

Study on Factors Influencing Business Growth in the Service Sector in Lao PDR

THIPDUANGCHAI Anousone^{1*}, SIRIVANH Thongvanh²

^{1*}Faculty of Economics and Business Management, National University of Laos. E-mail: Anship789@gmail.com

^{2*}Faculty of Economics and Business Management, National University of Laos. E-mail: thongvanh@nuol.edu.la

Abstract

This research aims to analyze the significance level of factors influencing business growth in the service sectors in Lao PDR, conduct Confirmatory Factors Analysis (CFA) of these factors, and explore the structural equation modeling (SEM) of business growth in the services sector in Lao PDR. This study employs a quantitative approach, using a questionnaire distributed to 373 respondents from the services sector in Lao PDR. The data were analyzed using structural equation modeling for hypothesis testing. The study finds that the importance level of factors influencing business growth in services sectors has a mean of 3.40 (SD=0.79), while competitive advantage has a mean of 3.20 (SD=0.86). The Confirmatory Factors Analysis (CFA) result for the measurement model indicates the following values: $\chi^2/df = 2.747$. $\chi^2=21.980$, GFI=0.98, AGFI=0.95, CFI=0.99, RMSEA=0.069. Hypothesis testing results show that E-Human resource management factors have a positive influence on competitive advantage, Supporting the hypothesis with a t-value of 14.70, an influence coefficient of $\beta=0.84$, and $P<0.001$. Competitive advantage factors positively influence business growth in the services sector in Lao PDR, supporting the hypothesis with a value of 6.14, and influence coefficient $\beta=0.58$, and $P<0.001$. Additionally, E-Human resource management factors positively influence business growth in the services sector in Lao PDR, Supporting the hypothesis of t-value=4.65, and influence coefficient of $\beta =0.41$, and $P<0.001$. The structural equation model for business growth in services sectors is a good fit, with the value of $\chi^2/df=2.001$, $\chi^2=42.018$ (insignificant), GFI=0.98, AGFI=0.95, CFI=0.99, and RMSEA=0.052, meeting the specified criteria for structural equation model. Hypothesis testing results confirm the acceptance of two hypotheses. First, there is a positive and significant relation between E-Human resource management and Competitive advantage, with $R^2=0.70$. Second, the results show a positive relationship between E-Human resource management, Competitive advantage, and business growth, with $R^2=0.9$.

Keywords: E-Human resource management, Competitive advantage, and business growth in services sector in Lao PDR.

Introduction

The service sector in Lao PDR plays an important role in driving economic growth and development, contributing significantly and accounting for 42% of GDP (World Bank, 2019). In the rapidly evolving digital era, business services in Lao PDR, are encountering unprecedented challenges and opportunities (Ministry of Planning and Investment, 2020). Business services are vital to the socioeconomic progress of countries, especially in generating employment, contributing to GDP, fostering economic growth, and enhancing welfare, living conditions, income levels, and social stability worldwide (Kumar, 2017). E-human resource management practices are transitioning to digital platforms, Emphasizing the need for organizations to adapt to new technologies to remain competitive, and HRM service quality (Bondarouk et al., 2017; Bondarouk & Ruël, 2009; Zavyalova et., 2022; Hidayat et al., 2025; Baiyere et al., 2025). However, the adaptation of human resource management strategies in the services sector has been slow due to limited technological infrastructure, inadequate literacy, and lack of strategic alignment between human resource management practices and business services goals (Southiseng & Walsh, 2010). Simultaneously, competitive advantage remains a critical factor in driving business growth in services sectors are considered a significant national country contributors to boosting economic growth in progress (Hoshino, 2024). Business organizations need to adopt new management methods to support these changes, considering human resources development as a key factor in enabling organizations to transition towards a modern global society (Zhang & Chen, 2024). Utilizing diverse digital technology tools within a business growth in the services sector framework is crucial for attaining a long-lasting competitive edge. Knowledge and skills can drive changes within organizations as well as in the economy and society (Tran & Nguyen, 2022; Achar et al., 2022). E-Human resource management (E-HRM) is closely related with Industry 4.0 and Society 5.0 (Agustain et al., 2023). The digital economy is a key catalyst for the expansion of digital initiatives, improving market connectivity and speeding up digitalization across almost all economic sectors, significantly supporting on business growth in services sector in Lao PDR (Runde et al., 2022; Ministry of Technology and Communication, 2021).

Based on the literature review and a large body of relevant scientific research, it is evident that factors influencing business growth in services sectors include government policies, technology adoption, competition, and resource management within business organizations. Further analysis reveals that human resource management in the digital era is particularly crucial for competitiveness and business growth in services sector. Therefore, understanding the conditions, challenges, and various factors influencing human resource management in the digital era is essential on business growth in services sector in Lao PDR. This information can be highly beneficial to government agencies and business operators in planning human resource development strategies to adapt to the evolving economic, social, and technological environment of the current and future digital economy.

Previous research on business growth in services sector in Lao PDR has shown that there is still limited understanding, especially concerning e-human resource management, competitive advantage, and business growth in services sector. It is essential to promote knowledge and awareness among entrepreneurs in Lao PDR to ensure their survival and sustainable growth in the current business environment and to prepare them for future competition. Therefore, this study aims to explore the relationship between e-HRM and competitive advantage and their combined impact on the growth of the business services sector in Lao PDR. It seeks to address the gaps in understanding and provide actionable insights for business to navigate the digital transformation effectively.

Literature Review

This research is developed from a comprehensive literature review on factors influencing on e-human resource management, competitive advantage, and business growth in services sectors and the primary intent is to identify the construct that could be most beneficial to examining the relationship between e-human resource management, competitive advantage, and business growth. E-human resource management is a critical focus and plays a vital role in the development on business growth in the services sector in Lao PDR. Businesses that implement human resource management efficiently and Influence often gain a substantial competitive edge over their rivals. This occurrence can be attributed to the fact that human capital is regarded as one of the most valuable assets within an organization. In the age of globalization and heightened competition, organizations face unavoidable pressure to continuously innovate and adapt to the swift changes in the business landscape (Jorge Ulises & Pablo José, 2024).

The e-human resource management was measured using 10 items and tree construct variables adapted from Dhamija (2012); Ruiz-Villavicencio et al., (2025); Shaddiq & Irpan (2023); Kongpradit & Kummadee, 2020), all of which have been previously validated. Example items include training on digital technology knowledge and skills; utilizing digital technology to organize technical seminars; developing a learning platform and knowledge management through a digital human resource management system; conducting employee searches and job postings via social media platforms (e.g., Facebook); and providing job application details and requirements through the e-human resource management system (Al-Zaqeba et al., (2025); Aggarwal & Sharon, 2017; Bondarrouk & Brewster, 2016). Additionally, the system facilitates announcing candidate selections through the e-human resource management system, and using digital technology for salary and pension payments, bonuses and welfare benefits, and health check-ups through the i-Banking system. Previous research studies show a positive relationship between E-Human resource management factors, particularly human resource management practices such as e-training and development, e-recruitment and e-selection, e-compensation management, and business growth (Elsawy, 2021; Nurshabrina & Adrianti, 2020; Waheed et al., 2020). In digital era, business organizations need to develop human resources with knowledge, skills, and expertise in digital technology, create value for products and services to meet customer needs, and establish competitive advantages, which is consistent with the findings of Pham (2020); Alqarni et al. (2023); Yuwanda et al. (2023); Indarti & Langenberg (2004).

Previous research studies indicate a positive relationship between e-human resource management factors—particularly human resource management practices such as e-training and development, e-recruitment and e-selection, and e-compensation management—and business growth (AlHamad et al., 2022; Elsayy, 2021; Nurshabrina & Adrianti, 2020; Waheed et al., 2020). In the digital era, business organizations must develop human resources with knowledge, skills, and expertise in digital technology, create value in products and services to meet customer needs, and establish competitive advantages. These findings align with the research of Pham (2020); Alqarni et al. (2023); and Yuwanda et al. (2023).

Competitive advantage is crucial for the long-term success of business, serving as the foundation for determining its business strategy. Some researchers have also explored the concept of competitive advantage at the firm level, drawing on current research in strategy and business competitiveness. Based on their business strategies, competitive strategies can be categorized into cost leadership, differentiation, market niche (Porter, 1985), and customer value (Woodruff, 1997) as sources of competitive advantage. The greater emphasis on firm-level analysis in recent periods has given rise to the Resource-Based View (RBV), which focuses on how a firm uses its unique internal resources and capabilities to outpace its rivals (Barney, 1991; Grant, 1991; Lado & Wilson, 1994; Willie, 2025). Previous studies have demonstrated a significant Influence of competitive advantage on business growth in services (Wijaya & Suasih, 2020; Yusuf et al., 2023; Yuwanda et al., 2023).

Business growth in the service sector is a measure of a firm's success in achieving its business objectives (Imran et al., 2018). Research studies examining the relationship between e-human resource management, competitive advantage variables, and business growth in services sector have often employed two main approaches. The first is the subjective approach, which focuses on a firm's performance relative to its competitors. The second is the objective approach, which is based on absolute measures of performance. Studies adopting the subjective approach have frequently measured on business growth in services sector using non-financial indicators, as highlighted by Murphy (1996); Chong (2008); Ahmad et al. (2010). According to Kaplan and Norton (1996), business growth in services sector can be evaluated across various dimensions, including the customer perspective, internal business processes, and learning and growth. Business growth is considered an endogenous latent variable, and is developed using three constructs and ten items.

This study explores the Influences of e-human resource management, concentrating on e-recruitment, e-selection, e-training and development, and e-compensation. The e-human resource management framework is established by El Saeed (2025); Baykal (2022); AlHamad et al. (2022); Shaddiq & Irpan (2023), and Kongpradit & Kummadee (2020). The Competitive Advantage variables (Focus, Cost strategy, and customer value) are analyzed using Porter's Theory (1985), while Customer value is based on Woodruff (1997). Business growth in service is measured through three perspectives: Customer perspective, internal business processes, and Learning and growth, following the framework of Kaplan and Norton (1996).

Previous studies have shown positive Influences between e-human resource management and Competitive Advantage (Alqarni et al., 2023); Nurshabrina & Adrianti, 2020; Obeidat et al., 2018), as well as between Competitive Advantage and business

growth (Wijaya & Suasih, 2020; Yuwanda et al., 2023). Additionally, positive Influences have been identified between e-human resource management, and business growth (AlHamad et al., 2022; Elsayy, 2021; Hosain, 2017; Yusuf et al., 2023; Opoku, 2024). Based on the literature review, this research is conducted based on the following three hypotheses:

H₁: There is a significant positive relationship between e-HRM and competitive advantage.

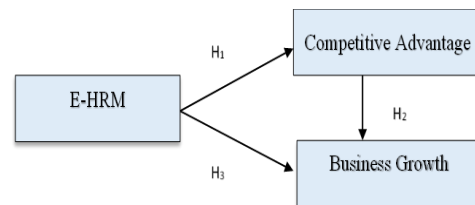
H₂: There is a significant positive relationship between competitive advantage and business growth in the services sector.

H₃: There is a significant positive relationship between e-HRM and business growth in the services sector.

Conceptual Framework

Based on the theoretical framework and empirical research related to e-human resource management and business growth in the services sector, this study proposed the following conceptual framework below:

Figure 1. Proposed Conceptual Framework



Methodology

This research utilizes a quantitative survey approach to assess the proposed hypotheses, specifically investigating the influences of e-human resource management and business growth in services in Lao PDR. It also explores the relationship between competitive advantage factors and business growth in services sectors. The methodology involves gathering primary data through questionnaires distributed to a sample group, which is then analyzed using SPSS-AMOS software to achieve the research objectives, test the hypotheses, and conduct structural equation modeling (SEM) analysis.

This research focused on e-HRM and factors influencing business growth in services in Lao PDR. The population of this study consisted business unit operators in Vientiane capital, Luang Phrabang City, Kaisone Phomvihane City, and Pakse City, Lao PDR, which represent the characteristics of a special economic zone and trade center in this geographic region. In this study, the sample size was 373 business services. Hair et al. (2010) suggested that for Structural Equation Modelling (SEM) analysis, a minimum of 250 samples is required when the number of observed variables is a fewer than 12. The data collected were analyzed using descriptive and inferential statistics methods. Questionnaires were distributed to 373 business units in Lao PDR and responses were collected over approximately three months in 2024, yielding 373 complete responses, resulting in a 97.13 % response rate. According to Roth and Craig (1998), and acceptable response rate is around 49.6%.

The questionnaire was developed based on a literature review of related studies and its content validity was tested using the index of congruence (IOC) by 3 experts. The questionnaire had an IOC greater than 0.50 (Rovinelli & Hambleton, 1976). The reliability of the instrument was tested using Cronbach's alpha, which was found to be 0.96, greater than the acceptable threshold of 0.7 (Nunnally, 1994).

The measurement model was assessed through reliability and validity tests, factor loading values, and model fit. Convergent validity was evaluated using the average variance extracted (AVE), while the reliability of the model was assessed using composite reliability (CR). All factor loading values were greater than 0.5. The study adhered to the thresholds for average variance extracted ($AVE \geq 0.5$) and composite reliability ($CR \geq 0.7$), as recommended by Hair et al. (2010) and Fornell & Larcker (1981).

Results

Demographic statistics

This research was conducted at a business growth in services sector in Lao PDR, as it is one of the central tourism, cultural, educational, and historical hubs in the partly of Laos. Demographic information was collected from 373 respondents through a paper-based survey conducted between January to April 2024. The research presents the demographic characteristics and business profiles of respondents based on key factors such as gender, age, education, position, duration of business operations, type of business, and number of employees on business growth in services sector in Lao PDR. The data show a slightly higher participation of male respondents indicating (52.3%) compared to female respondents (47.7). The majority of respondents are between 36 and 45 years old (38.9%), followed by those aged 25-35 (33.8%). The largest group of respondents holds a bachelor's degree (60.1%). More than half of the respondents (53.4%) are department heads, followed by business owners (34.6%). Most business units have been in operation for more than 10 years (57.6%). The majority of businesses operate in the service sector in Vientina capital (56%), and most businesses have fewer than 50 employees (68%).

Descriptive Analysis

The descriptive statistics of e-human resource management, competitive advantage and business growth factors are shown in Table 1. The results showed that the means and standard deviations (SD) of each item ranged from 3.34 to 4.24, with standard deviations ranging from 0.75 to 0.86. The importance level of E-Human resource management factors in digital era includes five key items: using digital technology to pay employee salaries through the i-Banking system, developing a learning system

and knowledge management through a E-HRM system, using digital technology to pay bonuses and benefits through i-Banking, providing job application information and requirements through the HRM digital system, and announcing candidate selections through the HRM digital system. The mean scores for these items indicated a high level of importance, ranging from 3.26 to 3.49. The competitive advantage factors with high importance included the ability to set prices for goods and services that reflect the value traders expect to receive, the ability to produce products and services of higher quality than competitors, the organization's ability to engage with customers and communicate differentiation from competitors, the organization's ability to choose a clear target market, the organization's ability to provide goods and services suitable for each customer group, and the organization's ability to explore new markets that can continuously generate profits. The mean scores for these factors ranged from 3.36 to 4.25. Regarding business growth in services, the factors of very high importance included the business's constant development of new products for customers, the consistent generation of innovative ideas for products and services, and having an Influence internal management system, as shown in Table 1.

Table 1.

Observe Variable and Items		Mean	SD
No	E-Human Resource Management		
1.	Training on knowledge and skills using digital technology.	3.34	0.73
2.	Utilizing digital technology for organizing technical seminars.	3.26	0.70
3.	Developing a learning system and knowledge management through a digital HRM system.	3.43	0.79
4.	Searching for personnel and posting job opportunities through social media platforms (e.g., Facebook).	3.32	0.77
5.	Providing job application information and requirements through the HRM digital system.	3.45	0.75
6.	Announcing candidate selections through the HRM digital system.	3.42	0.76
7.	Using digital technology for salary and pension payments via i-Banking systems.	3.39	0.77
8.	Using digital technology to pay bonuses and benefits through i-Banking.	3.45	0.80
9.	Using digital technology for payments related to medical treatment and health check-ups via the i-Banking system.	3.33	0.75
10.	Using digital technology to pay employee salaries through the i-Banking system.	3.49	0.80
No	Competitive Advantage	Mean	SD
1.	The organization's ability to choose a clear target market.	3.56	0.87
2.	The organization's ability to provide goods and services suitable for each customer group.	3.53	0.88
3.	The organization's ability to explore new markets that can continuously generate profits.	3.46	0.75
4.	The ability to provide labor at a lower cost than competitors.	3.26	0.83
5.	The ability to source raw materials at a lower cost than competitors.	3.22	0.82
6.	The ability to produce goods and services at a lower cost than competitors.	3.24	0.81
7.	The ability to set prices for goods and services that reflect the value traders expect to receive.	3.60	0.82
8.	The ability to produce products and services of higher quality than competitors.	3.64	0.80
9.	The organization's ability to engage with customers and communicate differentiation from competitors.	3.52	0.82
No	Business growth in the services sector	Mean	SD
1.	The business has continuously increased customer satisfaction.	3.54	0.78
2.	The business has consistently increased sales.	3.52	0.78
3.	The business has a strategy to continuously attract new customers.	3.63	0.80
4.	The business is constantly developing new products for customers.	4.23	0.76
5.	The business consistently generates innovative ideas for products and services.	4.24	0.76
6.	The business has an Influenceive internal management system.	4.23	0.75
7.	Employees' skills, knowledge, and expertise are continuously improving.	3.47	0.82
8.	Employees can Influenceively use digital technology tools.	3.37	0.78
9.	Employees are motivated to perform their duties to achieve business goals.	3.34	0.86
10.	Employees are satisfied with the work they are doing.	3.38	0.85

Confirmatory Factors Analysis (CFA)

The findings of the reliability and validity assessments indicated that the latent variable of e-human resource management demonstrated convergent validity with AVE = 0.53 and CR = 0.77, while competitive advantage showed convergent validity with AVE = 0.52 and CR = 0.76. All items had factor loadings greater than 0.5 (Schumacker & Lomax, 2016). In terms of model fit, the chi-square to degrees of freedom ratio (χ^2/df) was 2.747, which is less than 3, indicating a good fit. The goodness-of-fit index (GFI) was 0.98, exceeding 0.92. The adjusted goodness-of-fit index (AGFI) was 0.95, surpassing the threshold of 0.90. The comparative fit index (CFI) was 0.99, above the required 0.9, and the root mean square error of approximation (RMSEA) was 0.069, below the maximum of 0.08 (Hair et al., 2010). The results of the Confirmatory Factor Analysis (CFA) show that all values met or exceeded the specified thresholds, indicating that the model aligns well with the actual data collected from the business services sector in Lao PDR. Therefore, the model is appropriate for evaluating the structural equation model (SEM).

Analyze CFA of e-HRM and CA-Competitive Advantage

Confirmatory Factors Analysis (CFA) of factors influencing on Business growth in services sector results for measurement models has a value of $\chi^2/df = 2.747$, $\chi^2 = 0.84$, GFI=0.98, AGFI=0.95, CFI=0.99, RMSEA=0.069.

Figure 2.

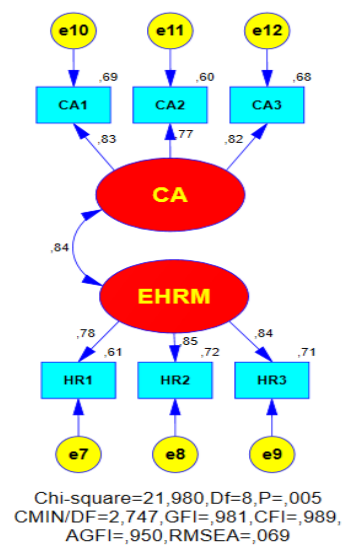


Table 2.

Chi-Square: χ^2	P-Value insignificant
χ^2/df	< 3
Goodness of Fit Index: GFI	> 0.90
Adjusted Goodness of Fit Index: AGFI)	> 0.90
(Root Mean Square Error of Approximation: RMSEA)	< 0.08
Comparative Fit Index: CFI)	> 0.90

Result of research Structural equation modeling (SEM) on Business Growth

- Convergent Validity (Measurement Model) Construct Reliability-CR>0.7, Average Variance Extracted-AVE>0.5,

Table 3.

	AVE	CR
E-Human Resource Management	0.53	0.77
Competitive Advantage	0.52	0.76

Structural Equation Modeling (SEM) Assessment

In this research, the assessment model utilized SEM with a maximum likelihood technique analysis. Evaluating the measurement model is a test of Convergent Validity and reliability by checking the confidence value of the measurement model (Construct Reliability) and finding the Discriminant Validity value of the measurement model (Fornell & Larcker, 1981) to indicate whether the observable variable is suitable as an indicator of the latent variable component or not. The criteria used to consider the model from the weight value of the factors loading must be more than 0.5 but not more than 0.95 (Hair, et al.,

2010). In addition, Hair also suggests that Construct Reliability: CR must be greater than or equal to 0.70 and the average variance extracted (AVE) must be greater than or equal to 0.50 (Hair, et al., 2010). The results of the analysis showed that the factor loading values for all latent variables ranged from 0.66 to 0.87. All construct variables had factor loading values greater than 0.50 and less than 0.95, which aligns with the criteria set by Bagozzi and Yi (1988), with a statistical significance level of $p < 0.001$. Regarding the reliability and validity of the measurement model, it was found that all constructs had an average variance extracted (AVE) value of ≥ 0.50 and a construct reliability (CR) value of ≥ 0.70 (Hair et al., 2010). Specifically, the e-human resource management factor had an AVE of 0.50 and a CR of 0.75, the competitive advantage factor had an AVE of 0.53 and a CR of 0.77, and the business growth in services sector factor had an AVE of 0.52 and a CR of 0.76. The factor loadings of this model range from 0.77 to 0.85, which is higher than 0.05 (Hair et al., 2010). Therefore, it can be concluded that the model demonstrates appropriate convergent validity in the SEM analysis, as shown in Table 4.

Table 4. Reliability and Validity of the model measurement

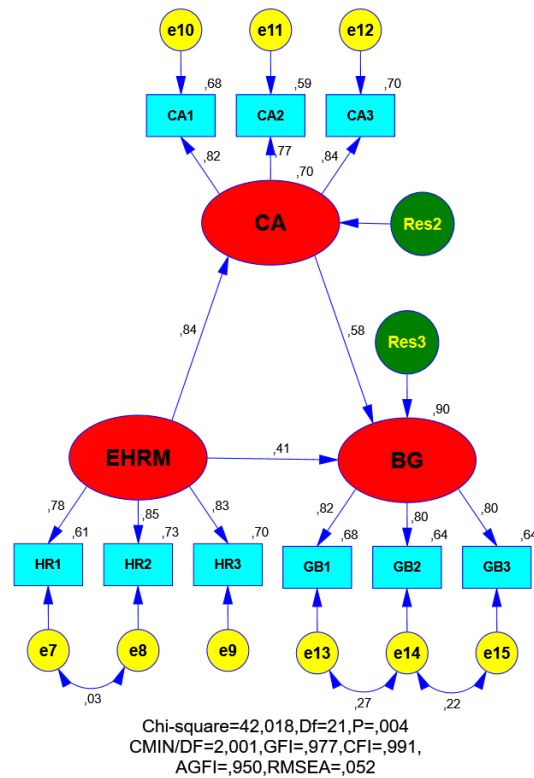
Variables		Factor Loading	AVE	CR
E-HR management			0.50	0.75
1.	E-recruitment and E-selection	0.78	-	-
2.	E-training and Development	0.85	-	-
3.	E-compensation	0.83	-	-
Competitive Advantage			0.53	0.77
1.	Focus	0.82	-	-
2.	Cost Strategy	0.77	-	-
3.	Customers Value	0.84	-	-
Business growth in Services			0.52	0.76
1.	Customer perspective	0.82	-	-
2.	Internal business processes	0.80	-	-
3.	Learning and growth	0.80	-	-

The structural equation model (SEM) demonstrated a good fit. The model had a chi-square to degrees of freedom ratio (χ^2/df) of 2.001, a Goodness of Fit Index (GFI) of 0.98, an Adjusted Goodness of Fit Index (AGFI) of 0.95, a Comparative Fit Index (CFI) of 0.99, and a Root Mean Square Error of Approximation (RMSEA) of 0.052. All of these values meet the established criteria for structural equation analysis of business growth in service sector operations in Lao PDR, as shown in Table 5.

Table 5. Measures of the Model (SEM)

Parameters	Rule of Thumb	References	Results	Good fit of Model
χ^2	Insignificant	Hair (2010)	P=0.004	Good fit
χ^2/df	<3	Hair (2010)	2.001	Good fit
GFI	>0.90	Schumacker & Lomax (2016)	0.98	Good fit
CFI	>0.90	Kline (2015)	0.99	Good fit
AGFI	>0.90	Schumacker & Lomax (2016)	0.95	Good fit
RMSEA	>0.07	Hair (2010)	0.052	Good fit

Figure 3.



Research hypothesis analysis results (Hypothesis Testing)

The research hypothesis analyzed from the statistical values shows the relationships among e-human resource management, competitive advantage, and business growth in the services sector. The results of the hypothesis analysis are shown in Table 4. The findings indicate that e-human resource management has a significant positive influence on competitive advantage, with a coefficient of $\beta=0.84$, $t\text{-value} = 14.70$, and $p\text{-value}=0.001$. The relationship between competitive advantage and business growth in the services sector also shows a significant positive influence, with a coefficient ($\beta=0.58$, $t\text{-value}=6.14$, and $p\text{-value}=0.001$). Additionally, the relationship between e-human resource management and business growth in the services sector has a significant positive influence, with a coefficient of $\beta=0.41$, $t\text{-value}=4.65$, and $p\text{-value} = 0.001$), as shown in Table 6.

Table 6. Hypothesis

Hypothesis	Variables	Coefficient	(t-value)	P-value	Hypothesis Result
H ₁	HRM → CA	0.84	14.70	P<0.001	Accepted
H ₂	CA → BG	0.58	6.14	P<0.001	Accepted
H ₃	HRM → BG	0.41	4.65	P<0.001	Accepted

Discussion

This research aims to analyze the significance level of factors influencing business growth in the service sectors in Lao PDR, conduct Confirmatory Factors Analysis (CFA) of these factors, and explore the structural equation modeling (SEM) of business growth in the services sector in Lao PDR. The first hypothesis (H₁) of this study is accepted. The results highlight the significant role and importance of e-human resource management, indicating that it positively influences the competitive advantage of businesses services sector in Lao PDR. The effective implementation of e-human resource management practices, including e-training and development, e-recruitment and selection, and e-compensation management, has become a crucial factor in gaining a competitive advantage. These findings are consistent with previous studies (Pham, 2020; Alqarni et al., 2023; Nurshabrina & Adrianti, 2020). The second hypothesis (H₂) is also supported, showing a significant influence of competitive advantage on business growth. This finding aligns with the theoretical framework of previous studies, which suggest that competitive advantage is achieved through better niche market positioning, cost strategy, and customer value (Porter, 1985; Woodruff, 1997). It is consistent with research indicating that creating a competitive advantage is crucial for a business's long-term strategy. Previous studies have demonstrated significant influences of competitive advantage on business growth (Pham, 2020; Wijaya & Suasih, 2020; Yuwanda et al., 2023). The third hypothesis (H₃) is also supported. The study confirms that effective E-HRM practices have a direct, significant positive influence on business growth in the services sector (Alqarni et al., 2023; AlHamad et al., 2022).

Conclusion

This study highlights the importance of e-human resource management, emphasizing its role in organizational strategy, competitive advantage, and business growth in services sector. This research aims to analyze the significance level of factors influencing business growth in the service sectors in Lao PDR, conduct Confirmatory Factors Analysis (CFA) of these factors, and explore the structural equation modeling (SEM) of business growth in the services sector in Lao PDR. Utilizing a quantitative approach, data were collected from 373 business in services sector and analysed using SEM for hypothesis testing. The results indicated that e-HRM factors significantly positively influence competitive advantage, Competitive Advantage Factors influence business growth, and e-HRM factors also directly enhance business growth. The SEM model demonstrated good fit indices, explaining 90% of the variance in business growth in the services sector. The study concludes that e-HRM is critical for enhancing competitive advantage and business growth, suggesting that business growth in Lao PDR should prioritize e-HRM practices to improve their competitive positioning and operational effectiveness.

References

1. Achar, S., Vijayendra, K., Hussain, S., Kejriwal, A., & Kejriwal, A. (2022). Business Trends in Digital Era: A Review. *Journal of Engineering Research and Reports*, 23(12), 328-338. <https://DOI/10.9734/JERR/2022/v23i12788>
2. Aggarwal, V., & Sharon, S. D. (2017). Digital human resource management. *Gyan Management Journal*, 11(2), 23-27.
3. Ahmad, N. H., Ramayah, T., Wilson, C., & Kummerow, L. (2010). Is entrepreneurial Competency and business success relationship contingent upon business environment? *International Journal of Entrepreneurial Behaviour & Research*, 16(3), 182-203. <https://doi/10.1108/13552551011042780>
4. Agustin, N., Hidalgo, D. T., & Morante, B. J. (2024). Challenges in Digital Transformation of Microenterprises in Nueva Ecija: A Basis for Risk Management Plan. *Journal of Economics, Management and Trade*, 30(4), 13-26. <https://DOI/10.9734/JEMT/2024/v30i41201>
5. AlHamad, A., Alshurideh, M., Alomari, K., Kurdi, B., Alzoubi, H., Hamouche, S., & Al-Hawary, S. (2022). The Influence of electronic human resources management on organizational health of telecommunications companies in Jordan. *International Journal of Data and Network Science*, 6(2), 429-438.
7. Al-Zaqeba, M., Alshehadeh, A. R., Jebri, I., & Al-khawaja, H. (2025). The role of digital human resources management functions in enhancing digital transformation readiness. *Al-Basaer Journal of Business Research*, 1(1).
8. Alqarni, K., Agina, M. F., Khairy, H. A., Al-Romeedy, B. S., Farrag, D. A., & Abdallah, R. M. (2023). The Influence of electronic human resource management systems on sustainable competitive advantages: the roles of sustainable innovation and organizational agility. *Sustainability*, 15(23), 16382. <https://doi.org/10.3390/su152316382>
10. Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, 16, 74-94.
12. Baiyere, A., Salmela, H., Nieminen, H., & Kankainen, T. (2025). Assessing digital capabilities for digital transformation—The MIND framework. *Information Systems Journal*, 35(1), 6-38. <https://doi.org/10.1111/isj.12519>
14. Barney, J. B. (1991). Firm resource and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
15. Baykal, E. (2022). Digitalization of human resources: E-HR. In *Research Anthology on Human Resource Practices for the Modern Workforce* (pp. 200-218). IGI Global. <https://DOI/10.4018/978-1-7998-0035-4.ch013>
16. Bondarouk, T., Harms, R., & Lepak, D. (2017). Does e-HRM lead to better HRM service?. *The International Journal of Human Resource Management*, 28(9), 1332-1362. <http://dx.doi.org/10.1080/09585192.2015.1118139>
17. Bondarouk, T., & Brewster, C. (2016). Conceptualising the future of HRM and technology research. *The International Journal of Human Resource Management*, 27(21), 2652-2671. <http://dx.doi.org/10.1080/09585192.2016.1232296>
18. Bondarouk, T. V., & Ruël, H. J. (2009). Electronic Human Resource Management: challenges in the digital era. *The international journal of human resource management*, 20(3), 505-514. <http://DOI/10.1080/09585190802707235>
19. Chong, H. G. (2008). Measuring performance of small and medium sized enterprise: The Grounded theory approach. *Journal of Business and Public Affairs*, 2(1), 1-11.
20. Dhamija, P. (2012). E-recruitment: a roadmap towards e-human resource management. *Researches World*, 3(3), 33.
23. El Saeed, M., Maarouf, H. M., & Younis, R. A. A. (2025). The role of HRM-service quality in the relationship between electronic human resource management and perceived performance. *Future Business Journal*, 11(1), 1. <https://doi.org/10.1186/s43093-024-00415-4>
25. Elsayy, M. (2021). Assessing the Influences of e-HRM on organizational performance: An empirical study. *Available at SSRN 3967550*.
26. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.2307/3151312>
27. Grant, R. M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California management review*, 33(3), 114-135.
28. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson.
29. Hidayat, D. N., Restiandi, A., & Sukresna, I. M. (2025). Designing an optimal education and training model for relationship managers in the digital era. *Research Horizon*, 5(1), 79-94.
30. Hosain, S. (2017). The Influences of E-HRM on organizational performance: Evidence from selective service sectors of Bangladesh. *International Journal of Human Resources Management (IJHRM) ISSN (P)*, 2319-4936.

31. Hoshino, T. (2024). Factors Influencing SME Growth a Structural Analysis Using SmartPLS. *Modern Advances in Business, Economics, and Finance*, 1(1), 96-107.
32. Imran, M., Hameed, W. U., & Haque, A. U. (2018). Influence of industry 4.0 on the production and service sectors in Pakistan: Evidence from textile and logistics industries. *Social Sciences*, 7(12), 246.
33. Jorge Ulises, K. R., & Pablo José, A. B. (2024). Impact of human factor management on company productivity: the moderating effect of digitalization. *Cogent Business & Management*, 11(1), 2371064. <https://doi.org/10.1080/23311975.2024.2371064>
34. Kaplan, R. S., & Norton, D. P. (1996). Strategic learning & the balanced scorecard. *Strategy & Leadership*, 24(5), 18-24.
35. Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.
36. Kongpradit, T., & Kummadee, P. (2020). Human resources management to move the economy for Thailand 4.0 era. *Journal of Graduate MCU KhonKaen Campus*, 7(3), 45-60.
37. Kumar, R. (2017). *Targeted SME financing and employment Influences: What do we know and what can we do differently?*. World Bank.
38. Lado, A. A., & Wilson, M. C. (1994). Human resource systems and sustained competitive advantage: A competency-based perspective. *Academy of management review*, 19(4), 699-727. Retrieved from <http://www.jstor.org/stable/258742>.
39. Ministry of Planning and Investment. (2020). The Third Nationwide Economic Survey Report 2019-2020. National Statistics Center, Vientiane,
40. Ministry of Technology and Communication. (2021). 20-year national digital economy development vision (2021-2040), 10-year national digital economy development strategy (2021-2030) and 5-year national digital economy development plan (2021-2025), Vientiane capital.
41. Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. *Journal of Business Research*, 36, 15-23.
42. Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
43. Nurshabrina, N., & Adrianti, R. (2020). The Influence of E-human resource management (E-HRM) on cost efficiency and productivity of employees in the company. *International Research Journal of Advanced Engineering and Science*, 5(1), 212-215.
44. Obeidat, D. B. Y., Tawalbeh, H. F., & Masa'deh, R. E. (2018). The relationship between human resource management (HRM) practices, total quality management (TQM) practices and competitive advantages. *Total Quality Management (TQM) Practices and Competitive Advantages (December 12, 2018)*. *Modern Applied Science*, 12(11). 1 (2024) <https://doi.org/10.52970/grhrm.v5i1.415>
45. Opoku, M. O. (2024). Human Resource Management Practices and the Performance of the Poultry Industry. *Open Access Library Journal*, 11(2), 1-22. <https://doi.org/10.4236/oalib.1111236>
46. Pham, H. (2020). Influences of human resource management practices on enterprises' competitive advantages and SMEs growth : Evidence from telecommunication industry. *Management Science Letters*, 10(4), 721-732. <https://doi.org/10.5267/j.msl.2019.10.025>
47. Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. New York, N.Y: The Free Press.
48. Roth, P. L., & Craig, A. (1998). Response rates in HRM/OB survey research: Norms and correlates, 1990–1994. *Journal of Management*, 24(1), 97-117. [https://doi.org/10.1016/S0149-2063\(99\)80055-5](https://doi.org/10.1016/S0149-2063(99)80055-5)
49. Rovinelli, R. J., & Hambleton, R. K. (1976). On the use of content specialists in the assessment of criterion-referenced test item validity.
50. Ruiz-Villavicencio, R. E., Ruiz-Villavicencio, G. E., Carrasco-Pintado, P. R., Landaure-Gonzales, G. C. E., Carreño-Flores, O. D., & Rodriguez-Barboza, J. R. (2025). Digital Transformation and Human Resource Management: Their Impact on Business Profitability and Contribution to Sustainable Economic Growth (SDG 8). *Journal of Lifestyle and SDGs Review*, 5(1), e03819-e03819. <https://doi.org/10.47172/2965-730X.SDGsReview.v5.n01.pe03819>
51. Runde, D., Bandura, R., & Lee, R. (2022). Digitalizing Laos: Improving Government Transparency, the Business Environment, and Human Capital. <https://www.csis.org/analysis/digitalizing-laos-improving-government-transparency-business-environment-and-human-capital>.
52. Schumacker, R. E., & Lomax, R. G. (2016). *A beginner's guide to structural equation modeling* (4th ed.). Routledge.
53. Shaddiq, S., & Irpan, M. (2023). Governance of Human Resources Management in the Digital Era. *Journal of Business and Management Studies*, 5(3), 80-96. <https://doi.org/10.32996/jbms.2023.5.3.8>
54. Southiseng, N., & Walsh, J. (2010). Competition and Management Issues of SME Entrepreneurs in Laos: Evidence from Empirical Studies in Vientiane Municipality, Savannakhet and Luang Prabang.
55. Tran, L. Q. T., & Nguyen, M. T. (2022). Digital Economy: A Comparative Study in ASEAN. *Theory, Methodology, Practice-Review of Business and Management*, 18(02), 83-92. <https://doi.org/10.18096/TMP.2022.02.05>
57. Waheed, A., Xiaoming, M., Waheed, S., Ahmad, N., & Tian-tian, S. (2020). E-HRM implementation, adoption and its predictors: a case of small and medium enterprises of Pakistan. *International Journal of Information Technology and Management*, 19(2-3), 162-180.
58. Wijaya, P. Y., & Suasih, N. N. R. (2020). The Influence of knowledge management on competitive advantage and SMEs growth : A study of silver craft
59. SMEs. *Entrepreneurial Business and Economics Review*, 8(4), 105-121. <https://doi.org/10.15678/EBER.2020.080406>
60. Willie, M. (2025). Leveraging Digital Resources: A Resource-Based View Perspective. *Golden Ratio of Human Resource*

- Management*, 5(1), 01-14.<https://doi.org/10.52970/grhrm.v5i1.415>
61. Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. *Academy of Marketing Science Journal*, 25(2), 139-153.
62. World Bank Group. (2019). *Lao PDR Economic Monitor, August 2019: Maintaining Economic Stability*. World Bank. Retrieved from <https://data.vietnam.opendevelopmentmekong.net/dataset/86c6777c-8be1-45a6-b75a-bf2dbba3e62a/resource/aacd3258-5826-44b0-8791-790351953d0b/download/lao-pdr-economic-monitor-maintaining-economic-stability.pdf>
63. Yusuf, M., Satia, H., Bernardianto, R., Nurhasanah, N., Irwani, I., & Setyoko, P. (2023). Exploring the role of digital leadership and digital transformation on the performance of the public sector organizations. *International Journal of Data and Network Science*, 7(4), 1983-1990. <https://doi.org/10.5267/j.ijdns.2023.6.014>
64. Yuwanda, T., Fadhlani, A., & Daud, I. (2023). Building Competitive Advantage through Human Capital and the Influences on SMEs Growth: Analysis at Individual and Organizational Level. *JDM (Jurnal Dinamika Manajemen)*, 14(1), 72-86.
65. Zavyalova, E., Sokolov, D., Kuchеров, D., & Lisovskaya, A. (2022). The digitalization of human resource management: Present and future. *Foresight and STI Governance*, 16(2), 42-51. <https://doi.org/10.17323/2500-2597.2022.2.42.51>
66. Zhang, J., & Chen, Z. (2024). Exploring human resource management digital transformation in the digital age. *Journal of the Knowledge Economy*, 15(1), 1482-1498.<https://doi.org/10.1007/s13132-023-01214-y>