Barriers and Opportunities for Lecturers' Career Progression in Vietnam's Scientific Labour Market

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ABSTRACT

Aim. This study employs job characteristics theory and human capital theory to establish an analytical framework. Through the lens of Vietnam's scientific labour market, it examines the relationship between perceived barriers and career advancement opportunities for university lecturers.

Methods. This multiple-method approach in the research design entails the gathering of information from a sample mainly comprised of public university lecturers. The analysis of data is performed using PLS-SEM, and the analysis is done through the smartPLS software.

Results. The findings show that the important perceived competitive advantage and job performance, which are central to career advancement, are significantly affected by factors including welfare benefits, heavy teaching load, and research funds. These results underscore the necessity of a comprehensive plan that encompasses organisational support and a more accommodating approach to various elements impacting academics in Vietnam's scientific labour market.

Conclusion. The development of such a plan is crucial to foster academic career advancement in Vietnam's scientific labour market. The strategies must comprise organisational provisions and effective countermeasures to address systemic challenges.

Cognitive value. The study aims at understanding and establishing the relationship between structural and organisational factors and individual performance benchmarks and serves as a starting point to inform policy changes in Vietnam education system.
Keywords: labour market, lecturers, career progression, education, Vietnam

Introduction

According to the World Bank, Vietnam is classified as an emerging market and has received formal recognition as an economy exhibiting substantial growth. The proportion of individuals residing in poverty throughout the country has markedly decreased from 16.8% in 2010 to 5% in 2022 (World Bank, 2020). Though the country is in the initial stages of urbanisation, it is swiftly progressing into intermediate-level urbanisation, with an estimated 39.48% urban population in 2023 and an annual urban growth rate of 1% (O'Neill, 2024). The shift towards industrial manufacturing is also contributing to both employment and economic output. The progress made exceeds the norms for Southeast Asia and the Asian region (World Bank, 2024).

Vietnam has achieved full international integration through its educational alliances with over 100 international partners (Duong & Doan, 2023). The fourth industrial revolution drives rapid knowledge substitution in education and stimulates continuous quests for scientific discoveries. Higher education digitalisation intensified existing trends which redefined basic educational standards and modified both instruction objectives and teacher responsibilities (McCarthy et al., 2023). The professional progression of educators in Vietnam's scientific job market is of utmost importance in this evolving societal context, mirroring broader patterns in educational research and socio-economic progress (French et al., 2023, Le et al., 2023).

The Vietnam higher education system has seen considerable transformations that aim at improving its global competitiveness while fostering an environment that promotes innovation and scientific research. Despite these changes, lecturers still face challenges such as poor pay, heavy workloads, and limited research support, which affect both motivation and capacity for long-term research (Le et al., 2023; Lunag et al., 2024).

Furthermore, the increasing need for exceptionally skilled instructors, influenced by the industry's globalisation and economic focus, adds more strain on current faculty members to broaden their duties and obligations, especially in the realm of research (London, 2010). Government assistance remains inadequate to provide resources for advanced research and career progression.

Nevertheless, opportunities exist through international partnerships and government-led reforms and investments in education infrastructure (Maheshwari, 2023; Pham et al., 2024; Ryu & Nguyen, 2021)

This study addresses several elements influencing teachers' professional development in the framework of Vietnam's scientific workforce, therefore augmenting the body of knowledge already available. Vietnam's academic labour market is complicated with many moving components; this study aims to grasp all those components. This study intends to provide pragmatic solutions for enhancing lecturers' professional development by analysing the advantages and drawbacks of supposed incentives and competitive strategy.

Literature Review

Background Theory

J. Richard Hackman and Greg R. Oldham's empirical investigation illustrates that the Job Characteristics Theory and Human Capital Theory provide insights into the manner in which specific job attributes influence employment outcomes, including performance metrics and job satisfaction levels. The Job Characteristics Theory delineates five pivotal dimensions: autonomy, feedback, job significance, task identity, and skill variety (Hackman & Oldham, 1976). These attributes exert a profound influence on psychological states, which subsequently affect motivation and work efficacy. In contrast, the Human Capital Theory asserts that investing in resources for education, training, or career advancement boosts an individual's economic significance and productivity (Becker, 1964). By synthesising diverse perspectives, research yields a holistic understanding of how scientific and academic careers are moulded by investments in human capital, encompassing credentials, skills, collaborations, and job characteristics.

Hypothesis Development

Impact Welfare of Lectures on Job Performance and Career Advancement

Even though monetary benefits are not typically regarded as an inherent work characteristic, a multitude of influences determines the welfare of lecturers, which in turn affects their job happiness and educational impact. Welfare offers more than monetary compensation because it incorporates job satisfaction with academic freedom and functional working conditions together with employee advantages but low income reduces both academic freedom and job security for lecturers (King & Bunce, 2020). The way employees understand workplace recognition and appreciation directly shapes their psychological condition along with their feelings of fairness which leads to job satisfaction and performance level (Mohammad et al., 2019).

The relationships between inadequate pay, work performance, and professional development have been the subject of significant research in numerous academic environments (Iddrisu, 2023). Insufficient wages are widely recognised as a major obstacle to job satisfaction and career advancement. Lecturers' performance is directly affected by reduced commitment and motivation stemming from inadequate pay (Ahmad et al., 2022). Similarly, when faculty members receive insufficient pay it makes them less motivated to conduct research and develop innovative solutions for their professional development (Polly et al., 2021).

Furthermore, strong job performance increases lecturers' chances of career advancement, as academic institutions consider it a primary criterion for promotion (Tang et al., 2024).

However, low payment can initiate a chain reaction starting from money dissatisfaction that reduces job performance, therefore restricting prospects for professional development. The lack of room for development in their roles makes individuals remain in positions, which inhibit both their performance and professional advancement (Akinwale et al., 2023).

- H1.a The welfare of lecturers has a commensurate negative or positive impact on job performance;
- H1.b The welfare of lecturers is directly correlated with perceived competitive advantage, with either a positive or negative relationship.

The Relationship Between Heavy Teaching Loads, Job Performance, and Career Advancement

Heavy teaching loads create insufficient research time which leads to restricted task diversity and professional independence and subsequently affects both professional satisfaction and work performance negatively (Hackman & Oldham, 1976). The relationship between heavy teaching loads, job performance, and career progression is a critical area of study in the academic context (Smith & Gillespie, 2023; Smith & Walker, 2024).

Furthermore, job performance stands as the primary factor which determines academic career advancement. The ability to handle teaching alongside research tasks leads lecturers toward better role performance leading to career advancement in academia. Recent research results have been reported that high job performance, characterised by effective teaching and substantial research contributions, is crucial for promotions and other career advancement opportunities (Huang et al., 2019). However, when lecturers are overburdened with teaching duties, their job performance can suffer, thereby limiting their prospects for career growth (Admiraal et al., 2023).

In addition, recently published results have highlighted that heavy teaching obligations decrease job performance at the same time they block career progression until motivation declines (Heffernan et al., 2022).

The cyclical relationship between heavy teaching duties, job performance and career advancement arises because excessive work creates lower commitment to academic tasks and reduced overall productivity.

- H2.a Heavy teaching loads have a negative or positive impact on job performance;
- H2.b There is a direct correlation between heavy teaching loads and perceived competitive advantage, which may be either positive or negative.

The Relationship Between Research Funding, Job Performance, and Career Advancement

Lecturers require adequate research funds to conduct relevant and substantial research projects and have the resources and autonomy to do so (Niemczyk & Rónay, 2023). A lack of funding can diminish these dimensions, leading to lower motivation and job performance.

Research funding that meets university needs gives lecturers access to essential tools which facilitate the production of academic output. Stronger capabilities create important contributions to scholarly work and improve the likelihood of promotion because performance remains the main requirement for progress (Indrawati & Kuncoro, 2021).

In addition to this, recent studies have revealed that research grants not only subsidise the researcher's ability but also amplify the morale of many a lecturer who in turn works even harder and as such, improves their job performance (Abboh et al., 2024). Therefore, this increased job performance has significant implications for graduate students' success rates and promotion decisions. However, without sufficient grants for research, advancement becomes impossible. Many current investigations have revealed that limited financial resources could detrimentally affect the professional capabilities of lecturers and their chances for career growth, causing a fall in both the quantity and quality of research production (Indrawati & Kuncoro, 2021; Qudah et al., 2019).

Moreover, research funding is essential for enhancing job performance, which, in turn, facilitates career advancement opportunities for lecturers in Vietnam's scientific labour market (Nguyen, 2020).

- H3.a There is a positive correlation between adequate research funding and job performance;
- H3.b There is a positive correlation between adequate research funding and perceived competitive advantage.

The Relationship Between Demand for Qualified Lecturers, Competitive Advantage, and Career Advancement

The demand for high-quality faculty reflects the need for deep expertise and continuous professional development to enhance the quality of education and research (Becker, 1964; Ros & Oleksiyenko, 2018).

Universities that manage to enlist and keep highly skilled instructors are likely to build a considerable competitive edge (Tran & Nguyen, 2022). The presence of qual-

ified lecturers in a higher concentration assists more institutions in achieving better results in terms of research and teaching, as this enhances their reputation and improves student success (Tsvetkova & Lomer, 2019). Consequently, they are capable of acquiring top-tier talent and funding, which in turn establishes a positive cycle of development.

Moreover, lecturers who have obtained higher qualifications combined with research experience demonstrate improved teaching and research abilities which leads to better student achievements and stronger institutional recognition (Dinh et al., 2024; Indrawati & Kuncoro, 2021).

However, the demand for qualified lecturers currently exceeds available talent thus creating fierce competition between academic institutions. The competitive environment creates performance and advantage differences between educational institutions by (Indrawati & Kuncoro, 2021). Institutions struggling to attract qualified lecturers may find it challenging to maintain their academic standing and research competitiveness (Scott & Guan, 2023).

In summary, the demand for qualified lecturers, their impact on competitive advantage, and job performance are closely interconnected (de Wit & Altbach, 2021). These hypotheses suggest that increasing demand and effective recruitment enhance institutional competitiveness and lecturer performance, contributing to improved academic outcomes.

- H4a. The demand for qualified lecturers positively affects their job performance;
- H4b. The demand for qualified lecturers positively influences competitive advantage

The Relationship Between Government Support, Competitive Advantage, Job Performance, and Career Advancement

Governments must provide financial support to establish educational buildings as well as human resources through funding programmes and policy and research programmes (Nguyen et al., 2024). The academic job market in Vietnam benefits from national support which determines both employee quality and organisation success (Hayden & Le-Nguyen, 2020). Strategic initiatives develop positive organisational reputation as well as attract skilled talent for improved competitiveness (Nguyen & Ha, 2023).

Moreover, the support from government institutions enhances faculty performance by providing crucial funding for educational and research activities (Van & Phuong, 2021). Particular research grants at significant levels enhance both output production and skilled development efforts (Jarvis & Mok, 2019). However, unequal funding, especially for urban-based universities, leads to gaps in performance and competitiveness among institutions (Dang et al., 2024).

Government support which includes funding along with policy development combined with infrastructure development helps universities achieve competitive advantages while improving lecturer performance (Aung & Aye, 2024; Indrawati & Kuncoro,

2021). The hypotheses indicate that such interventions become central components for institutional expansion and advancing academic productiveness.

- H5a. Enhanced government support positively affects the job performance of lecturers;
- H5b. Government support positively influences competitive advantage in academic institutions.

The Relationship Between International Collaboration, Competitive Advantage, Job Performance, and Career Advancement

International cooperation enables knowledge sharing and combined research activities which provides both global experience and improves human capital resources. Through international collaboration Vietnam achieves better lecturer performance and enhances competitiveness by providing resources and innovative approaches and a diverse intellectual environment (Bagherimajd & Khajedad, 2024; Nguyen, 2020). International research alliances produce funding sources while simultaneously improving teaching standards and research quality and institutional prestige while drawing accomplished talent (Moshtari & Safarpour, 2024).

International collaboration strengthens job performance through developing networks which combines with enhanced research abilities and different academic environments for lecturers. Such experiences enable lecturers to publish more research while attending international conferences and improve their teaching methods that aids academic progression (Alshaikhmubarak et al., 2020).

However, the extent and effectiveness of international collaborations can vary, resulting in uneven benefits (Nghia et al., 2019). Related studies provide evidence that institutions proactive in forging international partnerships tend to see significant improvements in job performance and competitive advantage (Dang et al., 2024). In contrast, those with limited international engagement may lag in meeting global academic standards and innovations.

In summary, international collaborations improve both competitive position and academic performance through essential resources and worldwide opportunities. These hypotheses propose that university positioning and lecturer productivity benefit from these collaborations, leading to career growth and research success.

- H6a. International collaboration positively affects the job performance of lecturers;
- H6b. International collaboration positively influences the competitive advantage of academic institutions.

The Mediating Role of Competitive Advantage and Perceived Job Performance Promotes the Career Advancement of Lecturers

Competitive advantage in academia is often rooted in the unique skills, knowledge, and research capabilities of lecturers (Hart & Rodgers, 2023). The investment in em-

ployee skill development via education and research and training continues to build institutional reputation and promote lecturer career advancement. The competencies that make up perceived job performance emerge through professional skills displayed in classroom work together with academic research and duties of service (Al-Refaei et al., 2024). Those career advancements determine how this accumulated capital leads to better promotion possibilities (Bimrose et al., 2008).

Additionally, perceived job performance and competitive advantage now determine lecturers' advancement in their careers across Vietnam (Nguyen & Ha, 2023). Lecturers seek career advancement because institutions pursue innovation through research and quality teaching which brings in funding sources and talented faculty members along with strategic partnerships to improve reputation and open up more educational opportunities (Chakraborty & Biswas, 2020).

Furthermore, perceived job performance serves as a mediator which links teaching excellence, research achievements and professional recognition to achieve career growth (Blokker et al., 2019). Academic trajectories depend on this component which supports institutions in meeting their standards to obtain competitive advantages (Mgaiwa, 2021).

Consequently, the competitive advantage system leads to improved lecturer performance through better resources and intellectual engagement, and faculty excellence drives higher institutional prestige (Nelly et al., 2024). This reciprocal dynamic fosters career progression for lecturers (Quyen Dang et al., 2024).

In summary, the interplay between competitive advantage and perceived job performance plays a significant mediating role in the career advancement of lecturers in Vietnam's scientific labour market. This cyclical enhancement of factors creates an environment where career progression is both a result and a driver of institutional success and individual excellence.

- H7. The perceived competitive advantage is a predictor of job performance in educational environments;
- H8. Perceived job performance is a positive predictor of career progression;
- H9. Perceived competitive advantage can enhance positive career progression.

Research Methods

Measurement Tools

This research utilised the interpretive research approach together with constructs from Job Characteristics Theory (Hackman & Oldham, 1976) and Human Capital Theory (Becker, 1964). The research used a 5-point Likert scale questionnaire according to Daphna Harel and EllenWentland (2018) that underwent translation and back-translation to ensure clarity (Siegel, 2018). These concepts are developed through a thor-

ough review of the literature from similar studies within the field and are described in Figure A1.

Research conducted with 60 lecturers confirmed measurement validity and reliability through Cronbach's alpha coefficients that exceeded 0.70 as suggested by Joseph F. Hair et al. (2017) and revisions to any ambiguous items (Phelps et al., 2014).

Data Collection

The research utilised PLS-SEM to analyse the complex behavioural patterns in a model with nine constructs containing thirty-six structural paths. The estimated error risk from such models mandated a minimum sample count of 360 based on the recommendation that constructs require at least ten times the number of pointing arrows (Hair et al., 2019).

The survey content is converted into a google form to set up a path during the data collection process. The data collection technique was designed in groups of 40 lecturers at specialised faculties, who voluntarily attended regular seminars of the faculty, through each workshop the author group introduced research and guidance, explaining measurement concepts to the first 40 respondents. Through the first 40 people, each of them helped send a link to collect data to at least 10 other lecturers who are teaching at universities. In this particular study, the research was designed to collect data from 500 respondents, but the actual number of respondents was 377, resulting in a robust recovery rate of 75.4%.

Analytical Techniques

The approach began by assessing the internal consistency of the survey instrument using Cronbach's alpha, a statistic that measures the average agreement between all item pairings on a scale. A Cronbach's alpha value of 0.6 or higher, as recommended by (Nunnally, 1978), indicates that the items reliably assess the same concept and are suitable for further analysis.

Next, apply common methods such as conducted confirmatory factor analysis (CFA) to validate the factor structure of our theoretical framework. Indicators checked the composite reliability (CR) and average variance extracted (AVE) for each construct, with CR values above 0.7 and AVE values above 0.5 indicating good construct reliability and validity (Dash & Paul, 2021).

The analysis of structural models occurred through PLS-SEM with SmartPLS 4.0.9.2 because this approach helps evaluate complex relationships between constructs (Hair et al, 2019). The technique enabled thorough testing of measurement as well as structural models which improved the study's robustness and statistical validity in the results.

Results

Sample Characteristics

From Table A1 presenting statistical characteristics of the study sample, the frequency analysis results show a higher proportion of female than male participants, with 64.456% of participants being female and 35.544% being male. The largest demographic of professors consists of individuals aged between 35–45 years, accounting for 40.32% of the total. This is followed by the 46–55 age bracket, which makes up 32.89% of the lecturers. Women under the age of 35 make up a lesser percentage (17.77%), while women over the age of 55 are similarly a smaller group (9.02%). Most individuals belong to classes with 6–10 years of experience, which accounts for 35.81% of the total. Following that, those who have worked for a period spanning from 11–15 years account for 29.71%. Additional smaller cohorts include of those with 1–3 years of experience (9.28%), 4–5 years of experience (14.32%), and those who have worked between 15–20 years (10.88%). In general, the research sample includes predominantly female lecturers, and all are mid-career aged with considerable experience. Understanding the nature of the population that makes up Vietnam's scientific labour market gives a good indication of what challenges and opportunities exist for advancement.

Inspection of measurement structures

The assessment of the measurement model's reliability is presented in Table A2, encompassing Cronbach's Alpha, outer loading, and outer Variance Inflation Factor (VIF).

First of all, the Cronbach's Alpha coefficients for all the constructs vary from 0.843 to 0.887 which is over the set standard of 0.7. Thus, this suggests a very high internal consistency, which means that all the items that are grouped in the same construct are valid and homogeneous measures of the construct in question.

Furthermore, outer loading values are extended from 0.742 to 0.885, which is way beyond the recommended value of 0.7. This means that each item is a strong component of the respective construct allow the items such as Item WL3 with factor loading of 0. 863 and Item HL4 as 0.880 to strengthen the respective construct.

In addition, the outer VIf values which used to test the multi collinearity vary from 1.567 to 2. All the variance inflation factors which are less than 5 are below the critical level of 5, thus showing that multicollinearity is not a problem in this analysis. This makes the items not too much related to each other, thus maintaining the analysis as perfect as is desired. in addition, the reliability analysis supports the measurement model that indicates satisfactory internal consistency, reliable measurement indicators, and no significant variance in measurement indicators.

Differentiation and Convergence Testing

The results of convergent validity analysis presented in Table A3 were strong. Analysis of composite reliability indicated values above 0.70 (Bagozzi and Yi, 1988) while all indicator loadings met Claes Fornell and David F. Larcker's (1981) standards thus verifying measurement adequacy.

Firstly, the compposite reliability measurements for all constructs exceeded 0.70 indicating robust reliability and achieved values between 0.894 and 0.922. The measurement items displayed excellent internal consistency through Cronbach's alpha ratings which exceeded 0.70.

Secondly, the study demonstrated convergent validity because AVE values exceeded 0.50 and reached between 0.680 to 0.746. The Fornell-Larcker criterion confirmed discriminant validity since the square roots of AVE for each construct exceeded inter-construct correlations.

Furthermore, the satisfactory CR level of each construct and the AVE values compare to previous research to both supports the operational reliability of the constructs besides endorsing the convergent validity of the constructs specified in the model as presented in Table A4.

Testing Hypotheses

The study examines how different individual perceptions of barriers and opportunities for lecturers' career advancement including lecturer welfare, substantial teaching loads, research funding, demand for qualified lecturers, government support, and international collaboration affect perceived competitive advantage, job performance, and career progression among lecturers in Vietnam's scientific labour market. From Table A4, the analysis of the structural model regarding the relationship among the measured variables indicates that the estimated coefficients determine the strength of the impact.

The welfare of lecturers (WL) shows a negative impact on both competitive advantage (estimated coefficient = -0.147, p-value = 0.006) and job performance (estimated coefficient = -0.109, p-value = 0.023), indicating that insufficient welfare conditions can reduce perceived competitiveness and hinder job performance.

Heavy teaching loads (HL) negatively affect job performance (estimated coefficient = -0.192, p-value = 0.000) but positively impact competitive advantage (estimated coefficient = 0.350, p-value = 0.000), suggesting that while excessive teaching responsibilities diminish performance, they may also drive lecturers to enhance their competitive edge. Research funding positively influences both competitive advantage (estimated coefficient = 0.185, p-value = 0.003) and job performance (estimated coefficient = 0.159, p-value = 0.002), emphasising the critical role of adequate financial resources in fostering research excellence and enhancing job performance.

The demand for qualified lecturers (DL) shows a positive relationship with job performance (estimated coefficient = 0.122, p-value = 0.017), though its impact on competitive advantage is not significant. Government support (GS) and international collaboration are significant drivers of competitive advantage and job performance, with international collaboration showing particularly strong positive effects on competitive advantage (estimated coefficient = 0.216, p-value = 0.000) and job performance (estimated coefficient = 0.167, p-value = 0.002). These perceptions collectively shape career progression, highlighting the interplay of individual, institutional, and external factors in academic career advancement.

The perceived competitive advantage (CA) and job performance play crucial roles as mediators in the career progression of lecturers within Vietnam's scientific labour market. competitive advantage significantly enhances lecturers' ability to secure professional opportunities, positively impacting job performance (estimated coefficient = 0.146, p-value = 0.002). This indicates that lecturers who view themselves as competitive are more likely to excel in their roles, thereby improving their career advancement prospects. Similarly, job performance is a key determinant of career progression, exerting a strong direct influence (estimated coefficient = 0.406, p-value = 0.000). A lecturer's high performance through research combined with teaching activities leads to recognition, which supports professional growth. Enhanced performance conditions, which result from competitive advantage, lead lecturers to advance their careers at professional levels.

Also, the analysis identified several non-significant relationships that warrant attention. In particular, the correlation between the necessity for proficient educators and the perceived competitive edge was determined to be statistically non-significant (estimated coefficient = 0.037, p-value = 0.468). The study findings show that higher demand for qualified lecturers does not significantly enhance competitive advantage or professional progress, which implies that different factors affect academic career paths.

In Table A5, The statistical analysis revealed that several specific indirect effects were statistically insignificant, suggesting that they do not correspond well with the theoretical framework. For instance, the estimation coefficient of 0.002 (p-value of 0.505) indicates that the pathway from demand for qualified lecturers to career progression is not significant. This pathway also includes competitive advantage and job performance. In the same vein, the indirect impact of government support on career progression through competitive advantage was marginally insignificant, with an estimation coefficient of 0.030 (p-value of 0.084). An additional pathway that connected government support to career progression via competitive advantage and job performance had an estimation coefficient of 0.006 (p-value of 0.123), indicating that it was not statistically significant. Furthermore, the indirect impact of demand for qualified lecturers on career progression through competitive advantage, which had an estimation coefficient of 0.011 (p-value of 0.482), was also not statistically significant. These results indicate that the theoretical model is not strongly supported by certain indirect effects, particularly those involving demand for qualified lecturers

and government support. This highlights the potential complexities or the influence of other variables that were not captured in this analysis.

The results of the analysis of the study concern perceptions of barriers and advantages of the career development and are visualised in Figure A2, emphasising the mediating role of competitive advantage, and job effectiveness.

Discussion

The future of career progression in Vietnam's scientific labour market is set to evolve significantly, shaped by ongoing reforms, global trends, and the specific needs of the country's educational system. Initially driven by a stronger emphasis on research and institutional reforms, the system will increasingly align with international standards and embrace digital advancements. This evolution will expand opportunities for career advancement, but also intensify competition, requiring lecturers to continuously develop their skills, engage in international collaborations, and contribute actively to their fields (Scott & Guan, 2023).

The study's contextual characteristics were determined by demographic information revealing that the research sample is predominantly female (64,456%) and most lecturers are aged between 35–45 years. The majority have 6–10 years of experience. This demographic insight is crucial as it highlights the need for targeted career advancement strategies, particularly for mid-career female lecturers, ensuring that professional development opportunities are aligned with the unique needs of this demographics.

The results has analysed the motivations of lecturers within Vietnam's social context, emphasising the need to interpret and discuss the results of similar studies in different settings for objectivity. According to job characteristics theory (JCT), job dimensions like autonomy and task significance play a crucial role in shaping motivation and job performance. The study found that factors like research funding and government support positively influence job performance and competitive advantage, consistent with job characteristics theory (Abboh et al., 2024). Similarly, human capital theory supports that investments in skills and education enhance productivity and career progression, as seen in the positive effects of international collaboration and demand for qualified lecturers on competitive advantage and job performance. However, the non-significant impact of demand for qualified lecturers on competitive advantage suggests that while these theories are broadly applicable, specific cultural and institutional factors in Vietnam may influence outcomes differently. Giorgia Miotto's et al. (2020) study in Spain on sustainable competitiveness in public education also confirms these findings. The study examines pragmatic, moral, and cognitive legitimacy types and analyses reputation based on performance, innovation, citizenship, services, governance, and workplace climate (Miotto et al., 2020). Overall, the findings align with theoretical expectations but also reveal the complexity of applying these theories in Vietnam's unique context.

Conversely, the analysis that explored the mediation influence of job performance and competitive advantage on career advancement showed that high job performance was positively related to career progression which was evident by the high coefficient of 0. 406 (p-value = 0. 000). What this means is that for lecturers whose academic careers are characterised by high research outputs and effective teaching, the likelihood of their advancing in their career is greater (Nguyen & Ha, 2023). This is an indication of a labour market that continuously seeks out high-performing employees. On the positive side, it was discovered that perceived competitive advantage had a correlation with job performance (coefficient = 0.146, p-value = 0.002). This suggests that lecturers who have an understanding of their added value within academics through production of research are most likely to be considered for promotion opportunities as well as successful career transition (Sahito & Väisänen, 2020). The research posits therefore that high job performance and strong competitive mindsets are essential factors for career advancement amongst Vietnamese scholars in academia.

However, the research results also found several non-significant relationships including the relationship between demand for qualified lecturers and perceived competitive advantage (Abboh et al., 2024). The research revealed that increased demand for competent academics does not significantly impact competitive advantage, a finding confirmed by (Barusman, 2018). Additionally, it does not contribute significantly to career progression through competitive advantage and job performance. This suggests that factors other than just demand for qualification have a greater impact on career progression. This finding could suggest a limitation of this research as it might not capture comprehensively the complexity of academic careers by concentrating solely on the demand recognition dimension (Rossoni et al., 2023). Subsequent investigations must look at broader economist factors that shape academic career paths even though there exist variables like institutional backstopping and research opportunities (Beck et al., 2022).

Conclusion

The research focuses on the career challenges and opportunities faced by Vietnamese university lecturers in the scientific labor market taking into account a wide range of factors influencing their trajectories. The first finding notes that the majority of respondents are middle-aged female lecturers between the ages of 35 and 45 with significant experience. Such group implies that career advancement programs for middle-aged women scholars in Vietnam need to be appropriately targeted at addressing their problems and potentials.

The second finding indicates that salaries, heavy teaching loads as well as funding for research varsities determine perceived competition edge and work performance. Poor salaries affect these two negatively while heavy teaching loads might lower work performance but raise competitiveness. Research financing, government support, and global partnerships increase competition spirit, job performance, and career growth.

The third conclusion identifies competitive advantage and job performance as crucial mediators in career progression. Higher perceived competitiveness enhances job performance, which in turn significantly boosts career progression. This finding underscores the importance of fostering both competitiveness and job performance to achieve successful career advancement for lecturers in Vietnam.

Finally, the study found statistically non-significant relationships between demand for qualified lecturers with perceived competitiveness, suggesting that demand indirectly affects overseas collaborations' career progression by stimulating national-level position competition and job performance. This means that a mere drive for qualification is insufficient to enable career mobility and that a multi-factorial strategy is needed to address numerous factors in Vietnam's academic environment.

Implications (Practical, Social, Future Research)

Career development in Vietnam's scientific labour market should cater specifically to the mid-career female professors considering they represent a critical mass of educational personnel. To improve their competitiveness and performance at work, initiatives should aim at coping with welfare issues, dealing with high teaching loads and increasing international cooperation and research funding as practical measures. Besides, it is important to deal with gender imbalances in academia especially with regards to leadership positions as this will promote a more vibrant and fair academic system.

Moreover, the study underscores that criteria for academic competitiveness need to be revisited so that they take into account factors other than just qualifications. Such an approach would thus mean careers advancement processes that are more inclusive.

Lastly, it is necessary to further investigate the root causes of gender differences in order to find out other factors contributing to an edge over others in terms of career movement aside from support from institutions themselves. In this way researchers may examine the success or otherwise of targeted interventions while attempting to identify additional possible mediating variables and moderators which could render their grasp on difficulties concerning progressions paths for Vietnamese scientists' adult learners clearer. This research will help develop strategies that are more attuned to the specific challenges and opportunities faced by lecturers in this context.

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Appendix

Table A1

Characteristics of the study sample

Characteristics	Contents	Frequency	Per cent
Gender	Female	243	64.456
	Male	134	35.544
Group Age	From 35 to 45	152	40.318
	From 46 to 55	124	32.891
	Under 35	67	17.772
	Up 55	34	9.019
Experience	From 1 to 3	35	9.284
	From 11 to 15	112	29.708
	From 4 to 5	54	14.324
	From 6 to 10	135	35.809
	Up 15	41	10.875

Source. Own research.

Table A2

Internal consistency reliability assessment

Items	Contents	Cronbach's alpha	Outer loading	VIF
WL	*Welfare of lecturers*	*0.843*		
WL1	Lecturers perceive their autonomy as dependent on workplace welfare policies		0.843	1.923
WL2	Lecturers may perceive their contributions as underappreciated due to low salaries		0.844	1.934
WL3	Lecturers' job satisfaction decreases with insufficient compensation		0.863	2.307
WL4	Lecturers may be less inclined to undertake extra research due to low pay		0.742	1.567
HL	*Heavy teaching loads*	*0.883*		
HL1	Lecturer's ability to balance teaching and research responsibilities is diminished by heavy teaching loads		0.840	2.224
HL2	Lecturer's job performance suffers due to excessive teaching responsibilities		0.855	2.141
HL3	Lecturer's opportunities for career advancement are limited by high teaching loads		0.865	2.173
HL4	Lecturer's motivation declines when overburdened with teaching duties		0.880	2.584
RF	*Research funding*	*0.877*		

Items	Contents	Cronbach's alpha	Outer loading	VIF
RF1	The lecturer's access to sophisticated technologies is augmented by sufficient research funding		0.864	2.362
RF2	Lecturer's motivation improves with sufficient research funding		0.861	2.345
RF3	Lecturer's ability to conduct impactful research increases with adequate financial support		0.827	1.923
RF4	Lecturer's job performance is boosted by access to necessary research resources		0.867	2.296
DL	*Demand for qualified lecturers*	*0.871*		
DL1	Lecturer's advanced qualifications are essential for improving the quality of education and research		0.849	2.172
DL2	Lecturer's continuous professional development is crucial for meeting the demand for highly educated faculty		0.878	2.505
DL3	Lecturer's advanced degrees and research backgrounds enhance their teaching effectiveness and scholarly activities		0.885	2.455
DL4	Lecturer's performance in research output and student learning outcomes is positively correlated with their qualifications		0.779	1.771
GS	*Government support*	*0.882*		
GS1	Lecturer benefits from increased government funding for educational institutions		0.860	2.277
GS2	Lecturer's job performance improves with access to government-supported research grants		0.865	2.374
GS3	Lecturer's professional growth is enhanced by government policies promoting higher education		0.845	2.080
GS4	Lecturer's competitive advantage is strengthened through government infrastructure development		0.866	2.332
IC	*International collaboration*	*0.885*		
IC1	Lecturer engages in international collaborative research projects		0.831	1.879
IC2	Lecturers' performance increases in worldwide academic networks		0.827	1.966
IC3	Lecturer enhances research skills via exposure to international best practices		0.820	1.885
IC4	Lecturer gains opportunities for publishing in prestigious journals through international collaboration		0.858	2.068
CA	*Competitive advantage*	*0.887*		
CA1	Lecturer's advanced degrees contribute to competitive advantage		0.874	2.373
CA2	Lecturer's specialised training enhances job performance		0.864	2.235

Items	Contents	Cronbach's alpha	Outer loading	VIF
CA3	Lecturer's research competencies improve career progression		0.868	2.452
CA4	Lecturer's high job performance leads to significant professional opportunities		0.849	2.222
JP	*Job performance*	*0.870*		
JP1	Lecturer consistently produces high-quality research		0.816	1.918
JP2	Lecturer effectively uses research funding to enhance academic work		0.875	2.543
JP3	Lecturer maintains motivation through significant research activities		0.869	2.449
JP4	Lecturer's teaching effectiveness is boosted by adequate resources		0.833	1.951
CP	*Career progression*	*0.883*		
CP1	Lecturer is frequently considered for promotions		0.861	2.233
CP2	Lecturer's research contributions are recognised		0.863	2.338
CP3	Lecturer has access to professional development opportunities		0.847	2.062
CP4	Lecturer's career advancement is supported by institutional resources		0.871	2.492

Source. Own research.

Table A3

Discriminant validity of Heterotrait Monotrait Ratio

	CR	AVE	CA	CP	DL	GS	HL	IC	JP	RF	WL
CA	0.922	0.746	0.864								
CP	0.920	0.741	0.410	0.861							
DL	0.911	0.721	0.213	0.376	0.849						
GS	0.918	0.738	0.235	0.361	0.429	0.859					
HL	0.919	0.740	0.227	-0.121	-0.104	-0.171	0.860				
IC	0.902	0.696	0.285	0.415	0.311	0.332	-0.258	0.834			
JP	0.911	0.720	0.286	0.490	0.374	0.413	-0.277	0.438	0.849		
RF	0.916	0.731	0.310	0.383	0.428	0.377	-0.109	0.342	0.418	0.855	
WL	0.894	0.680	-0.234	-0.265	-0.149	-0.238	0.176	-0.343	-0.327	-0.242	0.824

Note. Composite reliability (CR), Average variance extracted (AVE), Welfare of lecturers (WL), Heavy teaching loads (HL), Research funding (RF), Demand for qualified lecturers (DL), Government support (GS), International collaboration (IC), Competitive advantage (CA), Job performance (JP), Career progression (CP).

Source. Own research.

Table A4

Direct analysis results of hypothesis relationships

Hypothesis	Relationships	Estimation coefficient	Standard deviation	T statistics	P values
H1.a	WL -> CA	-0.147	0.054	2.728	0.006
H1.b	WL -> JP	-0.109	0.048	2.269	0.023
H2.a	HL -> CA	0.350	0.064	5.440	0.000
H2.b	HL -> JP	-0.192	0.046	4.182	0.000
H3.a	RF -> CA	0.185	0.062	2.965	0.003
H3.b	RF -> JP	0.159	0.052	3.059	0.002
H4.a	DL -> CA	0.037	0.051	0.726	0.468
H4.b	DL -> JP	0.122	0.051	2.398	0.017
H5.a	GS -> CA	0.102	0.052	1.975	0.048
H5.b	GS -> JP	0.152	0.052	2.923	0.003
H6.a	IC -> CA	0.216	0.062	3.489	0.000
H6.b	IC -> JP	0.167	0.053	3.175	0.002
H7	CA -> JP	0.146	0.046	3.164	0.002
H8	CA -> CP	0.293	0.056	5.281	0.000
H9	JP -> CP	0.406	0.053	7.656	0.000

Note. Welfare of lecturers (WL), Heavy teaching loads (HL), Research funding (RF), Demand for qualified lecturers (DL), Government support (GS), International collaboration (IC), Competitive advantage (CA), Job performance (JP), Career progression (CP).
Source. Own research.

Table A5

Specific indirect effects of structural measurement

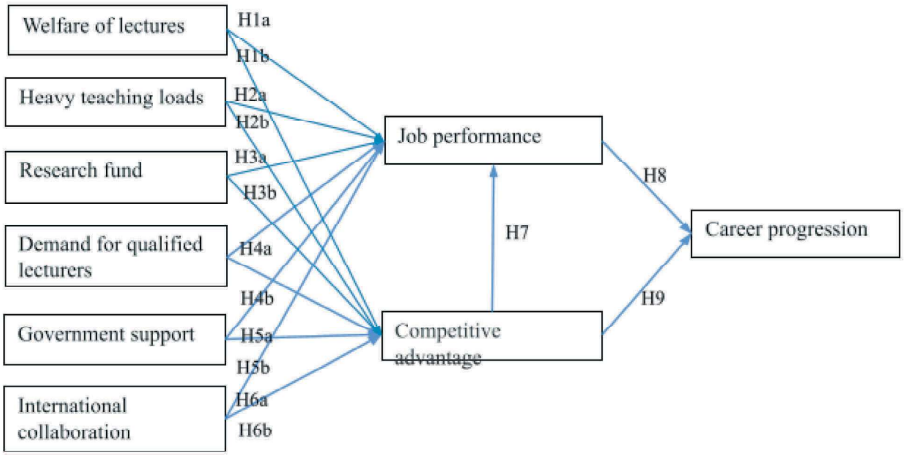
Specific indirect effects	Estimation coefficient	Sample mean	Standard deviation	T statistics	P values
IC -> CA -> JP	0.031	0.032	0.014	2.285	0.022
RF -> CA -> JP -> CP	0.011	0.011	0.005	2.062	0.039
GS -> JP -> CP	0.062	0.061	0.023	2.676	0.007
RF -> CA -> JP	0.027	0.027	0.013	2.050	0.040
GS -> CA -> CP	0.030	0.030	0.017	1.729	0.084
WL -> CA -> JP -> CP	-0.009	-0.009	0.004	1.943	0.052
WL -> CA -> JP	-0.021	-0.022	0.011	1.994	0.046
GS -> CA -> JP -> CP	0.006	0.006	0.004	1.544	0.123
DL -> CA -> JP -> CP	0.002	0.002	0.003	0.666	0.505
DL -> JP -> CP	0.050	0.050	0.023	2.182	0.029
HL -> JP -> CP	-0.078	-0.078	0.022	3.568	0.000
DL -> CA -> CP	0.011	0.012	0.016	0.703	0.482

Specific indirect effects	Estimation co-efficient	Sample mean	Standard deviation	T statistics	P values
IC -> CA -> JP -> CP	0.013	0.013	0.006	2.194	0.028
RF -> JP -> CP	0.065	0.065	0.023	2.775	0.006
IC -> CA -> CP	0.063	0.064	0.023	2.722	0.007
HL -> CA -> JP	0.051	0.051	0.018	2.820	0.005
HL -> CA -> JP -> CP	0.021	0.021	0.008	2.615	0.009
WL -> CA -> CP	-0.043	-0.043	0.018	2.421	0.016
CA -> JP -> CP	0.059	0.059	0.020	2.973	0.003
WL -> JP -> CP	-0.044	-0.045	0.020	2.165	0.030
IC -> JP -> CP	0.068	0.067	0.023	2.900	0.004
RF -> CA -> CP	0.054	0.055	0.023	2.318	0.020
DL -> CA -> JP	0.005	0.006	0.008	0.664	0.506
HL -> CA -> CP	0.103	0.102	0.024	4.201	0.000
GS -> CA -> JP	0.015	0.015	0.010	1.570	0.116

Note. Welfare of lecturers (WL), Heavy teaching loads (HL), Research funding (RF), Demand for qualified lecturers (DL), Government support (GS), International collaboration (IC), Competitive advantage (CA), Job performance (JP), Career progression (CP).
Source. Own research.

Figure A1

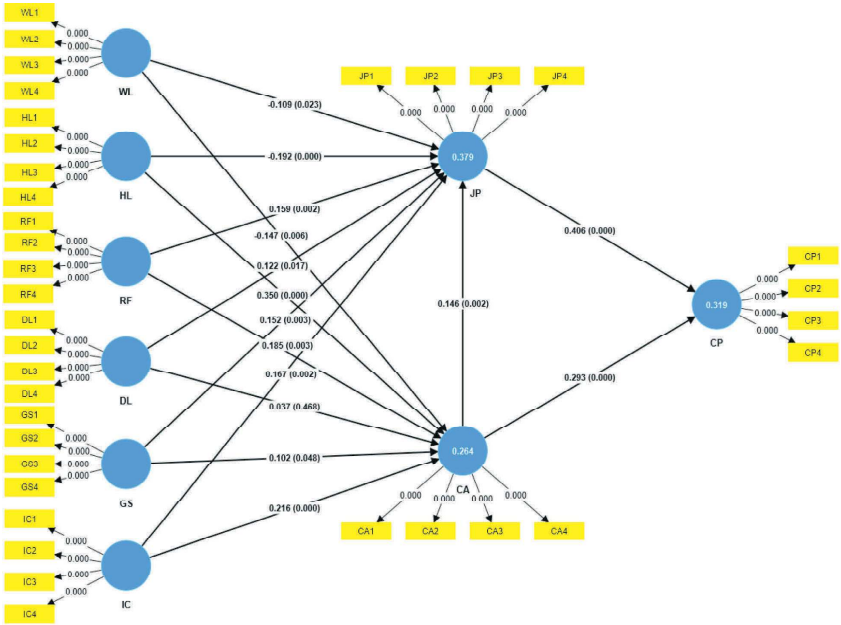
Theoretical framework predicting lecturers' career progression



Source. Own research.

Figure A2

A visual the relationship between perceived individual and career progression



Note. Welfare of lecturers (WL), Heavy teaching loads (HL), Research funding (RF), Demand for qualified lecturers (DL), Government support (GS), International collaboration (IC), Competitive advantage (CA), Job performance (JP), Career progression (CP).

Source. Own research.