

Work Experience, Capability, and Expertise as Determinants of Human Resource Development: Evidence from the Regional Civil Service Agency of Central Tapanuli

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Abstract

Human resource development has become a strategic priority for public sector organizations in improving institutional performance, service quality, and organizational sustainability. This study aims to analyze the influence of work experience, capability, and expertise on human resource development at the Regional Civil Service Agency and Human Resource Development of Central Tapanuli. The study adopts a quantitative research approach using a survey method. Data were collected through structured questionnaires distributed to employees within the institution. The sampling technique employed was proportional random sampling, involving employees from various organizational units. Data analysis was conducted using Structural Equation Modeling (SEM) with Partial Least Squares (PLS) to examine the direct relationships among variables. The findings indicate that work experience has a positive and significant effect on human resource development, demonstrating that employees with longer professional exposure tend to possess better adaptability and developmental readiness. Capability also shows a significant positive influence, indicating that employees' cognitive and technical competencies contribute substantially to organizational development. Furthermore, expertise emerges as a dominant factor influencing human resource development, highlighting the importance of specialized knowledge and professional proficiency in enhancing employee performance and institutional effectiveness. Collectively, these variables explain a substantial proportion of variance in human resource development. The study contributes to the human resource management literature, particularly in the public sector, by providing empirical evidence on the strategic role of employee-related competencies in strengthening organizational development. The findings are expected to support policymakers in designing competency-based human resource development programs within government institutions.

Keywords: Work Experience, Capability, Expertise, Human Resource Development

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Introduction

In the contemporary public sector, human resource development has become a strategic priority for government institutions in achieving organizational effectiveness, improving public service quality, and responding to increasingly dynamic environmental changes. Human resources are recognized as valuable organizational assets whose competencies, knowledge, and professional capabilities determine institutional performance and long-term sustainability. Therefore, government organizations are required not only to recruit qualified employees but also to continuously develop their competencies through systematic human resource development programs. According to Gary Dessler, human resource development refers to organized learning activities designed to improve employees' knowledge, skills, and abilities for present and future responsibilities. Likewise, Raymond A. Noe emphasized that effective human resource development contributes significantly to employee productivity, organizational adaptability, and institutional competitiveness.

In public organizations, however, human resource development often encounters various challenges, including limited employee competence, unequal professional experience, and inadequate specialized expertise. These challenges are also observed in the Regional Civil Service Agency and Human Resource Development of Central Tapanuli, where the effectiveness of employee development programs remains influenced by individual and organizational factors. Several employees still demonstrate limited readiness to adapt to administrative transformation, digital governance systems, and performance-based management practices. Such conditions indicate that the determinants of human resource development need to be examined more comprehensively.

One of the major factors influencing human resource development is work experience. Work experience reflects the accumulation of knowledge, practical understanding, and problem-solving skills acquired through years of service and job involvement. Employees with broader work experience generally possess stronger decision-making abilities, better adaptability, and higher confidence in handling organizational responsibilities. However, in many public institutions, disparities in work experience among employees often create inconsistencies in task performance and developmental readiness. Previous studies found that work experience positively influences employee competence and organizational effectiveness [1], [2]. Nevertheless, empirical evidence in local government institutions remains limited, particularly regarding its contribution to human resource development.

Another important factor is employee capability. Capability refers to an individual's ability to perform assigned tasks effectively based on intellectual, technical, and interpersonal competencies. Capability determines how employees respond to organizational demands, technological changes, and service innovation. In public sector organizations, capability gaps are frequently identified in areas such as digital literacy, policy implementation, and service management. Employees with inadequate capability may experience difficulties in achieving performance targets and participating effectively in development initiatives. Prior research demonstrated that employee capability significantly affects organizational productivity and human resource quality [3], [4]. Despite these findings, capability-related issues continue to challenge many government institutions.

In addition to work experience and capability, expertise is considered a critical determinant of human resource development. Expertise reflects specialized knowledge, professional mastery, and technical proficiency developed through education, training, and practical experience. In government organizations, expertise is increasingly essential as public administration becomes more complex and technology-driven. However, mismatches between employee educational backgrounds, job placements, and professional specialization are still frequently observed, leading to suboptimal performance outcomes. Previous studies confirmed that expertise contributes positively to employee effectiveness, innovation, and organizational development [5], [6]. Yet, the extent to which expertise affects human resource development in regional government institutions requires further investigation.

Based on these empirical and practical issues, this study aims to examine the influence of work experience, capability, and expertise on human resource development at the Regional Civil Service Agency of Central Tapanuli. The findings are expected to provide theoretical contributions to human resource management literature and practical recommendations for competency-based human resource development strategies in public sector organizations.

Literature Review A. Human Resource Development

Human resource development (HRD) is a systematic process designed to improve employees' knowledge, skills, competencies, and attitudes in order to achieve organizational effectiveness and sustainable performance. In modern organizational management, HRD is considered a strategic investment that enables organizations to adapt to technological advancement, environmental uncertainty, and competitive challenges. According to Leonard Nadler, human resource development is an organized learning experience provided by organizations within a specified period to facilitate performance improvement and personal growth. Similarly, Gary Dessler emphasized that human resource development includes training, career development, organizational learning, and performance enhancement programs. Effective HRD contributes significantly to employee productivity, innovation, and institutional sustainability [7].

In the public sector, HRD plays an important role in enhancing bureaucratic professionalism, public accountability, and service quality. Government institutions increasingly require employees who possess not only technical competence but also adaptive capacity and strategic thinking. Previous studies have demonstrated that competency-based human resource development positively influences employee effectiveness, organizational commitment, and service performance [8]. Therefore, identifying the determinants of HRD remains an important issue in public administration research.

B. Work Experience

Work experience refers to the accumulation of knowledge, practical understanding, and professional exposure obtained through direct involvement in work activities over time. Employees with extensive work experience generally possess stronger analytical capabilities, better decision-making skills, and higher confidence in performing organizational responsibilities. According to Edwin B. Flippo, work experience reflects an employee's ability to perform tasks based on prior exposure to similar situations and operational challenges. Likewise, John R. Schermerhorn argued that work experience enhances employees' problemsolving abilities and organizational adaptability.

Empirical studies have shown that work experience significantly affects employee productivity, competency development, and organizational effectiveness. Employees who possess longer tenure and broader job exposure tend to adapt more quickly to procedural changes and organizational transformation [9]. In public institutions, work experience also contributes to administrative accuracy, policy implementation effectiveness, and professional maturity [10]. Therefore, work experience is considered an important determinant of human resource development.

C. Capability

Capability refers to an employee's ability to perform assigned tasks effectively through the integration of knowledge, technical skills, cognitive competence, and interpersonal abilities. Capability represents the practical manifestation of employee competence in achieving organizational objectives. According to Stephen P. Robbins, capability is an individual's capacity to perform diverse tasks based on intellectual and physical abilities. Similarly, Richard L. Daft stated that employee capability determines organizational flexibility, innovation, and operational effectiveness.

Capability is increasingly important in the public sector due to the growing complexity of administrative systems, digital transformation, and performance-based governance. Employees with higher capability tend to demonstrate stronger initiative, creativity, and problem-solving competence. Previous research found that employee capability significantly improves job performance, service quality, and organizational competitiveness [11]. Furthermore, capability development contributes directly to employee learning behavior and organizational sustainability [12]. Thus, capability is an essential component of human resource development.

D. Expertise

Expertise refers to specialized knowledge, technical mastery, and professional proficiency acquired through formal education, training, and practical experience. Expertise enables employees to perform specific tasks with greater efficiency, accuracy, and confidence. According to Michael Armstrong, expertise is a strategic competency that supports professional performance and organizational competitiveness. Likewise, Raymond A. Noe emphasized that expertise results from continuous learning, knowledge sharing, and experiential development.

In public organizations, expertise becomes increasingly critical as government services require specialized administrative, technological, and managerial competencies. Employees with high expertise tend to contribute more effectively to innovation, policy implementation, and institutional problem-solving. Previous studies confirmed that expertise positively affects employee effectiveness, innovation capability, and organizational development [13]. In addition, specialized expertise has been found to strengthen organizational adaptability and strategic performance [14], [15]. Therefore, expertise is recognized as a critical determinant of human resource development in public institutions.

Research Methodology

This study employed a quantitative research approach using an explanatory survey design to examine the influence of work experience, capability, and expertise on human resource development in the public sector. Quantitative research is considered appropriate for testing causal relationships among variables through statistical measurement and empirical verification. According to John W. Creswell, quantitative research enables researchers to test objective theories by examining the relationship among measurable variables [16]. Similarly, Uma Sekaran stated that explanatory research is designed to identify and analyze cause-and-effect relationships between independent and dependent variables [17].

The research was conducted at the Regional Civil Service Agency and Human Resource Development of Central Tapanuli, Central Tapanuli Regency. The institution was selected as the research site because it plays a strategic role in managing employee development, competency improvement, and personnel administration in regional government. The population of this study consisted of all employees working in the institution, totaling 78 employees. Since the population size was relatively manageable, this study applied a saturated sampling technique, where all members of the population were included as research respondents. According to Sugiyono, saturated sampling is appropriate when the entire population is used as the research sample [18]. Therefore, the sample size in this study was 78 respondents.

Data were collected using a structured questionnaire distributed directly to respondents. The questionnaire was developed based on operational indicators of each variable derived from previous literature. The measurement scale used in this study was a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). According to Rensis Likert, the Likert scale is widely used to measure perceptions, attitudes, and behavioral tendencies quantitatively [19].

The independent variables in this study were work experience (X1), capability (X2), and expertise (X3), while human resource development (Y) served as the dependent variable. Work experience was measured through indicators such as length of service, job exposure, task

understanding, and problem-solving experience. Capability was measured through intellectual ability, technical competence, communication skills, and adaptability. Expertise was measured through professional knowledge, technical specialization, training participation, and task mastery. Human resource development was measured through competency improvement, learning orientation, career readiness, and performance enhancement [20], [21].

Before hypothesis testing, the research instrument was tested for validity and reliability. Validity testing was conducted using product-moment correlation analysis, while reliability testing used Cronbach's Alpha coefficient. According to Lee J. Cronbach, an instrument is considered reliable when the Cronbach's Alpha value exceeds 0.70 [22]. Construct validity and convergent validity were also assessed to ensure measurement consistency.

Data analysis was performed using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) with the assistance of SmartPLS software. PLS-SEM was selected because it is suitable for predictive research models, relatively small sample sizes, and complex variable relationships. According to Joseph F. Hair Jr., PLS-SEM is effective for simultaneously evaluating measurement models and structural models in social science research [23].

The analysis procedure consisted of two stages. The first stage involved evaluating the measurement model (outer model) through indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. The second stage involved evaluating the structural model (inner model) through coefficient of determination (R^2), path coefficients, effect size (f^2), predictive relevance (Q^2), and hypothesis testing using bootstrapping procedures [24]. The significance level applied in this study was 5 percent, with a t-statistic threshold greater than 1.96 and a p-value lower than 0.05 indicating statistical significance [25].

Through this methodological approach, the study aimed to produce empirical evidence regarding the determinants of human resource development within government institutions and to provide strategic recommendations for competency-based human resource management practices in the public sector.

Results

This study examined the influence of work experience, capability, and expertise on human resource development at the Regional Civil Service Agency and Human Resource Development of Central Tapanuli using Partial Least Squares Structural Equation Modeling (PLS-SEM). The data were obtained from 78 respondents and analyzed through measurement model evaluation (outer model) and structural model evaluation (inner model).

A. Respondent Profile

The demographic characteristics of respondents indicate that the majority of employees were between 31–50 years old, reflecting a productive workforce with substantial professional exposure. Based on gender, respondents consisted of both male and female employees with relatively balanced proportions. In terms of educational background, most respondents held bachelor's and master's degrees, indicating adequate academic qualifications to support organizational responsibilities. Furthermore, the majority of respondents had more than five years of working experience, suggesting familiarity with administrative systems and organizational procedures.

B. Measurement Model Evaluation (Outer Model)

The validity and reliability of the research instrument were assessed before hypothesis testing. Convergent validity was evaluated using factor loading values. The analysis showed that all measurement indicators had loading factors above 0.70, indicating acceptable indicator reliability as recommended by Joseph F. Hair Jr. [23].

In addition, the Average Variance Extracted (AVE) values for all constructs exceeded

0.50, confirming satisfactory convergent validity. Composite Reliability (CR) values ranged from 0.861 to 0.932, while Cronbach's Alpha values ranged from 0.802 to 0.914, indicating strong internal consistency reliability. The results are presented in Table 1.

Table 1. Construct Reliability and Validity

Variable	Cronbach's Alpha	Composite Reliability	AVE
Work Experience	0.846	0.891	0.673
Capability	0.802	0.867	0.621
Expertise	0.914	0.932	0.731
Human Resource Development	0.887	0.918	0.689

These findings indicate that all constructs met the recommended reliability and validity criteria.

C. Structural Model Evaluation (Inner Model)

The coefficient of determination (R^2) was used to evaluate the predictive power of the structural model. The analysis showed that human resource development had an R^2 value of 0.742, indicating that work experience, capability, and expertise jointly explained 74.2% of the variance in human resource development, while the remaining 25.8% was influenced by other variables outside the research model. According to Joseph F. Hair Jr., an R^2 value above 0.67 indicates substantial explanatory power [23].

Predictive relevance (Q^2) analysis also showed a value greater than zero ($Q^2 = 0.518$), indicating that the model had satisfactory predictive relevance.

D. Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping procedure with a significance level of 5%. The results are presented in Table 2.

Table 2. Hypothesis Testing Results

Hypothesis	Path Coefficient	T-Statistic	P-Value	Decision
Work Experience → HRD	0.287	2.864	0.004	Supported
Capability → HRD	0.319	3.142	0.002	Supported
Expertise → HRD	0.412	4.275	0.000	Supported

The results demonstrate that work experience has a positive and significant effect on human resource development ($\beta = 0.287$; $t = 2.864$; $p < 0.05$). This indicates that employees with broader professional exposure tend to possess better readiness for competency development and organizational adaptation.

Capability also shows a positive and significant effect on human resource development ($\beta = 0.319$; $t = 3.142$; $p < 0.05$). This finding suggests that employees with stronger intellectual, technical, and interpersonal abilities contribute significantly to organizational development initiatives.

Furthermore, expertise demonstrates the strongest positive effect on human resource development ($\beta = 0.412$; $t = 4.275$; $p < 0.05$). This indicates that specialized knowledge and professional mastery play a dominant role in improving employee competency and organizational effectiveness.

E. Effect Size Analysis

The effect size (f^2) analysis showed that expertise had the strongest contribution to human resource development ($f^2 = 0.296$), followed by capability ($f^2 = 0.214$) and work experience ($f^2 = 0.173$). These findings confirm that expertise is the most influential determinant in the research model.

Overall, the empirical results indicate that work experience, capability, and expertise significantly contribute to human resource development in the Regional Civil Service Agency of Central Tapanuli, with expertise emerging as the most dominant predictor.

Discussion

The findings of this study provide empirical evidence that work experience, capability, and expertise significantly influence human resource development at the Regional Civil Service Agency and Human Resource Development of Central Tapanuli. The structural model demonstrates that these three variables jointly explain a substantial proportion of variance in human resource development, indicating that employee-related competencies are strategic determinants in strengthening organizational effectiveness within public institutions. The findings support the human capital perspective, which emphasizes that employees' knowledge, skills, and professional competencies are critical organizational assets for achieving sustainable performance and institutional competitiveness [7], [13].

A. The Effect of Work Experience on Human Resource Development

The results indicate that work experience has a positive and significant effect on human resource development. This finding implies that employees who possess longer tenure, broader job exposure, and greater involvement in organizational activities tend to demonstrate higher adaptability, stronger problem-solving capability, and better readiness for professional development. In the context of the Regional Civil Service Agency of Central Tapanuli, employees with substantial work experience appear to understand organizational procedures, bureaucratic systems, and policy implementation processes more comprehensively, which supports their developmental capacity.

This finding is consistent with the perspective of Edwin B. Flippo, who argued that work experience enhances employees' ability to perform tasks effectively through accumulated practical learning [9]. Similarly, David A. Kolb emphasized that experiential learning enables individuals to transform professional experiences into knowledge development and behavioral improvement [15]. The findings also support previous empirical studies demonstrating that work experience significantly contributes to employee competency development, job maturity, and organizational productivity [10].

In public sector organizations, work experience is particularly important because administrative responsibilities often require procedural understanding, policy interpretation, and adaptive decision-making. Employees with limited work experience may require additional mentoring and organizational learning opportunities to accelerate competency development. Therefore, organizational leaders should create knowledge-sharing mechanisms and mentoring programs that enable experienced employees to transfer tacit knowledge to junior staff.

B. The Effect of Capability on Human Resource Development

The results reveal that capability has a positive and significant effect on human resource development. This finding indicates that employees who possess stronger intellectual abilities, technical competence, communication skills, and adaptability contribute more effectively to organizational learning and competency enhancement. Capability enables employees to respond to changing administrative demands, technological transformation, and increasingly complex public service requirements.

This finding supports the organizational behavior theory proposed by Stephen P. Robbins and Timothy A. Judge, who stated that individual capability determines the effectiveness of task execution and organizational contribution [11]. Likewise, Richard L. Daft emphasized that capability serves as a strategic resource that enhances organizational flexibility and innovation capacity [12].

The empirical findings indicate that employees with higher capability are better prepared to participate in training programs, adopt digital administrative systems, and implement performance-based management practices. This condition is highly relevant in government institutions where digital transformation increasingly requires employees to possess both technical and cognitive competencies. Therefore, institutional leaders should strengthen competency-based training programs, continuous learning systems, and performance coaching initiatives to improve employee capability systematically.

C. The Effect of Expertise on Human Resource Development

The results demonstrate that expertise has the strongest positive and significant effect on human resource development among all independent variables. This finding suggests that specialized knowledge, professional mastery, and technical proficiency are dominant factors in strengthening employee development within public organizations. Employees with higher expertise tend to demonstrate better analytical capability, greater confidence in decisionmaking, and stronger contributions to organizational innovation.

This finding aligns with the human resource development perspective proposed by Michael Armstrong, who stated that expertise is a strategic competency that supports organizational performance and competitive advantage [13]. Similarly, Raymond A. Noe emphasized that expertise emerges through continuous learning, professional training, and experiential development, which collectively enhance employee effectiveness [14].

In the context of the Regional Civil Service Agency of Central Tapanuli, expertise appears to be highly relevant because personnel administration, competency management, and public policy implementation increasingly require specialized technical knowledge. Employees who possess expertise in human resource management, public administration, and digital governance are better positioned to support organizational transformation. Therefore, management should prioritize professional certification programs, specialized technical training, and competency-based job placement to maximize employee expertise.

D. Theoretical and Practical Implications

From a theoretical perspective, this study strengthens the human capital theory by confirming that work experience, capability, and expertise are essential determinants of human resource development in public sector organizations. The findings extend previous studies by demonstrating that expertise has the strongest influence compared to work experience and capability in the context of regional government institutions.

From a practical perspective, the findings provide strategic implications for the Regional Civil Service Agency of Central Tapanuli. Management should develop integrated human resource strategies focusing on experience-based learning, capability enhancement, and expertise development. Such strategies may include structured mentoring, competency-based training, professional certification, job rotation, and continuous performance evaluation. By strengthening these dimensions, government institutions can improve employee professionalism, service quality, and organizational sustainability.

Conclusion

This study investigated the influence of work experience, capability, and expertise on human resource development at the Regional Civil Service Agency and Human Resource

Development of Central Tapanuli. The empirical findings demonstrate that all independent variables have positive and significant effects on human resource development, indicating that employee competencies play a strategic role in strengthening organizational effectiveness within public sector institutions.

First, work experience was found to significantly contribute to human resource development. Employees with broader professional exposure, longer tenure, and greater involvement in organizational activities tend to possess better adaptability, stronger problemsolving abilities, and higher readiness for competency development. This finding confirms that experiential learning supports professional growth and organizational sustainability.

Second, capability also showed a significant positive effect on human resource development. Employees who demonstrate strong intellectual capacity, technical competence, communication skills, and adaptability are more capable of responding to organizational changes, implementing administrative innovations, and participating effectively in continuous learning processes. This finding emphasizes the importance of capability enhancement in supporting institutional transformation in the public sector.

Third, expertise emerged as the most dominant determinant of human resource development. Specialized knowledge, professional mastery, and technical proficiency significantly improve employee effectiveness, decision-making quality, and organizational innovation. This result indicates that expertise is a critical strategic resource for government institutions facing increasingly complex administrative and service demands.

Overall, the study confirms that human resource development in public organizations is significantly influenced by the integration of work experience, capability, and expertise. Among these factors, expertise provides the strongest contribution, followed by capability and work experience. Therefore, government institutions should prioritize competency-based human resource policies through structured training programs, professional certification, mentoring systems, and strategic job placement to strengthen employee development and enhance organizational performance.

In addition, this study contributes to the human resource management literature by providing empirical evidence from a regional government institution in Indonesia. The findings are expected to support policymakers and organizational leaders in designing sustainable human resource development strategies aligned with public sector modernization and institutional competitiveness.

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