Examining the Impact of Individual, Environmental, Organizational, and Cultural Factors on the Improvement of Human Resource Productivity in Private Banks in Mazandaran Province

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Abstract

Efforts to improve and effectively utilize various resources, such as labor, capital, and information, are the goals of all managers. This study aims to examine the impact of individual, environmental, organizational, and cultural factors on the improvement of human resource productivity in private banks. The present research is applied in terms of its purpose and, based on its approach, is quantitative and descriptive-survey in nature. Data collection methods include library and field studies. The sampling method used in this study is stratified random sampling. The data collection instrument is a researcher-made questionnaire, derived from the theoretical framework of the study. The validity of the researcher-made questionnaire was assessed through face, content, and construct validity, and its reliability was confirmed using composite reliability and Cronbach's alpha, which was greater than 0.7. The statistical population of this study includes 300 managers and deputies of state-owned banks in Mazandaran Province. Based on the Krejcie and Morgan table, 169 participants were selected as the sample. For data analysis, structural equation modeling was conducted using PLS software. The findings indicate that individual, cultural, organizational, and environmental factors, with path coefficients of 0.233, 0.260, 0.391, and 0.960, respectively, influence the improvement of human resource productivity.

Keywords: *Human resources, productivity improvement, individual, organization, environment*

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1. Introduction

In today's competitive world, enhancing human resource productivity is one of the primary objectives of private organizations. The mission of management and the main goal of managers in every organization is the effective and optimal utilization of diverse resources such as labor, capital, energy, and information [1]. This has made productivity and the correct utilization of all factors, including human resources, goods, and services, a priority for private organizations in all countries. Societies now recognize that the survival of any organization is impossible without considering the productivity of human resources [2]. Technological advancements provide organizations with scientific knowledge and information that can be utilized in the production of goods and services. Factors such as appropriate working hours, timely payments, reasonable compensation, and job security are significant environmental factors contributing to productivity improvement [3].

Productivity can be defined as the effort to achieve high levels of performance with minimal resource utilization. In other words, productivity is the balance between inputs and outputs. Additionally, productivity refers to the level of production relative to the resources used [4]. The most critical factor in improving productivity in any organization or country is the human workforce, which has become a significant and fundamental element in explaining differences in productivity and its growth across nations [5].

Increasing human resource productivity is crucial for improving organizational efficiency and can lead to the enhancement of organizational productivity. Banks, where human resources are considered one of the most valuable assets, are no exception. They must manage integrated activities to enhance productivity [6]. Evaluating technological capabilities provides important and strategic information to managers and policymakers, which can be used to generate the knowledge required for organizational productivity [7].

Given the limitation of resources and the unlimited nature of human needs, along with population growth and intense global economic competition, improving productivity is not an option but a necessity [8]. The economic growth and development of different societies, including Iran, are rooted in their productivity growth rates. Considering the banking-centered financial system of the country, understanding the methods for measuring and increasing the efficiency and productivity of banks and the impact of various factors and policies on them is crucial. The connection between bank branches and headquarters, as well as the evaluation of productivity in these affiliated financial units with defined revenues and expenses for provided financial services, highlights the importance of innovation to enhance productivity, increase revenues, and reduce costs [9].

As the operational workload of private bank branches—both in terms of customer interactions and the accuracy required to improve the quality of execution—is higher than that of headquarters, designing a structure to evaluate, identify, and ultimately improve operational processes in branches is essential [10].

One of the main priorities for managers in terms of human resource productivity and improving the services provided by the organization is increasing customer satisfaction and meeting their needs [11]. By enhancing productivity in their organizations, managers can pave the way for achieving organizational goals and the country's development and progress. Therefore, the ultimate goal of every organization is achieving productivity, which encompasses efficiency and effectiveness [12].

Since human resource productivity in private banks involves interactions with employees, paying attention to the needs and expectations of employees, as well as customers, and implementing strategies for customer retention by bank staff are essential topics in the banking industry [13].

Workforce productivity in our country is in an unfavorable state due to social and economic environments, organizational culture, individual training, and other factors. In macroeconomic planning, it has always been intended that a portion of the country's economic growth should come from productivity increases. However, this has been largely neglected, and economic growth has primarily resulted from other factors [5].

Productivity faces challenges such as insufficient accuracy, errors in reported results, and lack of scalability to other banks [14]. Productivity management in private banks is undergoing changes, with no specific framework available for these banks to achieve the goals of improving human resource productivity. Additionally, one of the fundamental issues for private banks in Iran is attracting more resources and customers and achieving success across all banking domains [12].

Moreover, the policies used in organizations have significant weaknesses in achieving established organizational goals and enhancing productivity. Insufficient efforts have been made toward improving human resource productivity [5].

In the banking industry, whether public or private, a wide range of higher-level documents and directives exist to regulate and guide bank activities. These documents, primarily issued by regulatory and policymaking institutions, define the legal and regulatory framework for bank operations and influence their decision-making processes. At the macro level, monetary and banking laws passed by parliament serve as the most critical higher-level documents. These laws specify the general principles of bank activities, their relationships with customers and other financial institutions, and the tools of monetary policymaking [12].

The literature on human resource productivity highlights a range of factors and frameworks for improvement. Yanti et al. (2024) investigated the impact of electronic human resource management (e-HRM) on productivity, analyzing data from 395 respondents using PLS software. The results indicated that implementing e-HRM positively influences employees' behavioral intentions, thereby enhancing their productivity [15]. Antonova et al. (2023) explored the dynamics of human resources and labor productivity in construction and real estate sectors, emphasizing how low wages, education levels, and productivity are interrelated. Higher educational attainment among employees improved productivity, but wage stagnation remained a challenge [16]. Azizi et al. (2022) studied sustainable human resource productivity, identifying key drivers such as general welfare, organizational culture, leadership styles, rewards, and ergonomics, demonstrating their significant influence on workforce engagement and organizational performance [11]. Paulet and Mavoori (2021) conducted a cross-regional analysis of banking productivity using 15 years of data from 90 banks globally, revealing that financial market liberalization fosters convergence in efficiency strategies, leading to cost minimization and enhanced productivity [13]. Similarly, Dehany (2023) analyzed productivity factors in education, highlighting managerial/organizational, economic, individual, and social/psychological factors as pivotal, with variables like job security, timely payment, training, and equitable compensation showing the highest impact [17]. Nemati (2021) underscored human resources as a strategic organizational asset, emphasizing how disciplined participation and awareness-driven efforts significantly contribute to productivity improvement [18]. Ghafari Zanuzi et al. (2020) proposed a systemic model for productivity enhancement in universities using a fuzzy DEMATEL approach, identifying targeted training, knowledge management strategies, and fostering creativity as highly influential factors [19]. Finally, Hozouri (2020) employed a mixed-methods approach to design a model for public sector productivity, identifying factors like individual creativity, organizational culture, communication, job enthusiasm, resilience, and performance evaluation as critical for productivity enhancement. Together, these studies demonstrate the multifaceted and systemic nature of human resource productivity, providing a comprehensive foundation for further research and practical implementation [20].

Based on reviews of past studies and research conducted by other authors in the field of factors affecting human resource productivity, it was observed that despite the numerous applications and advantages of these methods, they face challenges such as insufficient accuracy, errors in reported results, and lack of scalability to other banks [21].

The main motivation for this study is that, despite numerous studies analyzing the concept of improving human resource productivity, no definitive results have been presented to date. Consequently, the goal of this research is to address these research gaps by contextualizing the concept of human resource productivity improvement in private banks. By analyzing and identifying the significance of its dimensions, this study will significantly contribute to advancing research on improving human resource productivity. This research seeks to examine the influence of individual, organizational, cultural, and environmental factors on improving human resource productivity in private banks. The novelty of the present study lies in examining these variables in private banks to enhance productivity. Considering the stated issues, the main research question is as follows: To what extent do individual, environmental, organizational, and cultural factors influence the improvement of human resource productivity in private banks?

2. Methodology

The nature of the present study, in terms of its objective, is applied. This classification is due to the study's potential to enhance productivity in banks. Based on its methodology, the study is descriptive-survey in nature. This approach is conducted to uncover existing realities or the status quo. Furthermore, the study adopts a quantitative approach.

The statistical population of this research comprises managers and deputy managers of all private banks in Mazandaran Province. The population includes 300 managers and deputy managers from branches of Tejarat

Bank, Parsian Bank, Refah Bank, Iran Zamin Bank, Pasargad Bank, and Bank Shahr in Mazandaran Province. According to the Morgan Table, a sample size of 169 individuals was determined. The sampling method employed in this research is stratified random sampling, ensuring equal selection chances for all sample members. Data collection from the statistical population was conducted through a researcher-designed questionnaire. The validity of the questionnaire was confirmed through face, content, and construct validity.

This study was conducted in all private banks in Mazandaran Province. The data collection period was in 2022, making the temporal scope of the study the year 2022. The thematic scope of this research encompasses topics related to banking, productivity, and human resources.

A questionnaire was designed based on indicators influencing productivity enhancement, derived from prior studies in organizations. It was validated in two stages by eight experts. In the first stage, the questionnaires were distributed among a group of experts, who provided their responses. In the subsequent stage, the completed questionnaires were collected and summarized. The summaries were returned to the respondents for their feedback. This process continued until a general consensus was achieved. Cronbach's alpha was used to assess the reliability of the questionnaire, yielding a value above 0.7, which was deemed acceptable.

Data analysis in this research is conducted in two parts. The first part includes descriptive statistics, such as demographic characteristics, presented through frequency tables and charts using SPSS and Excel software. The second part involves inferential statistics. Structural equation modeling was used to analyze data, evaluate model fit, and test research hypotheses using PLS software.

3. Findings

Based on the factors derived from various studies, the following dimensions and components have been identified as contributing to the enhancement of human resource productivity:

Table 1. The results of Qualitative analysis

Dimension	Components
Individual	Individual Attitude
	Individual Experience
	Individual Skills
Organization	Organizational Climate
	Organizational Support
	Organizational Leadership
Culture	Hierarchical Culture
	Adhocracy Culture
	Group Culture
Environment	Socio-Cultural Environment
	Political-Legal Environment
	Technological Environment
	Physical Environment

The demographic analysis of respondents shows that 89.9% were male and 10.1% female. In terms of age, 46.7% were aged 41–50, 26.6% were over 50, 18.6% were 31–40, and 8% were 25–30. Educationally, 42% held a master's degree, 34.9% had a doctoral degree, and 23.1% had a bachelor's degree. Regarding bank affiliation, 22.5% were from Parsian Bank, 21.9% from Bank Shahr, 20.1% from Refah Bank, 18.9% from Iran Zamin Bank, and 16.6% from Tejarat Bank. Work experience ranged widely, with 26.6% having over 20 years of experience, followed by 24.9% with 16–20 years, 24.3% with 11–15 years, 20.7% with 6–10 years, and 3.6% with less than five years. Positionally, 57.4% were branch managers, 32.5% deputy branch managers, and 10.1% managers or deputy managers of provincial branches. Geographically, 26.6% worked in Sari, 16.6% in Babolsar, 16% in Amol, 14.8% in Babol, 14.2% in Behshahr, and 11.8% in Qaemshahr.

Table 2. Cronbach's Alpha, Composite Reliability, and AVE Tests

Variables	Alpha > 0.7	CR > 0.7	AVE > 0.5	R^2	Q^2
Human Resource Productivity	0.940	0.953	0.771	0.570	0.398
Organizational Factors	0.906	0.924	0.557	0	0
Individual Factors	0.886	0.909	0.528	0	0
Cultural Factors	0.951	0.957	0.635	0	0
Environmental Factors	0.920	0.932	0.535	0	0

The reliability test for the measurement tool indicated an acceptable level of reliability. The factor loadings test was confirmed, with all factor loading coefficients exceeding 0.7, indicating suitability. Convergent validity was verified based on the four required conditions, confirming the acceptance of this validity criterion. Each observed variable's factor loading on its corresponding latent variable was at least 0.1 higher than its factor loading on other latent variables, confirming the cross-loading test.

The square root of AVE (main diagonal of the matrix) for all first-order variables exceeded their correlations, indicating appropriate divergent validity and good model measurement fit. Thus, both convergent and divergent validity criteria were satisfied, confirming the validity and reliability of the measurement model.

For structural model fit, the significance of path coefficients (T-value) was assessed. Relationships between constructs were significant at a 95% confidence level. The R^2 test for determination coefficients showed an R^2 value of 0 for exogenous variables and 0.570 for the human resource productivity variable, which is acceptable. The obtained GOF value exceeded 0.5, indicating strong model fit.

Table 3. Summary of Hypothesis Results

Hypothesis No.	Relationship	Path Coefficient	T-value	Result
1	Individual Factors → Human Resource Productivity	0.233	2.108	Supported
2	Cultural Factors → Human Resource Productivity	0.260	2.061	Supported
3	Organizational Factors → Human Resource Productivity	0.391	2.358	Supported
4	Environmental Factors → Human Resource Productivity	0.960	5.144	Supported

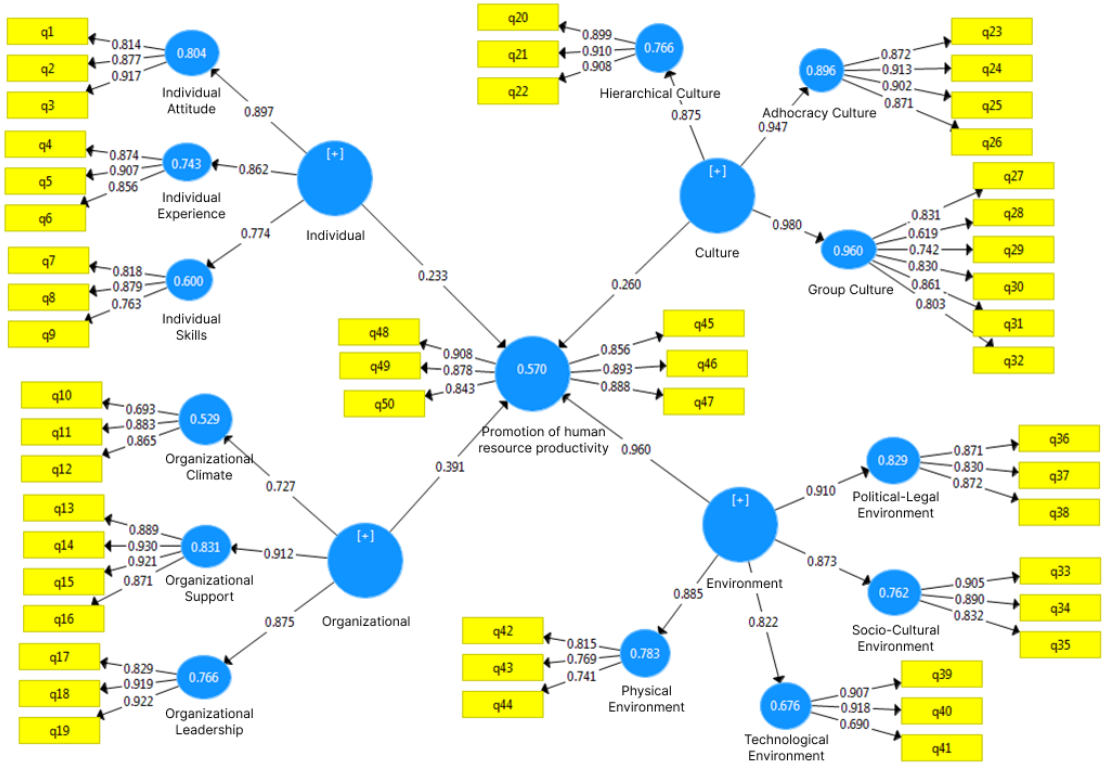

Figure 1. Model with Standardized Coefficitents

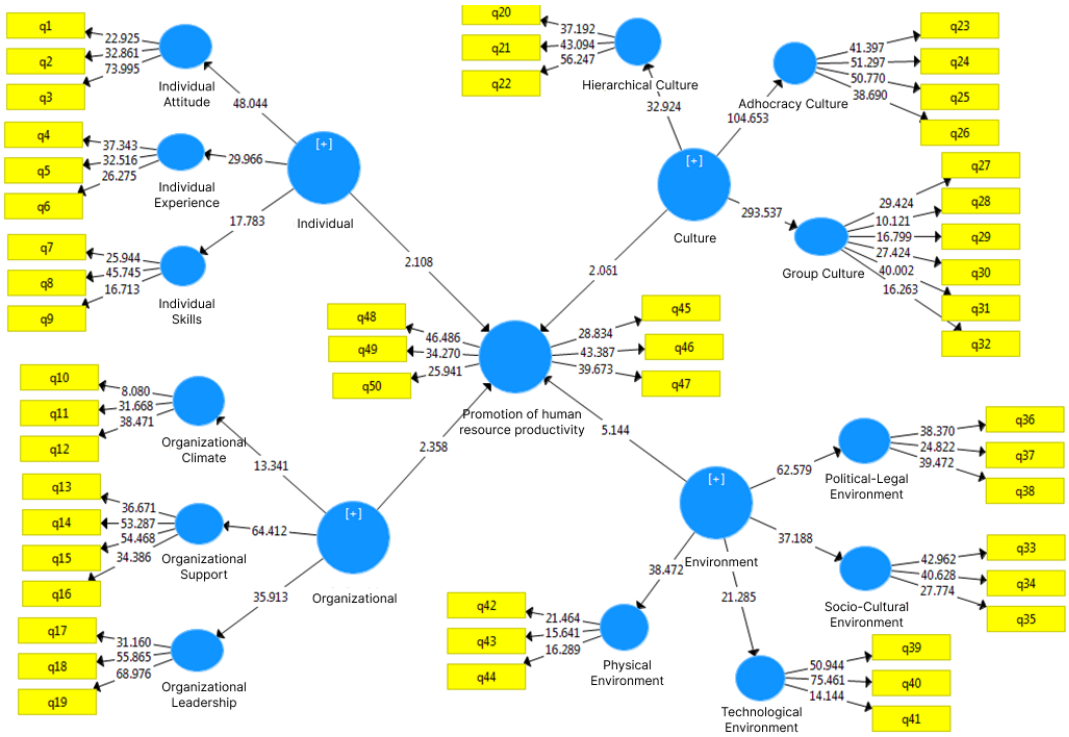

Figure 2. Model with T-values

Hypothesis 1: The path coefficient for the relationship between individual factors and human resource productivity is 0.233, with a T-value of 2.108, exceeding the significance threshold of 1.96. Therefore, Hypothesis 1 is supported.

Hypothesis 2: The path coefficient for the relationship between cultural factors and human resource productivity is 0.260, with a T-value of 2.061, exceeding the significance threshold of 1.96. Thus, Hypothesis 2 is supported.

Hypothesis 3: The path coefficient for the relationship between organizational factors and human resource productivity is 0.391, with a T-value of 2.358, exceeding the significance threshold of 1.96. Hypothesis 3 is therefore supported.

Hypothesis 4: The path coefficient for the relationship between environmental factors and human resource productivity is 0.960, with a T-value of 5.144, exceeding the significance threshold of 1.96. Consequently, Hypothesis 4 is supported.

4. Discussion and Conclusion

Based on the review of theoretical literature, factors such as individual, cultural, organizational, and environmental factors were identified. Statistical analyses revealed that all these factors have a significant positive impact on the enhancement of human resource productivity. Among these, environmental factors and organizational factors were found to have the greatest influence on improving human resource productivity. Below, the discussion, comparisons, and recommendations are presented.

In Hypothesis 1, it was determined that individual factors influence human resource productivity with a path coefficient of 0.233. The findings of Azizi et al. (2022) indicate that individual variables such as education, knowledge and skills, benefits, individual health and welfare facilities, work experience, enthusiasm for work, and managerial reward and punishment systems have a significant relationship with human resource productivity [11], aligning with the results of this study.

In Hypothesis 2, cultural factors were found to influence human resource productivity with a path coefficient of 0.260. The findings of Hakkak et al. (2021) and Pourmola et al. (2021) demonstrated that cultural factors, such as appropriate working hours, timely payments, fair remuneration, and job security, significantly impact human resource productivity [22, 23]. This is consistent with the results of this study.

In Hypothesis 3, it was shown that organizational factors significantly influence human resource productivity, aligning with the findings of Mojelan et al. (2021). Mojelan's research highlighted that awareness and acceptance of

organizational goals, proactive efforts to achieve objectives, teamwork, and collaboration are key factors influencing employee productivity enhancement [21].

In Hypothesis 4, environmental factors were confirmed to significantly impact human resource productivity, consistent with the findings of Sukki et al. (2019). Sukki's research indicated that quality of work-life, motivation (both material and spiritual), and fair treatment of individuals positively influence human resource productivity [24]. Additionally, Hakkak et al. (2021) and Pourmola et al. (2021) emphasized the role of factors such as appropriate working hours, timely payments, fair remuneration, and job security in productivity enhancement [22, 23].

The human resource productivity indicators help establish productivity strategies in organizations and enhance effective communication and collaboration between various units and departments. They foster compatibility between managers and employees, uniform empowerment programs, and consistent evaluation of human capital productivity levels.

The findings of Hypothesis 1 showed that individual factors influence human resource productivity with a path coefficient of 0.233. Based on the factor loadings, the compatibility between the employee's field of study and job was found to have the greatest impact on productivity enhancement. Managers are advised to employ staff whose field of study aligns with their job roles, as a lack of expertise in the relevant field can lead to reduced efficiency and productivity.

The findings of Hypothesis 2 indicated that cultural and social factors influence human resource productivity with a path coefficient of 0.260. Factor loadings revealed that employee loyalty to the bank had the greatest impact on productivity enhancement. Managers are encouraged to foster a positive atmosphere and avoid tension among employees to increase loyalty and commitment to the bank.

The findings of Hypothesis 3 demonstrated that organizational factors influence human resource productivity with a path coefficient of 0.391. Factor loadings revealed that suggestions and feedback had the most significant impact on productivity enhancement. Managers are recommended to organize brainstorming sessions and actively listen to employee feedback, which can improve work relationships and enhance the productivity and performance of the bank.

The findings of Hypothesis 4 indicated that environmental factors influence human resource productivity with a path coefficient of 0.960. Factor loadings revealed that job security had the greatest impact on productivity enhancement. Managers are advised to enhance the efficiency of security systems and foster a sense of satisfaction and friendly relationships among employees to create a supportive work environment.

This study highlights that managers aiming to enhance human resource productivity in organizations should recognize that while productivity may determine performance outcomes, mediating processes play a crucial role. Furthermore, human resource managers should develop a profound understanding of how to shape individuals' skills, attitudes, and behaviors to improve organizational performance.

The literature on human resource productivity enhancement can be discussed among various employee groups. This research can gather data at different employee levels and across other organizations. However, the generalizability of this study is limited, as it does not include small and medium-sized enterprises, regions, or industries. To generalize the findings, further attention to other industries is recommended.

Nonetheless, incorporating other options could lead to different interpretations since managers in these organizations have varied experiences. This study was conducted at a specific point in time. Future studies could adopt a longitudinal approach, allowing for the collection of data over a longer period, enabling a more comprehensive model of human resource productivity enhancement in organizations and private banks. A similar study could also be conducted using regional or industry-specific data to complement these findings.

In terms of methodology, a quantitative approach was employed. While quantitative research offers generalizable empirical findings, qualitative studies could provide a deeper understanding of issues related to human resource productivity enhancement.

Authors' Contributions

Authors equally contributed to this article.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

All procedures performed in this study were under the ethical standards.

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