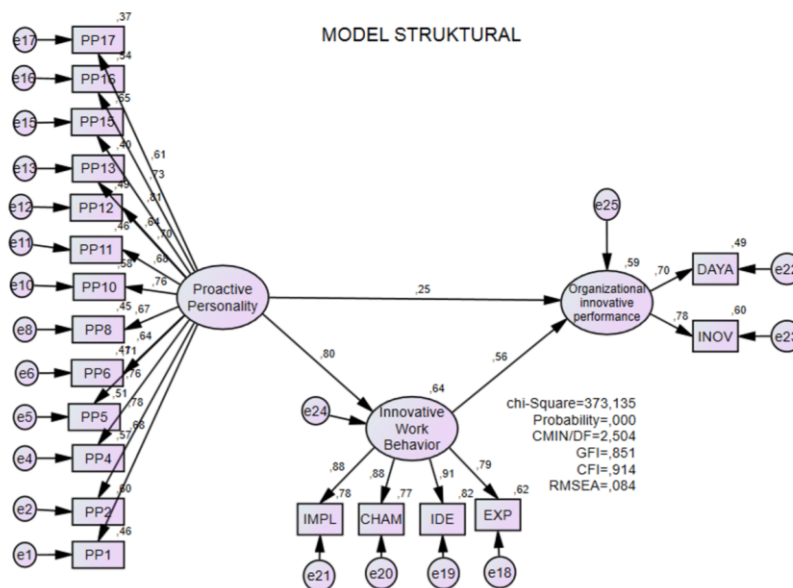


Figure 2. Structural Model Diagram

GOODNESS OF FIT MODEL

The goodness of fit analysis (table 5) shows that the model is accepted (good fit) with the statistical size CMIN/DF being $2.504 < 5$, RMR $0.026 < 0.05$, CFI $0.914 > 0.90$ and TLI $0.902 > 0.90$ and RMSEA $0.084 < 0.10$ (acceptable fit).

Table 5. The goodness of fit model

Goodness of Fit Size	Standard	Estimate	Conclusion
P value Chi-Square Test	> 0.05	0,000	Poor Fit
CMIN/DF	< 5	2,504	Good Fit
GFI	> 0.90	0.851	Poor Fit
RMR	< 0.05	0.026	Good Fit
RMSEA	< 0.10	0.084	Acceptable Fit
CFI	> 0.90	0.914	Good Fit
TAG	> 0.90	0.902	Good Fit

DISCUSSION

This study delves into the nuanced relationship between proactive personality (PP), innovative work behavior (IWB), and organizational innovative performance (OIP) among university lecturers. The analysis reveals a positive and significant effect of PP on lecturers' IWB, aligning with Bandura's (1989) concept that personality and behavior dynamically interact, fostering a reciprocal relationship. Proactive individuals, characterized by the initiative and action to effect change, showcase a heightened propensity for innovative work behavior (Park and Jo, 2018). This positive and significant relationship underscores the intricate interplay of thoughts, emotions, and actions propelling innovative work behavior among lecturers. Despite the positive perception of lecturers towards a proactive attitude within the workplace, there exists a degree of hesitancy in extending this attitude to external initiatives, such as instigating changes in the work environment or promoting innovative ideas. Consequently, there is a call for universities to proactively cultivate an environment that supports and accelerates the proactive personalities of lecturers. This entails not only recognizing but also encouraging a proactive approach, fostering an atmosphere conducive to innovative work behavior.

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Moving beyond the individual level, the study extends its focus to the broader organizational context. The findings showcase that a proactive personality plays a pivotal role in enhancing organizational innovation performance within higher education. The proactive attitude of lecturers becomes a driving force for innovation, as evidenced by their continuous search for novel ways to effect change, make a meaningful impact on campus, and convert ideas into reality. This emphasizes the importance of nurturing proactive individual lecturers, involving them as key contributors to the innovative initiatives driving higher education.

In the context of innovative work behavior (IWB), its positive influence on organizational innovative performance resonates with previous studies (Guan *et al.*, 2019; Jankelova *et al.*, 2021).

The study's findings indicate that lecturers' IWB significantly enhances the innovative performance of higher education. This is exemplified by lecturers' proactive exploration of opportunities, generation of novel ideas, championing initiatives, and effective implementation, as indicated by a mean score of > 3.8 for the IWB variable. The robust correlation between IWB and organizational innovative performance further validates organizational behavior (OB) theory, asserting that individual behavior is a catalyst for organizational development (Champoux, 2011). The study employs the bias-corrected and accelerated (BCa) bootstrap method to reveal IWB as a significant mediating variable. This underscores the pivotal role of IWB in bridging the gap between a proactive personality and organizational innovative performance. Proactive individuals, inclined towards proactive attitudes, are more likely to exhibit IWB (Lie *et al.*, 2022). The results affirm that IWB acts as a conduit, strengthening the influence of a proactive personality on the innovative performance of higher education. Lecturers acknowledge the positive measurement items for PP, IWB, and OIP, emphasizing the integral role of a proactive attitude in enhancing innovative work behavior, which, in turn, contributes to the university's innovative performance.

LIMITATIONS

This study is subject to certain limitations that warrant consideration for future research endeavors. Firstly, the investigation focused exclusively on two factors influencing innovative performance in higher education—proactive personality factors and innovative work behavior (IWB). To enrich the understanding, future studies should incorporate additional dimensions such as creativity, diverse personality types, and various aspects impacting individual and organizational performance, such as motivation, job satisfaction, attitude, and values. Secondly, the research is confined to private universities within the LLDikti Region III, excluding high schools, institutes, academies, and state universities in the region. Consequently, the findings may not be readily generalizable to encompass all Private Higher Education Institutions (PTS) and Public Higher Education Institutions (PTN) in Indonesia. To address this limitation, future research should strive to include a broader spectrum of educational institutions, providing a more comprehensive and representative analysis. Thirdly, for a more thorough and conclusive understanding of the influence of proactive personality and innovative work behavior on organizational innovative performance in private universities within LLDikti Region III Jakarta, it is recommended to increase the number of respondents. A larger sample size would enhance the statistical robustness of the findings, ensuring greater reliability in drawing comprehensive conclusions.

CONCLUSION

In the journey towards fostering innovation within higher education institutions, this research unveils crucial insights. Lecturer personality factors (PP) emerge as powerful catalysts, exhibiting a positive and significant influence on innovative work behavior. Elevating proactive attitudes among lecturers becomes pivotal, demanding concerted attention from universities. Strengthening these personality dimensions not only propels innovative work behavior but also propels the entire organizational innovative performance of higher education institutions to new heights. The impact of lecturer innovative work behavior on the innovative performance of higher education is undeniable. As universities cultivate environments conducive to idea exploration and champion the implementation of innovative ideas, the ripple effect is evident.

The findings emphasize the imperative for institutions to create conditions fostering creativity, allowing lecturers the freedom to explore, promote, and execute innovative ideas. Crucially, this research establishes the mediating role of innovative work behavior in amplifying the influence of proactive personality on organizational innovative performance. A dynamic interplay unfolds—where proactive attitudes seed innovative work behavior, and in turn, this behavior enhances the innovative performance of higher education institutions. It is a symbiotic relationship that, when nurtured, results in a flourishing landscape of resources and innovation outcomes. In essence, the conclusion drawn is clear: the journey to innovation in higher education necessitates a dual focus. By fortifying proactive personality traits and cultivating environments that nurture innovative work behavior, universities can embark on a transformative path. This path not only promises heightened organizational innovative performance but also positions higher education institutions at the forefront of creativity, adaptability, and progress.

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