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THE IMPACT OF KNOWLEDGE MANAGEMENT ON UNIVERSITY LECTURERS' SCIENTIFIC RESEARCH MOTIVATION IN NAM DINH PROVINCE

Specialized HR

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SUMMARY OF THE THESIS OF DOCTORS IN ECONOMICS

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INTRODUCTION

1. Rationale for Choosing the Research Topic

In the context of globalization and the Fourth Industrial Revolution, knowledge has become a core resource determining national competitiveness. Higher education (HE) plays a central role in training high-quality human resources, with faculty members being the key force. The 13th Central Committee's Resolution No. 8 (2023) emphasizes tapping into the creative potential of intellectuals and promoting science and technology, highlighting the need to enhance lecturers' motivation for scientific research (SR).

Studies such as Sallán et al. (2012) and Nguyen Ngoc-Tan & Gregar (2019) affirm that knowledge management (KM) is a strategic tool to boost academic capability and research motivation. However, in Vietnam, KM has not yet been effectively integrated into human resource development strategies. Research by Ferraris et al. (2019), Aydin (2017), and Phạm Ngọc Thạch et al. (2021) indicates that the relationship between KM and SR motivation remains underexplored, particularly in local HE institutions.

At universities in Nam Dinh province (former), scientific research activities remain limited, with low international publication rates, constrained funding, and an academic environment that is insufficiently incentivizing. In response, this study entitled "***The Impact of Knowledge Management on University Lecturers' Scientific Research Motivation in Nam Dinh Province***" was conducted to clarify the role of KM in SR motivation and to propose solutions to enhance KM effectiveness, thereby stimulating creative potential and improving lecturers' research capacity.

2. Research Objectives

- To develop a research model examining the impact of KM on lecturers' motivation for SR.
- To assess the current status and the extent of influence of KM factors on lecturers' SR motivation in universities in Nam Dinh Province (former).
- To analyze differences in the impact of KM on SR motivation among lecturer groups based on their length of service.
- To propose solutions and recommendations to enhance KM, thereby improving lecturers' motivation for SR in universities.

3. Research Questions

This study focuses on addressing the following questions:

Question 1: Which KM factors influence lecturers' SR motivation?

Question 2: What is the current status and level of impact of KM factors on lecturers' SR motivation in universities in Nam Dinh Province (former)?

Question 3: Are there significant differences in the impact of KM on SR motivation among lecturer groups by seniority?

Question 4: What specific solutions should universities adopt to enhance KM effectiveness and promote lecturers' SR motivation?

4. Research Subjects and Scope

Research Subjects: The impact of KM on lecturers' SR motivation.

Content Scope*:* The study examines a one-way relationship from KM factors to lecturers' SR motivation.

Spatial Scope: Full-time lecturers at three public universities in Nam Dinh Province (former): Nam Dinh University of Economics – Technical Industry, Nam Dinh University of Technical Education, and Nam Dinh University of Nursing.

Temporal Scope: Secondary data from 2019–2024; primary survey conducted from October to December 2024; proposed solutions applicable for 2026–2030.

5. Research Approach and Methods

Research Approach: The study combines two approaches: resource–strategic and psychological–cognitive. The first approach regards knowledge as a strategic resource, positioning KM as a tool to enhance both capacity and motivation for scientific research. The second approach explains the mechanism through which KM affects motivation via a supportive environment, recognition, and autonomy.

Research Methods: The dissertation employs a mixed-methods approach. Qualitative research was conducted through in-depth interviews to refine measurement scales. Quantitative research included two stages: a preliminary survey of 80 lecturers and a main survey of 396 lecturers, analyzed using SPSS and SmartPLS3 to test the model and hypotheses.

6. New Contributions of the Dissertation

6.1. Theoretical Contributions

First, the dissertation develops and refines the concepts of KM and lecturers' SR motivation within the context of HE.

Second, it builds and tests a model of the impact of KM factors on lecturers' research motivation, while expanding the model by adding the factor "Leadership and Knowledge Development" and the moderating variable "Work Experience," thereby contributing to the theoretical foundation of KM in HE.

6.2. Practical Contributions

First, the dissertation provides a comprehensive overview of the current status of KM and SR activities at universities in Nam Dinh province (former), while identifying KM factors influencing lecturers' research motivation.

Second, it is the first study to simultaneously measure the impact of KM factors on lecturers' research motivation in a local context.

Third, the empirical results serve as an important basis for universities to recognize the role and influence of each KM factor, enabling them to propose suitable management solutions, with practical reference value for other HE institutions aiming to enhance KM effectiveness and promote lecturers' research motivation.

7. Structure of the Dissertation

In addition to the introduction, conclusion, references, and appendices, the dissertation comprises the following five chapters:

- Chapter 1: Overview of research on knowledge management and scientific research motivation of university faculty.
- Chapter 2: Theoretical basis of the impact of knowledge management on scientific research motivation of university faculty.
- Chapter 3: Research methodology.
- Chapter 4: Research results on the impact of knowledge management on scientific research motivation of faculty at universities in Nam Dinh province (former).
- Chapter 5: Proposed solutions and recommendations to enhance knowledge management to improve scientific research motivation for faculty at universities.

CHAPTER 1. OVERVIEW OF RESEARCH ON KNOWLEDGE MANAGEMENT AND SCIENTIFIC RESEARCH MOTIVATION OF UNIVERSITY LECTURERS

1.1. Research on Knowledge Management

Classic studies by Nonaka & Takeuchi (1995), Brooking (1997), and De Jarnett (1996) built the theoretical foundation of KM, defining it as the process of creating, organizing, sharing, and applying knowledge to enhance organizational performance. However, most works remain at process modeling, lacking measures and links between knowledge and strategic outcomes.

In HE, KM is seen as a key driver of management efficiency and innovation (Veer Ramjeawon & Rowley, 2020; Rowley, 2000). Models by Arntzen et al. (2009), Rivera & Rivera (2016), and Sahibzada et al. (2020a, 2020b) highlight the roles of technology, culture, and leadership in knowledge sharing but take mainly linear views, leaving unclear its impact on faculty research motivation.

In Vietnam, studies by Trần Ngọc Tú & Từ Minh Khai (2021) and Phạm Ngọc Thạch et al. (2021) began integrating resource–strategic and psycho–cognitive perspectives, yet KM's mechanism affecting lecturers' motivation and knowledge creativity remains underexplained. Quarchioni et al. (2020) further noted most research is descriptive, revealing a gap in modeling KM linked to research motivation in HE.

1.2. Studies on lecturers' research motivation

International studies (Ryan & Deci, 2000; Kianto et al., 2016) indicate that lecturers' research motivation is influenced by both intrinsic and extrinsic factors, with KM enhancing their competence and the value of knowledge. However, few studies explicitly examine the direct relationship between KM and research motivation. In Vietnam, studies (Huynh Thanh Nha, 2016; Le Thi Thuong, 2020; Huynh Nhat Nghia, 2022) have mainly identified influencing factors but have not developed an integrated model linking organizational knowledge and individual research behavior.

1.3. Studies on The Impact of Knowledge Management on Lecturers' Research Motivation

Both international and domestic studies confirm that KM is a strategic resource that drives innovation, work efficiency, and research motivation. Numerous studies (Nguyen Quoc Duy & Vu Hong Tuan, 2013; Iqbal et al., 2018; Tarhini, 2016) indicate that KM positively influences productivity and satisfaction through knowledge sharing, codification, and application, yet individual cognition remains underexplored. In HE, research (Ngoc-Tan & Gregar, 2019; Tran Quang Huy, 2016; Nguyen Anh Tuan, 2021; Binh et al., 2023) demonstrates that KM enhances lecturers' research outcomes and motivation. However, most models do not integrate strategic and cognitive–psychological perspectives, nor adequately address the context of local universities, highlighting a research gap that warrants further investigation.

1.4. Research Gaps

First, previous studies mainly approached KM from a resource–strategic view, showing its positive effect on research activities but not clarifying its link with lecturers' research motivation. They also omitted two factors: "Leadership and Knowledge Development" and "Length of Service." This dissertation extends Pham Ngoc Thach's (2023) model to address these gaps.

Second, prior research focused on major universities, not reflecting local characteristics. This dissertation tests the model in universities in Nam Dinh province (former), clarifying how KM influences research motivation and proposing context-specific solutions.

CHAPTER 2. THEORETICAL BASIS OF THE IMPACT OF KNOWLEDGE MANAGEMENT ON SCIENTIFIC RESEARCH MOTIVATION OF UNIVERSITY LECTURERS

2.1. Theoretical Basis of Knowledge and Knowledge Management

Knowledge: "*Knowledge is regarded as information residing in the human mind, encompassing a combination of experience, values, contextual information, and know-how that enables evaluation and integration to generate new experiences and information. Within organizations, knowledge is not only embedded in documents and knowledge repositories but also embedded in processes, practices, and operational rules of the organization*".

Knowledge Management in Universities: "*Knowledge management in universities is understood as a strategic process of identifying, creating, sharing, applying, and developing knowledge as a critical resource, systematically organized and led to promote teaching, learning, and scientific research, thereby enhancing knowledge value and improving the institution's sustainable performance*".

2.2. Theoretical Basis of Scientific Research Motivation of University Lecturers

Motivation for Scientific Research of Lecturers: "*Scientific research motivation of university lecturers refers to their voluntary commitment, aspiration, and effort to enhance research activities within the given conditions to achieve high productivity and research efficiency, aiming to fulfill their personal goals in alignment with the objectives of the university*".

2.3. Theoretical Foundation of Knowledge Management's Impact on Lecturers' Scientific Research Motivation

In this study, **the Resource-Based View (RBV)** and **the Self-**

Determination Theory (SDT) are adopted as the theoretical foundations. RBV considers KM as a strategic resource that provides competitive advantage for universities, while SDT explains how KM influences lecturers' intrinsic and extrinsic motivation, thereby promoting SR activities.

2.4. Proposed Research Model and Research Hypotheses

- *Research Model*:

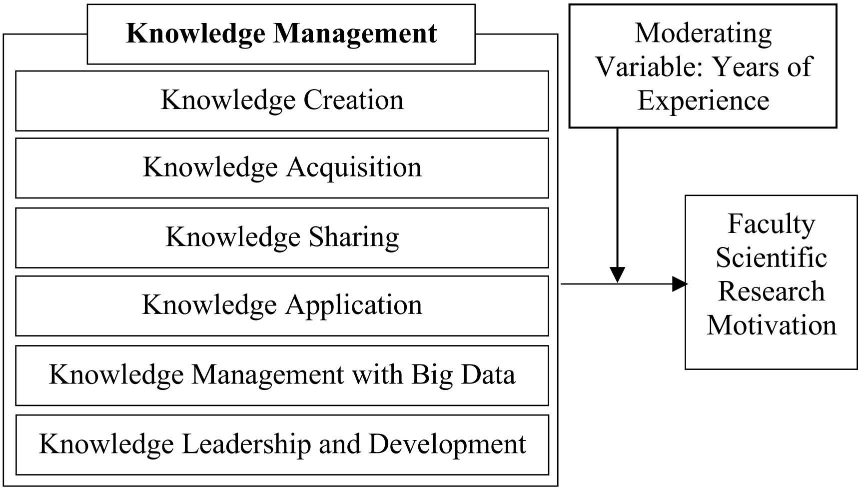

Figure 2.1: Proposed Research

"Source: Author's proposal based on theory"

- *Research Hypotheses:*

Hypothesis 1 (H1): Knowledge creation positively influences the scientific research motivation of university faculty.

Hypothesis 2 (H2): Knowledge acquisition positively influences the scientific research motivation of university faculty.

Hypothesis 3 (H3): Knowledge sharing positively influences the scientific research motivation of university faculty.

Hypothesis 4 (H4): Knowledge application positively influences the scientific research motivation of university faculty.

Hypothesis 5 (H5): Knowledge management with big data positively influences the scientific research motivation of university faculty.

Hypothesis 6 (H6): Knowledge leadership and development positively influences the scientific research motivation of university faculty.

Hypothesis 7 (H7): Years of experience influence the relationship between knowledge management and the scientific research motivation of university faculty.

CHAPTER 3. RESEARCH METHODOLOGY

3.1. Research Design

**** Research Process***

Phase 1: Research Overview: The researcher employed a systematic literature review (SLR) to identify theoretical models, measurement indicators, and research gaps, thereby proposing the initial research model.

Phase 2: Theoretical Basis Research: Key-word based data retrieval was conducted to build the theoretical basis for variable relationships, establish the model structure, measurement scales, and research hypotheses.

Phase 3: Qualitative Research: Case studies and in-depth interviews were used to preliminarily test the model and assess the current state of KM and lecturers' SR motivation at three universities in Nam Dinh province (former) during 2019–2024.

Phase 4: Quantitative Research:

Preliminary Quantitative Study: 80 responses were collected to test the reliability of scales, eliminate weak indicators, and finalize the questionnaire.

Official Quantitative Study: Data from 396 lecturers at the three universities were analyzed using SmartPLS3 to test the model, hypotheses, and perform multi-group analysis.

Phase 5: Research Report: Additional in-depth interviews with five lecturers were conducted to interpret quantitative results; findings were compared with previous studies to clarify contributions and propose suitable KM solutions for local universities.

*** Data Collection and Processing Methods**

The researcher used secondary data from three universities in Nam Dinh province (former) and academic sources domestically and internationally to identify KM factors affecting research motivation, thereby developing the model, hypotheses, scales, and questionnaire for analysis using SPSS and SmartPLS3.

*** Questionnaire Design and Scale Construction**

The measurement scales were adapted from previous studies (Shannak et al., 2017; Ngoc Thach Pham et al., 2023; Ngoc-Tan & Gregar, 2019; Ardito et al., 2019; Wong & Aspinwall, 2005) and tailored to the context of Nam Dinh province (former). The model comprises six KM factors: knowledge creation, acquisition, application, sharing, big data management, and leadership–knowledge development; the dependent variable is research motivation. New indicators were added for the leadership factor to reflect the role of knowledge facilitation in universities.

The questionnaire employed a 5-point Likert scale for all variables, suitable for PLS-SEM analysis. It comprised three parts: (1) Introduction and invitation to participate; (2) Personal information; (3) Measurement items in model order, designed for clarity and accessibility to lecturers at the three universities in Nam Dinh (former).

3.2. Qualitative Research

Qualitative research was conducted at three public universities in Nam Dinh province (former) through in-depth interviews with 16 lecturers from various disciplines, all with substantial experience and advanced degrees, to examine the suitability of the research model and measurement scales.

The interviews helped adjust indicators inherited from international studies to fit the Vietnamese higher education context and eliminated unclear, redundant, or difficult-to-measure variables. The results showed that KM factors such as knowledge creation, acquisition, sharing, application, big data management, and leadership & knowledge development were all perceived as strongly influencing research motivation. Some indicators (ST5, TT6, DL6, LT1–LT4) were removed to streamline the scale and enhance reliability, providing a solid foundation for the subsequent quantitative research.

3.3. Quantitative Research

**** Preliminary Quantitative Research***

A pilot survey was conducted with 100 lecturers at three public universities in Nam Dinh province (former), yielding 80 valid responses (80%) to test the reliability of the measurement scales using Cronbach's Alpha and item-total correlations. The scales were adjusted based on the prior qualitative findings.

The study applied the following criteria: Cronbach's Alpha between 0.7–0.95 and item-total correlation > 0.3. Variables failing to meet the thresholds were removed (DT1, CS3, CS4, CS5, CS7, DL2, LT7, LT8, LT9, DLNCKH2, DLNCKH5, DLNCKH6). The variable ST4, despite a low correlation, was retained for further testing in the main study via factor analysis.

**** Official Quantitative Research***

The main survey was conducted at the three public universities in Nam Dinh province (former) with 396 valid responses (79.2%). Convenience sampling ensured representation across disciplines, work experience, and proper distribution among universities. Questionnaires were distributed both in person and via Google Forms over two months (October–December 2024). The sample size met established formulas for adequacy. Data were processed using Excel, SPSS, and SmartPLS3.

Quantitative analysis tested hypotheses regarding the effects of six KM factors on research motivation and examined differences based on work experience.

- Analysis of model fit indices:

+ Observed variable quality via outer loadings (≥ 0.7 acceptable; 0.4–0.7 considered for retention).

+ Reliability: Cronbach's Alpha and Composite Reliability (≥ 0.7).

+ Convergent validity: AVE $\geq$ 0,5.

+ Discriminant validity: cross-loadings, HTMT, Fornell-Larcker criteria.

- Structural model analysis:

+ Collinearity check: VIF < 3.

+ Significance of relationships via path coefficients and p-values ($p < 0.05$ significant).

+ Effect size and explanatory power: R^2, adjusted R^2, and f^2.

+ Descriptive statistics of variables and demographics to support analysis.

Upon completing the quantitative analysis to test the research model hypotheses, the results were used to draw conclusions. Qualitative research was also conducted to supplement and validate the consistency of quantitative findings.

CHAPTER 4. RESEARCH RESULTS ON THE IMPACT OF KNOWLEDGE MANAGEMENT ON SCIENTIFIC RESEARCH MOTIVATION OF FACULTY AT UNIVERSITIES IN NAM DINH PROVINCE (FORMER)

4.1. Overview of Higher Education in Vietnam and Universities in Nam Dinh Province (former)

*** Higher Education in Vietnam:*** Vietnamese higher education has shown positive developments, with 242 institutions and 2.1 million students, while both the quantity and quality of faculty have increased. Scopus-indexed publications grew fivefold between 2013 and 2024. However, there remains a shortage of high-quality human resources, weak university–industry linkages, and limited research and technology transfer activities.

*** Universities in Nam Dinh province (former):*** There are three public multi-disciplinary universities. Between 2021 and 2024, faculty numbers increased and quality improved, particularly at Nam Dinh University of Economics – Technical Industries. Two universities operate autonomously, emphasizing research, student skills, and industry collaboration. KM is a key factor to enhance research motivation and support sustainable development.

4.2. Current State of Knowledge Management and Scientific Research Activities of Faculty at Universities in Nam Dinh Province (former)

During 2021–2024, universities in Nam Dinh province (former) promoted scientific and technological management and research through curriculum innovation, business cooperation, and inviting experts, achieving 431 research topics, 2,242 papers (129 ISI/Scopus), and 305 startup ideas, but international publications, state-level projects, and collaborations were limited.

Knowledge application and sharing included 78 textbooks, 372 books, and 151 workshops, mainly for internal use. KM relied on IT, digital libraries, and data repositories but lacked systematic organization and dedicated staff. Leadership supported research by reducing teaching loads and investing in infrastructure but not enough to establish a knowledge culture. Research activities grew with 950 faculty (161 PhDs, 24 Professors/Associate Professors) and many research groups, but productivity, international publications, incentives, and business cooperation remained limited.

Overall, universities have progressed but need coordinated solutions, more resources, and mechanisms to improve research, innovation, and knowledge application.

4.3. Assessing the Impact of Knowledge Management on Scientific Research Motivation of Faculty at Universities in Nam Dinh Province (former)

**** Descriptive statistics of the research sample***

A total of 396 valid questionnaires were collected from three public universities in Nam Dinh province (former). Male respondents accounted for 53% and female 47%. Faculty with less than 10 years' experience made up 29.3%, 10–15 years 37.4%, and over 15 years 33.3%. By major, 21.7% were in Economics, 27% in Engineering, and 51.3% in Basic Sciences.

All KM scales were above neutral, showing fairly high agreement. Creativity and knowledge application were supported by policies and rewards but practical application was limited. Knowledge sharing and KM with big data were noticed but infrastructure was not strong. Leadership set an example but did not fully enable KM. SR motivation averaged 3.3; highest for awareness of research role, while long-term commitment and passion were limited. Overall, universities made progress but still at a moderately good level, needing improvements in policy, mechanism, and academic environment.

**** Results of hypothesis testing using the PLS-SEM model***

- Assessment of reliability, convergent validity, and discriminant validity of the measurement scales

Table 4.1. Results of Reliability and Convergent Validity Analysis

Variable	Cronbach's Alpha	CR	AVE
Knowledge Sharing	0,813	0,877	0,641
Knowledge Leadership & Development	0,891	0,932	0,821
Knowledge Management with Big Data	0,810	0,875	0,638
Knowledge Creation	0,877	0,924	0,802
Knowledge Acquisition	0,895	0,922	0,703
Knowledge Application	0,869	0,910	0,717
Scientific Research Motivation	0,914	0,940	0,796

"Source: Results of PLS-SEM analysis"

The Cronbach's Alpha and CR values of all measurement scales are greater than 0.7, indicating statistically significant internal consistency and acceptable reliability. Additionally, AVE values above 0.5 show good convergent validity.

All HTMT indices are below 0.9, ensuring clear discriminant validity. "Knowledge Sharing" is significantly related to research motivation (r = 0.446–0.515), suggesting that internal knowledge exchange stimulates research; regular seminars and sharing sessions are recommended. “Leadership and Knowledge Development” stands out (AVE = 0.821; r = 0.458–0.506), as direct leadership support fosters research inspiration. “Knowledge Management with Big Data” shows moderate correlation (r = 0.356), highlighting the importance of digital data repositories and digital competency. “Knowledge Creation” is strongly related (r = 0.456), encouraging creative freedom and financial support for new ideas. “Knowledge Acquisition” and “Knowledge Application” show lower correlations but serve as a foundation for reinforcing research confidence. Overall, the measurement model is reliable, with good convergent and discriminant validity, providing a solid basis for structural analysis and managerial implications to enhance research motivation.

- Assessment of multicollinearity among independent variables

Table 4.2. Variance Inflation Factor (VIF)

	VIF
Knowledge Sharing	1,312
Knowledge Leadership & Development	1,193
Knowledge Management with Big Data	1,124
Knowledge Creation	1,312
Knowledge Acquisition	1,020
Knowledge Application	1,070

“Source: Results of PLS-SEM analysis”

All VIF < 5, confirming the absence of multicollinearity and that the independent variables contribute uniquely.

- Assessment of the coefficient of determination (R^2)

Table 4.3. Model Explanatory Power (R^2) Index

	R^2	R^2 hiệu chỉnh
Faculty Scientific Research Motivation	0,446	0,438

“Source: Results of PLS-SEM analysis”

The model explains 43.8% of the variance in research motivation, indicating a good fit with the research data. This reflects that effective KM activities can stimulate and sustain lecturers' SR motivation.

- Evaluation of effect size (f^2)

Table 4.4. Structural Effect Size (f^2)

	f^2
Knowledge Sharing	0,052
Knowledge Leadership & Development	0,108
Knowledge Management with Big Data	0,063
Knowledge Creation	0,058
Knowledge Acquisition	0,025
Knowledge Application	0,043

"Source: Results of PLS-SEM analysis"

All six KM factors have an influence on research motivation ($f^2 > 0.02$). "Leadership and knowledge development" exerts the strongest effect ($f^2 = 0.108$), highlighting the central role of academic leadership. It is followed by "Knowledge Management with Big data" (0.063), "Knowledge creation" (0.058), "Knowledge sharing" (0.052), "Knowledge application" (0.043), and "Knowledge acquisition" (0.025) as the weakest. These results confirm the importance of implementing KM in a comprehensive manner, with priority given to leadership.

- Analysis of the model's predictive relevance (Q^2)

Table 4.5. Model Predictive Relevance (Q^2) Index

	Q^2 (=1-SSE/SSO)
Faculty Scientific Research Motivation	0,349

"Source: Results of PLS-SEM analysis"

The Q^2 value of the variable "Research Motivation of Lecturers" is 0.349, indicating good predictive relevance of the model. This result confirms the model's suitability and practical applicability in guiding KM strategies to enhance research capacity in universities.

- Significance of the relationships in the model

Table 4.6. Results for Determining the Significance Level of the Relationships

	β	T Statistics (|O/STDEV|)	P Values
Knowledge Application -> Faculty Scientific Research Motivation	0,195	4,880	0,000
Knowledge Leadership & Development -> Faculty Scientific Research Motivation	0,268	6.383	0,000
Knowledge Management with Big Data -> Faculty Scientific Research Motivation	0,198	4,731	0,000
Knowledge Creation -> Faculty Scientific Research Motivation	0,206	4,772	0,000
Knowledge Acquisition -> Faculty Scientific Research Motivation	0,119	3,099	0,002
Knowledge Sharing -> Faculty Scientific Research Motivation	0,159	4,748	0,000

"Source: Results of PLS-SEM analysis"

All relationships in the model are statistically significant ($p < 0.05$; $T > 1.96$). "Leadership and Knowledge Development" shows the strongest impact ($\beta = 0.268$), confirming the pivotal role of academic leadership in coordinating and promoting knowledge within universities.

- Multi-group analysis by the moderating variable of work tenure

The PLS-MGA results reveal that the effects of knowledge management (KM) factors on research motivation differ among the three tenure groups:

- For the <10 years experience group, "knowledge acquisition" and "knowledge leadership & development" had a strong impact.

- In the 10–15 years experience group, "knowledge application" and "knowledge management with big data" were the prominent factors.

- For the >15 years experience group, "knowledge sharing" and "knowledge creation" played a more significant role.

**** Summary of Research Hypothesis Testing and In-depth Interviews Following Quantitative Analysis***

Table 4.7. Summary of Research Hypothesis Testing Results

Hypothesis	Formulation of hypotheses	Results of hypothesis testing	Impact ranking of the factors
H6	Leadership and knowledge development positively influence university lecturers' research motivation	Accepted	1 (Strongest)
H1	Knowledge creation positively influences university lecturers' research motivation	Accepted	2
H5	Knowledge management with big data positively influences university lecturers' research motivation.	Accepted	3
H4	Knowledge application positively influences university lecturers' research motivation.	Accepted	4
H3	Knowledge sharing positively influences university lecturers' research motivation..	Accepted	5
H2	Knowledge acquisition positively influences university lecturers' research motivation.	Accepted	6 (Weakest)
H7	Seniority moderates the relationship between knowledge management and university lecturers' research motivation	Accepted	-

"Source: Results of PLS-SEM analysis"

The research results indicate that KM factors have varying impacts on lecturers' scientific research motivation in Nam Dinh province (former), ranked in descending order as follows: Leadership and Knowledge Development, Knowledge Creation, Knowledge management with Big Data, Knowledge Application, Knowledge Sharing, and Knowledge Acquisition. Among these, "Leadership and Knowledge Development" is the most influential factor, underscoring the central role of academic leadership in fostering research motivation.

Interviews with five experts from three universities in Nam Dinh province (former) (conducted from February to March 2025) were carried out to validate the quantitative findings. The results revealed that Big Data supports young lecturers in conducting efficient searches, identifying research topics, and improving publication quality. Knowledge Sharing enhances motivation among mid-career lecturers through academic collaboration and professional recognition. Knowledge Acquisition has a lower impact due to infrastructure limitations but remains a foundational element for research. Leadership and Knowledge Development was reaffirmed as the strongest factor, playing a guiding and inspirational role. Work tenure moderates these effects: young lecturers are influenced mainly by technology; mid-career lecturers by creativity and application; and senior lecturers by leadership and academic depth. The interviews reinforce the model's reliability and suggest tailored managerial implications for each tenure group.

CHAPTER 5. PROPOSED SOLUTIONS AND RECOMMENDATIONS TO ENHANCE KNOWLEDGE MANAGEMENT AND BOOST SCIENTIFIC RESEARCH MOTIVATION FOR FACULTY AT UNIVERSITIES

5.1. Discussion of Research Results

PLS-SEM results show all six KM factors positively affect lecturers' research motivation in Nam Dinh universities. "Leadership and Knowledge Development" has the strongest impact, confirming the central managerial role. "Knowledge Creation" and "Application" enhance research performance, "Sharing" supports academic collaboration, and "Big Data Management" improves storage and access, especially for young lecturers. "Acquisition" shows weaker effects due to limited infrastructure and skills.

Multi-group analysis reveals tenure-based differences: earlycareer lecturers (<10 years) are influenced most by Big Data KM; mid-career (10–15 years) by Creation and Application; senior (>15 years) by Creation, Acquisition, and Application, while Leadership affects all groups. Results highlight the importance of knowledge leadership, data infrastructure, and sharing–innovation incentives, requiring tailored management strategies to boost motivation.

Although Nam Dinh province (former) merged into Ninh Binh, this administrative change does not affect the study's objectives or validity. The dissertation analyzes KM–motivation links across three representative universities, ensuring generalizability to other regions. Hence, findings retain their scientific and practical significance for HE in Vietnam.

5.2. Current Trends in Knowledge Management Implementation at Vietnamese Universities

In the context of globalization and the Fourth Industrial Revolution, Vietnam's HE is oriented toward international integration and digital transformation. According to Scheme 1600 and relevant government resolutions, the key priorities include strengthening international cooperation, harmonizing curricula, and enhancing foreign language proficiency, particularly English. KM has become an inevitable trend, requiring universities to promote autonomy, digitalization, the development of open educational ecosystems, and the fostering of innovation. Lecturers play a central role in creating and disseminating knowledge within an academic environment closely connected to businesses and society.

5.3. Scientific and Technological Development Orientation According to Resolution 57-NQ/TW and for Universities

During the 2025–2030 period, universities in Nam Dinh province (former) focus on developing science and technology, innovation, and digital transformation, linking research with practical applications and societal needs. The main objectives include improving research quality, increasing the number of ministerial and national-level projects, developing outstanding faculty, attracting talent, and promoting international publications. The universities also aim to strengthen interdisciplinary and applied research, while reforming management mechanisms to enhance their position within Vietnam's HE system.

5.4. Solutions to Enhance Knowledge Management and Boost Scientific Research Motivation for Faculty at Universities

Based on quantitative findings, document analysis, and open-ended surveys, the dissertation proposes four key solution groups:

First, strengthening leadership and knowledge development — focusing on enhancing the leadership role, establishing clear roadmaps, inspiring faculty, and creating an academic environment that supports research, especially for senior lecturers.

Second, developing policies that encourage knowledge creation and application - including incentive and reward mechanisms, teaching load reduction, and investment in training to promote creativity, knowledge utilization, and the growth of scientific human resources.

Third, creating a supportive environment for knowledge sharing and acquisition - emphasizing the development of internal and external collaboration networks, adoption of digital technologies, establishment of specialized units, and organization of knowledge-sharing activities to enhance research motivation.

Fourth, reinforcing resources and adjusting KM mechanisms with big data - through investment in IT infrastructure, data digitization, establishment of electronic KM systems, and effective use of big data to support research, with priority for young lecturers and long-term operational efficiency.

Additionally, the dissertation makes several policy recommendations for the State and local authorities: upgrading infrastructure and increasing investment in science and technology; recognizing KM as a strategic resource in higher education; improving budget allocation mechanisms, enhancing autonomy, and ensuring transparency and accountability; developing information infrastructure, expert databases, and international journals; expanding autonomy in personnel and finance with flexible incentives to attract high-quality talent; establishing KM performance evaluation mechanisms linked to research productivity; and promoting international integration, commercialization of research outcomes, and digital knowledge platforms.

5.5. Limitations of the Dissertation and Directions for Future Research

The dissertation has two main limitations. First, the survey data were collected from only three public universities in Nam Dinh province (former), which may not fully represent the overall situation of higher education institutions across the country. Second, it has not yet incorporated practical experiences from universities that have effectively implemented knowledge management, particularly leading institutions in Vietnam and the region; analyzing such successful models would strengthen the empirical foundation for proposed solutions to enhance research motivation.

Accordingly, several directions for future research are suggested:

First, expanding the analysis of the relationship between knowledge management and faculty members' research awareness, attitudes, and behaviors to clarify its impact on research motivation. Second, considering additional KM components, particularly digital knowledge management and change management in the context of Industry 4.0. Third, conducting studies across different types of higher education institutions to increase the comprehensiveness, reliability, and validation of measurement tools.

CONCLUSION

The dissertation established a theoretical foundation and expanded the KM model by introducing the factor "Leadership and Knowledge Development," clarifying its influence on lecturers' research motivation. Qualitative and quantitative analyses based on 396 valid samples revealed that all six KM factors positively affect research motivation, in descending order of influence: Leadership and Knowledge Development, Knowledge Creation, KM with Big Data, Knowledge Application, Knowledge Sharing, and Knowledge Acquisition. Multi-group analysis confirmed that work seniority is an important moderating variable. The dissertation successfully achieved its objectives, reaffirming the central role of knowledge management in higher education and providing a solid basis for universities to design and implement effective KM strategies.

LIST OF RESEARCH WORKS RELATED TO THE AUTHOR'S THESIS THEME

No	Article title	Name of journal, conference/topic management level	Year of publication /testing	ISSN/ ISBN index	Note
1	Opportunities and Challenges for Vietnamese Enterprises from the Perspective of Digital Transformation	Proceedings of the National Scientific Conference: Digital Transformation – Opportunities, Challenges, and Solutions for Developing the Digital Economy, Labour Publishing House, Hanoi.	November 2023 (Pages: 71–80)	978-604-480-649-5	Author
2	Proposed Model for the Impact of Knowledge Sharing on Scientific Research Outcomes of Faculty at Universities in Nam Dinh Province	Economy & Forecast Review	Issue No. 04 – February 2025 (Pages: 130–133)	1859 - 4972	Author
3	Enhancing Scientific Research Motivation of University Faculty: Knowledge Management Solutions	Review of Finance	Issue 1 – May 2025 (No. 848), Pages: 225–227	2615 - 8973	Author
4	Current State of	Economy &	Issue 12 –	1859	Author

No	Article title	Name of journal, conference/topic management level	Year of publication /testing	ISSN/ ISBN index	Note
	Scientific Research Activities by University Faculty in Vietnam	Forecast Review	June 2025 (Pages: 143–146)	- 4972	
5	Current State of Knowledge Management Processes in Vietnamese Universities during Industry 4.0	Economy & Forecast Review	Issue 13 – July 2025 (Pages: 92–95)	1859 - 4972	Author
6	Solutions to Foster Innovation in Small and Medium-sized Enterprises (SMEs) in Vietnam Today	Review of Finance	Issue 2 – July 2025 (No. 853), (Pages: 86–88)	2615-8973	Author
7	Knowledge management and research motivation in higher education: Exploring the moderating role of AI proficiency	Environment and Social Psychology	2025, Vol. 10, No. 7 (https://esp.as-pub.com/index.php/esp/article/view/389)	2424-8975	Main Author