Original Research Article

Transformation of financial management in Jinan's banking industry: Driving Factors, implementation, and strategic optimization

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Abstract: This study explores the digital financial management transformation of the banking industry in Jinan, Shandong Province, China. Employing quantitative research methods, it analyzes driving factors, implementation measures, and effects of the transformation, while identifying challenges faced. The results, based on a sample of 305 employees from major banks, indicate a high level of digital transformation with significant impacts from implementation measures. However, areas like technology integration and data security require improvement. A strategic plan is proposed to optimize the digital transformation for better operational efficiency, resource allocation, and customer experience.

Keywords: Digital transformation; Financial management; Implementation measures; Data security; Strategic planning

1. Introduction

In the era of the digital economy, the banking industry globally is undergoing profound changes, driven by technological advancements and evolving customer demands. Jinan, as an important region in China's financial landscape, is no exception. The banking sector here is actively embracing digital transformation to stay competitive and meet the demands of a tech-savvy populace. This study aims to delve into the specifics of this transformation, highlighting its driving forces, implementation strategies, and the challenges encountered.

2. Literature review

Drawing from transaction cost theory, strategic management theory, and synergy theory, this study examines the multifaceted nature of digital transformation in banking. Key driving factors include:

1. Advances in Fintech: Technologies like artificial intelligence (AI), big data, and blockchain are revolutionizing banking operations.

2. **Customer Demand**: Increasing customer expectations for convenience and personalized services are pushing banks to innovate.

3. Policy Support: Governments worldwide are promoting fintech innovation through various incentives.

4. Market Competition: The rise of fintech companies is creating intense competition for traditional banks.

5. Technological Progress: Continuous advancements in technology enable new business models and service delivery methods.

3. Research methods

A quantitative research design was adopted, involving a survey questionnaire administered to 305 employees from major banks in Jinan. The sample included individuals from various job levels and backgrounds, ensuring a comprehensive view. Data was analyzed using SPSS software, employing descriptive statistics, correlation

analysis, and regression analysis to establish relationships between variables.

4. Results and discussion

4.1. Demographic profile of respondents

Table 1 presents the demographic characteristics of the respondents.

 Table 1. Demographic profile of respondents.

Characteristic	Frequency	Percentage
Age		
18-24 years old	80	26.23%
25-34 years old	78	25.57%
35-44 years old	88	28.85%
45 years old or older	59	19.34%
Sex		
Male	138	45.25%
Female	167	54.75%
Job Position		
Top Management	85	27.87%
Middle Managers	55	18.03%
Grassroots Managers	62	20.33%
Frontline Workers	37	12.13%
Others	66	21.64%
Years of Experience		
Less than 1 year	55	18.03%
1-3 years	68	22.30%
4-6 years	59	19.34%
7-10 years	46	15.08%
More than 10 years	77	25.25%
Educational Background		
Financial Management	187	61.31%
Information Technology	27	8.85%
Management	38	12.46%
Others	53	17.38%

4.2. Evaluation of digital transformation

4.3. Industry driving factors

Table 2 summarizes the respondents' evaluation of industry driving factors.

Driving Factor	Weighted Mean	Qualitative Interpretation	Rank
The digital transformation of banks has significantly developed in financial technology.	3.90	High	3
The advances in financial technology have a significant impact on the digital transformation of banks.	4.01	High	2
The policy and government support have a significant impact on the digital transformation of banks.	3.78	High	5

Driving Factor	Weighted Mean	Qualitative Interpretation	Rank
The competitive pressures in the market drive banks to accelerate digital transformation.	3.86	High	4
The advances in technological innovations have accelerated the pace of the digital transformation of banks.	4.13	High	1
Overall Weighted Mean	3.94	High	

 Table 2. (continued)

4.4. Implementation measures

 Table 3 details the respondents' assessment of implementation measures.

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Implementation Measure	Weighted Mean	Qualitative Interpretation	Rank
The banks have successfully introduced new technologies in their digital transformation.	4.15	High	4
The banks have effectively optimized their business processes through digital transformation.	4.10	High	5
The banks have adequate employee training as a key factor in the success of digital transformation.	4.16	High	2.5
The banks have effectively considered data security to be a top factor in their digital transformation.	4.21	Very High	1
The banks have restructured to adapt to digital transformation.	4.16	High	2.5
Overall Weighted Mean	4.16	High	

4.5. Effects

Table 4 outlines the effects of digital transformation as perceived by the respondents.

Table 4. Evaluation of effects of digital transformation.

Effect	Weighted Mean	Qualitative Interpretation	Rank
The digital transformation has significantly improved the operational efficiency of banks.	4.12	High	4
The resource allocation of banks is more reasonable through digital transformation.	4.17	High	1.5
The digital transformation of banks has dramatically improved the customer experience.	4.13	High	3
The digital transformation has helped banks effectively control operating costs.	4.17	High	1.5
The digital transformation has enhanced the provision of services to the customers.	4.03	High	5
Overall Weighted Mean	4.13	High	

 Table 4. (continued)

5. Challenges in digital transformation

5.1. Technology integration

Table 5 highlights the extent of challenges related to technology integration.

Table 5. Extent of	challenge based of	n technology integration.
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Challenge	Weighted Mean	Qualitative Interpretation	Rank
The implementation of new processes and technologies in banks, considering legal requirements and growing IT infrastructure, causes problems.	4.17	High Extent	4
The centrally provided technology and interfaces are not sufficiently developed for seamless integration.	4.18	High Extent	3
Banks face rapid technological developments and associated disruption risks.	4.19	High Extent	2
The high costs associated with digitalization and infrastructure.	4.32	Very High Extent	1
Overall Weighted Mean	4.21	Very High Extent	

Table 5. (continued)

5.2. Data security risk

Table 6 shows the extent of challenges related to data security risk.

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Challenge	Weighted Mean	Qualitative Interpretation	Rank
Increasing networking between banks and FinTechs, leading to more transparency.	4.29	Very High Extent	3
Limited availability of internal digital experts.	4.30	Very High Extent	2
Digitalization can both minimize and promote errors, creating uncertainty.	4.36	Very High Extent	1
Overall Weighted Mean	4.32	Very High Extent	

Table 6. (continued)

5.3. Employee adaptability

Table 7 presents the extent of challenges related to employee adaptability.

Table 7. Extent of challenge based on employee adaptability.

Challenge	Weighted Mean	Qualitative Interpretation	Rank
Digitalization increases employee and process transparency, causing fear.	4.36	Very High Extent	1
Employees are overwhelmed by digitalization and need to adapt quickly.	4.13	High Extent	3
Employees must be involved in the change process and learn to handle digitalization.	4.28	Very High Extent	2
Employees need to become more welcoming to digitalization.	3.88	High Extent	4
Overall Weighted Mean	4.16	High Extent	

5.4. Significant differences in evaluation

Analysis revealed significant differences in the evaluation of digital transformation based on demographic profiles. Younger respondents (25-34 years old) rated digital transformation higher across all variables compared to older age groups. Male respondents also provided higher ratings compared to females. Top management employees had the most positive evaluations, followed by middle managers, with frontline workers rating it the lowest. Similarly, those with 1-3 years of experience rated digital transformation higher than those with more or less experience. Respondents with backgrounds in information technology-related fields provided the highest evaluations.

5.5. Relationship between digital transformation and challenges

A significant positive relationship was found between the extent of digital transformation and the challenges faced, as indicated by high correlation coefficients (r > 0.5, p < 0.05) for technology integration, data security risk, and employee adaptability.

5.6. Proposed digital transformation strategic plan

To optimize financial management through digital transformation, a strategic plan is proposed focusing on:

- **Collaboration**: Enhancing partnerships with government agencies and policymakers for improved system updates and innovation.
- Operational Efficiency: Integrating modern digital solutions to streamline processes and reduce costs.
- Customer Experience: Adapting services to meet evolving customer demands and preferences.
- **Employee Training**: Providing comprehensive training to enhance employees' digital skills and adaptability.
- Data Security: Implementing robust cybersecurity measures to protect sensitive information.

6. Conclusion

The study concludes that while digital transformation in Jinan's banking industry is progressing well, there are still significant challenges, particularly in technology integration, data security, and employee adaptability. A strategic approach, involving collaboration, operational efficiency, customer focus, and employee training, is essential for sustainable success in this digital era.

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