

FROM FLEXIBILITY TO INNOVATION: THE MEDIATING ROLE OF INDIVIDUAL INNOVATION CAPABILITY IN ACADEMICS' INNOVATIVE WORK BEHAVIOUR

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Abstract: Flexible work arrangements (FWAs) are increasingly adopted to enhance employee autonomy, work-life balance and innovation. Yet, limited attention has been given to the mechanisms through which workplace flexibility translates into innovative work behaviour (IWB), particularly in higher education institutions (HEIs). This study examines the direct effect of FWAs on IWB and investigates individual innovation capability (IIC) as a mediating mechanism in this relationship. Drawing on Social Exchange Theory, Self-Determination Theory and Social Cognitive Theory, data were collected from 389 permanent Malaysian academics employed in universities listed in the QS World University Rankings 2023. The model was assessed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with 10,000 bootstrap subsamples. The results show that FWAs have a positive and significant direct effect on IWB ($\beta = 0.102$, $p = 0.006$), although the magnitude of the direct effect is modest. FWAs also significantly enhance IIC ($\beta = 0.364$, $p < 0.001$), while IIC strongly predicts IWB ($\beta = 0.679$, $p < 0.001$). Importantly, IIC significantly mediates the FWA–IWB relationship ($\beta = 0.247$, $p < 0.001$), with the indirect effect exceeding the direct effect. These findings show that FWAs foster IWB through both direct and capability-building pathways, with IIC as a key mechanism translating flexibility into innovation. The study extends flexible-work research by highlighting the role of individual capability development and suggests that HEIs should complement flexible-work policies with initiatives that strengthen academics' innovation capability.

Keywords: Flexible Work Arrangements; Individual Innovation Capability; Innovative Work Behaviour; Academics; Higher Education Institutions; Malaysia

Introduction

Innovation has become increasingly important in higher education, where academics operate in knowledge-intensive environments that require continuous knowledge sharing, adaptation and innovative behaviour (Yang et al., 2026). Innovative work behaviour (IWB) captures this behavioural contribution by referring to employees' intentional efforts to explore, generate, champion and implement new ideas at work (De Jong & Den Hartog, 2010). In universities, such behaviour has become increasingly important as technological developments continue to reshape academic work and create new demands for innovation in teaching and related academic practices (Gai et al., 2026). Recent research has therefore increasingly examined the individual and workplace mechanisms underlying academics' IWB. Hassan et al. (2024) demonstrated the importance of work engagement and job self-efficacy in explaining faculty members' IWB, while Zhou et al. (2025) further showed that individual and organisational factors can shape IWB among higher education academics through work engagement. Collectively, these studies reinforce the importance of examining not only the antecedents of academics' IWB but also the mechanisms through which workplace conditions are translated into IWB.

One workplace practice that has gained substantial attention is flexible work arrangements (FWAs). FWAs allow employees to exercise discretion over the schedule, location, or organisation of their work (De Menezes & Kelliher, 2017). The growth of digital technologies and post-pandemic work practices has accelerated the use of flexible schedules, remote work and technology-enabled work arrangements (Spreitzer et al., 2017; Renard et al., 2021). In academia, flexibility is especially relevant because academic work combines teaching, research, consultation, and administrative responsibilities that often extend beyond conventional office hours. Malaysian academics also report work-life and workload pressures, making flexibility an increasingly important institutional practice (Subramaniam et al., 2020).

Despite these advantages, the assumption that greater flexibility automatically produces innovation remains questionable. Prior research has linked FWAs with job satisfaction, work-life balance and performance (Davidescu et al., 2020; Ghimire et al., 2023), while recent studies suggest that flexibility may also promote IWB by increasing autonomy and allowing employees to reorganise their time and work settings (Jiang et al., 2023). However, other research warns that flexible and remote work may reduce social interaction, feedback, organisational attachment and collaboration when the arrangement is poorly designed (Renard et al., 2021; Mache et al., 2020). Recent evidence from the higher education context further indicates that flexible work conditions can shape academics' IWB. For example, Farooq et al. (2026) found that hybrid work strengthened the relationship between happiness at work and IWB among faculty members, suggesting that flexible work environments can influence the conditions under which academics engage in innovation.

These mixed findings suggest that the relationship between workplace flexibility and innovation is more complex than a simple direct-effect explanation. Recent systematic evidence similarly indicates that IWB across office-based, hybrid and remote working environments depends on multiple infrastructural and human-organisational conditions (Schön et al., 2026). Consequently, understanding whether FWAs influence IWB directly, indirectly through individual capability, or through both pathways remains theoretically important.

This uncertainty is particularly relevant in HEIs. Academic innovation often depends on interaction with colleagues, knowledge sharing, access to organisational resources and the

capacity to transform ideas into workable solutions (Kim et al., 2025; Yang et al., 2026). The more fundamental question is whether flexibility helps academics develop the capability required to convert autonomy and discretion into innovative action. Individual innovation capability (IIC) is therefore positioned in this study as the explanatory mechanism linking FWAs to IWB. IIC refers to an individual's ability to continually transform knowledge, skills and creativity into innovative products, services or work practices (Iddris et al., 2022).

Accordingly, this study examines whether FWAs directly influence academics' IWB and whether IIC explains the mechanism through which flexibility contributes to innovation. It contributes to the literature in three respects. First, it examines the FWA–IWB relationship in the higher education context. Second, it positions IIC as a capability-building mechanism connecting work flexibility with innovative behaviour, thereby distinguishing the opportunity to work flexibly from the capability to use that flexibility innovatively. Third, by integrating SET, SDT and SCT, the study distinguishes organisational opportunity from the motivational and cognitive processes required to convert that opportunity into innovative action.

Literature Review

Flexible Work Arrangements

Flexible work arrangements refer to employment practices that permit employees to modify when, where or how work is performed (De Menezes & Kelliher, 2017). The construct commonly includes temporal flexibility such as flexitime, spatial flexibility such as remote work, and technology-supported mobility. Van Steenbergen et al. (2018) operationalised new ways of working through practices that permit employees to decide their work location and timing, use activity-related workspaces, rely on information technology and collaborate remotely. Such arrangements reflect the broader shift from fixed workplace structures towards greater employee discretion.

The literature generally associates FWAs with positive employee outcomes. Flexible schedules can improve work-life balance and job satisfaction, while providing employees with greater control over their working lives (Davidescu et al., 2020; Chung & van der Lippe, 2020). In academic settings, Ghimire et al. (2023) found that FWAs are relevant to academics' job satisfaction, while Subramaniam et al. (2020) highlighted their value in managing work-life balance and stress. Nevertheless, flexibility can also create challenges. Research indicates that flexible work arrangements may produce mixed outcomes depending on how such arrangements are designed and implemented (Mache et al., 2020; Renard et al., 2021). More recent evidence suggests that hybrid and remote work may weaken opportunities for relationship-building and spontaneous interpersonal interactions that support different stages of IWB (Kantola et al., 2025). Taken together, these findings suggest that the consequences of FWAs depend not only on the availability of flexibility but also on how such arrangements are designed and supported, particularly in balancing employee flexibility with organisational requirements for innovation and performance (Eng et al., 2025).

Previous flexible-work studies have drawn on SDT to explain how autonomy arising from flexible arrangements influences employee outcomes, including innovative behaviour (Jiang et al., 2023), while other studies have adopted resource-based perspectives such as Conservation of Resources (COR) Theory (Yunus & Mostafa, 2022). These approaches provide important insights but give less attention to how organisational flexibility is converted into individual innovation capability. The present study therefore extends this literature by combining SET's

exchange perspective with SDT's motivational explanation and SCT's capability-development mechanisms.

Innovative Work Behaviour

IWB concerns employees' intentional behaviour directed towards the introduction and application of new and useful ideas. De Jong and Den Hartog (2010) conceptualised IWB as a four-dimensional process comprising idea exploration, idea generation, idea championing and idea implementation. In academic work, these behaviours may appear through the development of new teaching approaches, novel research methods, digital learning practices, improved administrative processes or new forms of engagement with students and external stakeholders. Because IWB extends beyond idea generation to include the championing and implementation of ideas, employees need to move ideas from recognition and development towards practical application (De Jong & Den Hartog, 2010). This distinction is important for the FWA context. Although flexibility can provide employees with greater autonomy and discretion over when and where work is performed (Jiang et al., 2023), these opportunities do not necessarily translate automatically into the capability required to develop and implement innovative ideas. Consequently, an individual capability mechanism is likely to be important in explaining how flexible work translates into IWB.

Individual Innovation Capability

Individual innovation capability refers to an employee's capacity and willingness to generate, develop and realise novel ideas. Iddris et al. (2022) describe it as the ability to continually transform knowledge, skills and creativity into innovative outputs. Nham et al. (2020) emphasise that innovation capability can be examined at the individual as well as organisational level, and that individual capability is central to the conversion of knowledge resources into innovation.

IIC is conceptually distinct from IWB. While IIC reflects an individual's capability to use knowledge, skills and creativity for innovation (Nham et al., 2020), IWB represents the behavioural process through which employees explore, generate, champion and implement new ideas at work (De Jong & Den Hartog, 2010). Individuals with stronger innovation capability are therefore better positioned to search for alternatives, improvise when established solutions are insufficient and apply creative thinking to work-related problems (Nham et al., 2020). This conceptual distinction positions IIC as a plausible mechanism linking contextual work practices, such as flexibility, with the behavioural manifestation of innovation.

Theoretical Foundation

Social Exchange Theory (SET) suggests that favourable organisational practices can generate reciprocal responses from employees (Cropanzano & Mitchell, 2005). When FWAs are perceived as supportive organisational practices, employees may reciprocate through positive work-related behaviours. However, SET alone does not fully explain how flexible work may develop the individual capability required for innovation.

Self-Determination Theory (SDT) provides a complementary explanation by emphasising autonomy and competence as fundamental psychological needs that support intrinsic motivation (Deci & Ryan, 2000). FWAs provide discretion over time and place, thereby increasing autonomy. Yet autonomy is most valuable for innovation when employees can use that freedom to learn, experiment, and build competence. Social Cognitive Theory (SCT) further explains the development of IIC by emphasising self-efficacy, personal agency and

learning as mechanisms through which individuals develop confidence and capability to perform innovative tasks (Bandura, 1986). Together, SDT and SCT suggest that the autonomy provided by FWAs can create opportunities for academics to develop their capability to innovate, which may subsequently encourage IWB.

The proposed FWA–IIC–IWB mechanism extends beyond the explanatory focus of any one of these theoretical perspectives when considered independently. SET explains how flexible work, when perceived as a supportive organisational practice, may encourage reciprocal employee responses, but offers limited explanation of how such flexibility contributes to the development of individual innovation capability. SDT complements this perspective by explaining how autonomy and competence support intrinsic motivation (Deci & Ryan, 2000). In contrast, SCT highlights how self-efficacy, personal agency and learning contribute to capability development (Bandura, 1986). Integrating these three theoretical perspectives therefore provides a more comprehensive explanation of the proposed mechanism: FWAs create organisational opportunities and autonomy, motivational and cognitive processes support the development of IIC, and IIC subsequently facilitates IWB. This integrated perspective provides the theoretical basis for positioning IIC as the capability-building mechanism linking flexible work arrangements with innovative work behaviour.

Hypothesis Development

Flexible Work Arrangements And Innovative Work Behaviour

FWAs can provide employees with greater discretion to organise their work, select environments that support particular tasks and reduce constraints associated with rigid schedules (Jiang et al., 2023). Empirical evidence supports this relationship. Jiang et al. (2023) found that FWAs positively influence innovation behaviour among knowledge employees, while more recent evidence demonstrates a positive relationship between FWAs and employees' IWB (Gašić et al., 2025). Together, these findings suggest that greater discretion over when and where work is performed can create conditions that facilitate employees' engagement in innovation-related activities. Flexible arrangements may also support employees in balancing work and personal demands, potentially creating more favourable conditions for effective work performance (Davidescu et al., 2020).

However, the relationship may be context-dependent. Flexible work can alter opportunities for immediate feedback, informal exchange and collaboration, which may influence employees' ability to engage in innovative activities (Renard et al., 2021). Nevertheless, the theoretical arguments and empirical evidence generally support the expectation that the autonomy and flexibility provided by FWAs can facilitate innovative action. Accordingly, the following hypothesis is proposed:

H1: Flexible work arrangements positively influence innovative work behaviour.

Flexible Work Arrangements and Individual Innovation Capability

Technological advances enable employees to work across locations and time periods, creating greater freedom to organise work and pursue new approaches (Spreitzer et al., 2017). Such freedom can provide employees with the time and psychological space required to reflect, experiment and explore new ideas. In addition, job autonomy arising from FWAs may strengthen self-efficacy and encourage employees to develop innovation-related skills. Jiang et al. (2023) demonstrate that FWAs can promote innovative behaviour among knowledge

employees, while research on location autonomy suggests that greater discretion over work location enables knowledge workers to select work environments that support productivity and well-being (Spivack & Woodside, 2019).

In academic work, flexibility may allow staff to allocate uninterrupted periods to research, use diverse digital tools, connect with wider professional networks and tailor work settings to different tasks. Through SDT, these opportunities satisfy autonomy and competence needs; through SCT, they create opportunities for learning and self-directed capability development. Therefore:

H2: Flexible work arrangements positively influence individual innovation capability.

Individual Innovation Capability and Innovative Work Behaviour

IIC enables employees to transform knowledge, skills and creativity into novel work solutions (Iddris et al., 2022). This capability supports the full IWB process because employees must not only recognise opportunities but also develop, promote and implement ideas. Recent evidence further indicates that individual psychological resources can shape how university teachers translate supportive academic environments into innovative behaviour. For example, Chen et al. (2026) found that innovation self-efficacy plays an important role in the relationship between the academic innovation environment and university teachers' IWB. Nham et al. (2020) argue that innovation capability is a key mechanism through which knowledge and organisational resources are converted into innovation outcomes. Accordingly, academics with stronger IIC should be more capable of turning ideas into concrete changes in teaching, research and work processes.

H3: Individual innovation capability positively influences innovative work behaviour.

The Mediating Role of Individual Innovation Capability

A direct FWA–IWB relationship captures only part of the process through which flexibility may influence innovative behaviour. Although FWAs provide employees with greater discretion, such discretion may not automatically translate into innovative action. Employees may also require the capability to use this flexibility productively by developing innovation-related competence, confidence and learning. From an SDT perspective, autonomy can support intrinsic motivation and competence development (Deci & Ryan, 2000), while SCT emphasises the role of self-efficacy, agency and learning in translating contextual opportunities into behaviour (Bandura, 1986). Taken together, these perspectives suggest that FWAs may contribute to the development of IIC, which subsequently facilitates IWB.

This mediation logic is especially relevant to knowledge-intensive academic work. Academics may receive flexibility but differ in their ability to use it to experiment, solve problems and develop new approaches. Those with stronger IIC are better positioned to capitalise on the autonomy provided by FWAs (Nham et al., 2020). Previous research has begun to examine mechanisms underlying the FWA–innovation relationship. For example, Jiang et al. (2023) demonstrated that thriving at work partially mediates the relationship between FWAs and IWB among knowledge employees. However, this motivational pathway does not specifically address whether flexibility contributes to the development of the individual capability required to generate, develop and implement innovative ideas. Examining IIC as a mediator therefore extends existing FWA research from a predominantly motivational explanation towards a capability-building explanation. Nevertheless, the mediating role of IIC in the relationship

between FWAs and IWB remains underexplored, particularly in the HEI context. Accordingly, the following hypothesis is proposed:

H4: Individual innovation capability mediates the positive relationship between flexible work arrangements and innovative work behaviour.

Methodology

Research Design and Sample

The study employed a quantitative, cross-sectional survey design. The target population comprised permanent Malaysian academic staff working in Malaysian universities listed in the QS World University Rankings 2023. The population frame covered research, comprehensive, focus and private universities. Purposive sampling was used because a complete sampling frame containing the names and contact details of all eligible academics was not available. Eligibility required respondents to be Malaysian citizens, hold permanent academic appointments and work in one of the selected universities. Although purposive sampling enabled the inclusion of respondents who met the study's specific eligibility criteria, it may introduce selection bias because not every academic in the target population had a known probability of participation. Consequently, the findings should be generalised beyond the sampled university population with appropriate caution.

Meanwhile, the data were collected through an online self-administered questionnaire distributed using Google Forms from June to July 2024. A total of 389 usable responses were obtained after data screening, exceeding the minimum sample requirement identified through G*Power. The sample included 221 female academics (56.8%) and 168 male academics (43.2%). Most respondents were aged 40-49 years (44.2%), 79.9% held a PhD, and senior lecturers formed the largest position group (46.3%). Respondents represented research, comprehensive, focus and private universities, providing coverage across different institutional categories.

Measures

All variables were measured using established instruments and a five-point Likert scale. FWAs were adopted from Van Steenberg et al. (2018). The original instrument included five items addressing discretion over work location and timing, activity-related workspaces, the use of information technology for mobility and remote collaboration. During measurement-model assessment, one FWA item was removed because of low loading, leaving four retained indicators.

IIC was measured using six reflective items adopted from Nham et al. (2020). Items assess enjoyment of trying new ideas, eagerness for discovery, seeking new ways of doing things, improvising problem-solving methods, creative and original thinking, and becoming more creative through continuous learning. IWB was measured using the scale of De Jong and Den Hartog (2010), operationalised as a higher-order construct comprising idea exploration, idea generation, idea championing and idea implementation.

Data Analysis

Data screening and descriptive analysis were performed using IBM SPSS version 29, while the measurement and structural models were assessed using SmartPLS 4. PLS-SEM was selected because the study emphasised prediction, mediation and the assessment of a model containing a higher-order construct. PLS-SEM was preferred over hierarchical regression because the

study simultaneously estimates relationships among latent constructs while accounting for measurement error and assessing the reliability and validity of multi-item measures. It also permits the direct estimation of mediation effects within the structural model and accommodates the higher-order specification of IWB. Hierarchical regression, in contrast, would require separate equations based largely on composite scores and would not provide simultaneous assessment of the measurement and structural models.

Given the use of single-source self-reported data, potential common method bias (CMB) was assessed using the marker-variable approach described by Miller and Simmering (2022). The results did not indicate evidence of substantial common method bias. Reliability was assessed using Cronbach's alpha and composite reliability, convergent validity through average variance extracted (AVE), and discriminant validity using the heterotrait-monotrait ratio (HTMT). Following Hair et al. (2022), indicator loadings of ≥ 0.50 , AVE values of ≥ 0.50 , and CR values of ≥ 0.70 were applied to assess indicator reliability, convergent validity and internal consistency. The significance of direct and indirect paths was evaluated using bias-corrected bootstrapping with 10,000 subsamples.

Results

Descriptive And Measurement Model Results

The descriptive analysis showed that FWAs had the lowest mean among the study constructs ($M = 3.333$), compared with IIC ($M = 4.132$) and IWB ($M = 3.854$). This indicates that respondents perceived moderate flexibility in their academic work arrangements while reporting comparatively high individual innovation capability and moderately high innovative work behaviour.

The measurement model was evaluated at both the lower-order and higher-order levels to reflect the hierarchical specification of IWB. The lower-order components of IWB were first examined for indicator reliability, internal consistency and convergent validity, followed by assessment of the higher-order IWB construct and the other model constructs. As presented in Table 1, the measurement model demonstrated satisfactory reliability and convergent validity. All AVE values exceeded 0.50 and all CR values exceeded 0.70, while the retained indicator loadings were above 0.60. FWA recorded an AVE of 0.507 and CR of 0.804. Although its Cronbach's alpha was comparatively lower ($\alpha = 0.674$), the satisfactory CR and AVE values provided support for retaining the construct. IIC demonstrated strong reliability and convergent validity (AVE = 0.729, CR = 0.941, $\alpha = 0.925$), while the higher-order IWB construct also demonstrated satisfactory measurement properties (AVE = 0.652, CR = 0.881, $\alpha = 0.819$).

Table 1: Measurement Model Summary

Construct	Outer Loadings >0.5	AVE >0.5	CR >0.7	Cronbach's Alpha
Flexible Work Arrangements		0.507	0.804	0.674
FWA1	0.702			
FWA3	0.668			
FWA4	0.763			
FWA5	0.710			
Individual Innovation Capability		0.729	0.941	0.925
IC1	0.878			

IC2	0.885			
IC3	0.897			
IC4	0.865			
IC5	0.817			
IC6	0.774			
Innovative Work Behaviour (HOC)		0.652	0.881	0.819
Idea Exploration		0.745	0.854	0.661
IWB_IE1	0.832			
IWB_IE2	0.893			
Idea Generation		0.730	0.890	0.815
IWB_IG3	0.855			
IWB_IG4	0.843			
IWB_IG5	0.865			
Idea Championing		0.793	0.885	0.741
IWB_IC6	0.873			
IWB_IC7	0.908			
Idea Implementation		0.825	0.934	0.894
IWB_II8	0.890			
IWB_II9	0.919			
IWB_II10	0.916			

Source: Authors' analysis.

Following the establishment of reliability and convergent validity, discriminant validity was assessed using the heterotrait-monotrait ratio (HTMT) (Henseler et al., 2015; Franke & Sarstedt, 2019). The more stringent threshold of 0.85 was applied. As shown in Tables 2 and 3, all HTMT values for both the first-order and second-order constructs were below 0.85, indicating satisfactory discriminant validity. The first-order HTMT values ranged from 0.309 to 0.800, while the second-order values ranged from 0.462 to 0.811. Therefore, the constructs were empirically distinct at both levels of the hierarchical measurement model.

Table 2: Discriminant Validity (HTMT) First-Order Construct

Construct	1	2	3	4	5	6
1. FWA						
2. IDEA CHAMPIONING	0.413					
3. IDEA EXPLORATION	0.309	0.460				
4. IDEA GENERATION	0.425	0.574	0.769			
5. IDEA IMPLEMENTATION	0.392	0.800	0.647	0.792		
6. IIC	0.462	0.569	0.613	0.784	0.694	

Table 3: Discriminant Validity (HTMT) Second-Order Construct

	FWA	IIC	IWB
FWA			
IIC	0.462		
IWB	0.466	0.811	

Structural Model and Mediation Results

The explanatory power of the structural model was assessed using the coefficient of determination (R^2), following Hair et al. (2022). Effect sizes (f^2) were interpreted following Cohen's (1988) guidelines, whereby values of 0.02, 0.15 and 0.35 represent small, medium and large effects, respectively. The structural model results in Table 4 demonstrate that all three hypothesised direct relationships were statistically significant. FWA had a positive effect on IWB ($\beta = 0.102$, $t = 2.766$, $p = 0.006$), supporting H1. The effect size ($f^2 = 0.019$) was approximately at Cohen's (1988) threshold for a small effect ($f^2 = 0.02$), indicating a modest direct contribution of FWA to IWB. IIC exhibited a strong positive effect on IWB ($\beta = 0.679$, $t = 23.423$, $p < 0.001$), supporting H3, with a large effect size ($f^2 = 0.835$). Furthermore, FWA significantly predicted IIC ($\beta = 0.364$, $t = 7.980$, $p < 0.001$), supporting H2, with a moderate effect size ($f^2 = 0.153$). The model explained 51.9% of the variance in IWB ($R^2 = 0.519$), while FWA explained 13.0% of the variance in IIC ($R^2 = 0.130$). Collectively, these findings indicate that IIC represents a particularly important mechanism through which flexible work arrangements may translate into innovative work behaviour.

Table 4: Structural Model Results

Hypothesis	Relationship	β	SD	t-value	p-value	Decision	R^2	f^2
H1	FWA $\rightarrow$ IWB	0.102	0.037	2.766	0.006	Supported	0.519	0.019
H3	IIC $\rightarrow$ IWB	0.679	0.029	23.423	0.001	Supported		0.835
H2	FWA $\rightarrow$ IIC	0.364	0.046	7.980	0.001	Supported	0.130	0.153

Source: Authors' analysis based on 10,000 bootstrap subsamples.

The mediation analysis in Table 5 revealed that IIC significantly mediated the relationship between FWA and IWB ($\beta = 0.247$, $SD = 0.034$, $t = 7.223$, $p < 0.001$). The bootstrapped confidence interval [0.186, 0.320] did not include zero, providing further evidence of a significant indirect effect. Thus, H4 was supported. Notably, the indirect effect was larger than the direct effect, highlighting the importance of IIC as a mechanism through which FWA contributes to IWB.

Table 5: Indirect Effect and Mediation Results

Relationship	β	SD	t-value	p-values	BCI LL	BCI UL	Decision
H4: FWA $\rightarrow$ IIC $\rightarrow$ IWB	0.247	0.034	7.223	0.001	0.186	0.320	Supported

Discussion

Flexible Work Arrangements Positively Influence Innovative Work Behaviour

The findings demonstrate that FWAs have a positive and significant effect on IWB among Malaysian academics ($\beta = 0.102$, $p = 0.006$), supporting H1. This suggests that greater flexibility in when, where and how academic work is performed can facilitate innovative behaviour by providing academics with greater discretion to organise their work, allocate time to cognitively demanding activities and select work environments that support idea development and problem solving. This finding is consistent with previous research showing that FWAs can facilitate innovative behaviour by providing employees with greater autonomy and discretion over their work (Jiang et al., 2023; Gašić et al., 2025).

Nevertheless, the effect size ($f^2 = 0.019$), which is approximately at Cohen's (1988) threshold for a small effect, indicates that flexibility makes only a modest direct contribution to IWB. Thus, although FWAs may provide favourable conditions for innovative action, their direct contribution appears relatively limited compared with the substantially stronger effect of IIC on IWB. This suggests that flexibility alone may not be sufficient to generate substantial innovative behaviour; rather, its value may depend on the individual capabilities that enable academics to use the autonomy and discretion afforded by FWAs productively.

Flexible Work Arrangements Build Innovation Capability

Beyond its direct contribution to IWB, flexibility also significantly enhanced IIC. This finding is important because it suggests that FWAs may have developmental value beyond providing employees with greater discretion over when and where work is performed. The autonomy embedded in flexible work can provide greater control over work practices and create opportunities for self-development and learning (Jiang et al., 2023), which may enable academics to experiment and develop innovation-related competence.

The result is consistent with SDT, which emphasises autonomy and competence as fundamental psychological needs that support intrinsic motivation (Deci & Ryan, 2000). From this perspective, the discretion afforded by FWAs may create conditions that enable academics to engage in self-directed learning and experimentation. SCT further complements this explanation by emphasising the role of self-efficacy, personal agency and learning in capability development (Bandura, 1986). Taken together, these theoretical perspectives suggest that FWAs may do more than directly encourage innovative behaviour; they may also contribute to the development of academics' capability to engage in innovation.

Individual Innovation Capability as a Key Predictor of Innovative Work Behaviour

IIC emerged as the strongest predictor of IWB ($\beta = 0.679$, $p < 0.001$), with a large effect size ($f^2 = 0.835$). The substantial path coefficient and effect size indicate that individual innovation capability plays a central role in explaining academics' innovative work behaviour. This finding suggests that academics with stronger innovation capability are better positioned to explore, champion and implement new ideas in their work.

This finding reinforces the conceptual distinction between providing opportunities for innovation and possessing the capability to use them effectively. Organisational practices may create favourable conditions, but translating these conditions into innovative behaviour also depends on employees' capability to use knowledge, skills and creativity in innovative ways. This interpretation is consistent with Nham et al. (2020), who conceptualise individual innovation capability in relation to the utilisation of knowledge for innovation, and Iddris et al. (2022), who emphasise the transformation of knowledge, skills and creativity into innovative outcomes.

Individual Innovation Capability Mediates The Flexibility-Innovation Relationship

The mediation analysis further demonstrates that IIC significantly mediates the relationship between FWA and IWB ($\beta = 0.247$, $p < 0.001$), supporting H4. The bootstrapped confidence interval [0.186, 0.320] excludes zero, confirming the significance of the indirect effect. Since the direct effect of FWA on IWB also remained positive and significant ($\beta = 0.102$, $p = 0.006$),

the results indicate partial mediation, with the direct and indirect effects operating in the same direction. This pattern is consistent with complementary mediation.

Importantly, the indirect effect ($\beta = 0.247$) was larger than the direct effect ($\beta = 0.102$), highlighting IIC as an important mechanism through which FWAs contribute to IWB. This finding suggests that flexibility may create opportunities for innovative action, but its contribution to IWB becomes more meaningful when academics possess the capability to use the autonomy and discretion afforded by FWAs productively. This interpretation is consistent with the conceptualisation of IIC as an individual capability through which knowledge, skills and creativity are translated into innovation-related outcomes (Nham et al., 2020; Iddris et al., 2022).

Theoretical Implications

This study contributes to the flexible-work and innovation literature by extending direct-effect explanations to incorporate a capability-building mechanism. Existing research frequently evaluates FWAs in relation to work-life balance, job satisfaction, performance or direct innovation outcomes (Davidescu et al., 2020; Ghimire et al., 2023; Jiang et al., 2023). The findings extend the flexible-work and innovation literature by demonstrating that FWAs influence IWB through both direct and capability-based pathways. While FWAs exert a significant direct effect on IWB, the modest direct effect suggests that flexibility alone provides only a limited stimulus for innovative behaviour. More importantly, the substantially stronger indirect pathway through IIC reveals how flexibility is translated into innovative action. Thus, the theoretical contribution of this study lies not in rejecting the direct FWA–IWB relationship, but in demonstrating that this relationship is more fully explained when individual innovation capability is incorporated as a mediating mechanism.

Next, the integrated use of SET, SDT and SCT offers a more comprehensive explanation of the mediated relationship. SET explains the organisational resource exchange, SDT explains the motivational value of autonomy and competence, and SCT explains capability formation through agency, learning and self-efficacy. The integration of these theoretical perspectives helps explain why FWAs can influence IWB directly while exerting a stronger influence through the development of individual innovation capability.

Practical Implications

The results indicate that flexible work policies can contribute directly to academics' innovative behaviour; however, the modest direct effect suggests that flexibility alone is unlikely to generate substantial improvements in innovation. HEIs should therefore complement flexible work arrangements with capability-building initiatives, including appropriate digital infrastructure, innovation training, collaborative platforms, research support and opportunities for continuous learning.

Second, flexibility policies should be designed around academic work rather than copied directly from corporate models. Teaching schedules, laboratory access, student consultation and collaborative research require coordination. Universities may therefore benefit from structured flexibility: clear expectations, protected periods for focused work, reliable digital access and mechanisms that preserve peer interaction and feedback.

Third, managers should evaluate FWAs not only through satisfaction or work-life outcomes but also through capability indicators. If flexible work is intended to support innovation,

universities should monitor whether academics are gaining confidence, creative problem-solving ability, technological competence and opportunities to experiment. This shifts FWA policy from an employee convenience measure towards a strategic innovation-development tool.

Finally, at the policy level, higher education authorities should avoid treating flexibility as a uniform administrative concession. Institutional guidelines could instead promote outcome-oriented flexibility that allows universities to adapt arrangements to teaching, research and disciplinary requirements. Policy frameworks should also link flexible work provisions with investment in digital infrastructure, professional development and collaborative research systems. Such an approach would ensure that flexibility develops academic capability rather than merely changing where or when work is performed.

Limitations And Future Research

The findings should be interpreted in light of several limitations. First, the cross-sectional design limits causal inference; future studies could employ longitudinal designs to examine how FWAs contribute to the development of IIC and subsequent IWB over time. Second, the study relied on self-reported data from Malaysian academics; future research could incorporate supervisor ratings, objective innovation outcomes or multi-source data. Third, the sample focused on permanent Malaysian academics in universities included in the QS World University Rankings 2023. Replication across other higher education systems, non-ranked institutions and different professional groups would strengthen the generalisability of the findings. Future studies could also examine moderators such as digital support, collaboration climate, workload, career stage and the extent to which flexible work is voluntarily chosen to identify the conditions under which FWAs most effectively strengthen IIC and IWB.

Conclusion

This study examined whether flexible work arrangements foster IWB among Malaysian academics and whether individual innovation capability explains this relationship. The findings demonstrate that FWAs positively and significantly influence IWB, although the direct effect is modest. FWAs also significantly strengthen IIC, which in turn emerges as a strong predictor of IWB. More importantly, the significant indirect effect confirms that IIC partially mediates the relationship between FWA and IWB, with the indirect pathway substantially exceeding the direct pathway.

These findings demonstrate that flexibility contributes to academic innovation through two complementary pathways. It can directly facilitate innovative behaviour by providing greater discretion over when, where and how work is performed, while the stronger indirect pathway indicates the importance of strengthening academics' capability to innovate. Accordingly, the strategic value of FWAs in HEIs extends beyond providing autonomy and convenience. Universities seeking to foster sustained innovative behaviour should combine flexible work practices with opportunities for learning, experimentation, creative problem solving and capability development.

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