Technological Innovations and Financial Performance: A Case of Commercial Banks in Jordan

Sulieman Aber Abdullah[1]
Alrgaibat khawaldeh[2]
[1]Hashemite University, Zarqa, Jordan
[2]The University of Jordan

Abstract

The study sought to examine the effect of technological innovations on the financial performance of commercial banks in Jordan. The study was based on the fact that Jordan, and like other developing countries, had seen changes in the financial sector with the aim of integrating the Jordanian economy with the global markets. There were also immense changes on regulations seeking to make commercial banks more competitive. Over the last years a number of factors had contributed to increasing competition in the Jordan banking sector. One of the most important factors is deregulation, promoted by the Central Bank Directive on Banking and Financial Services, Operation and Supervision of credit institutions. This directive provided the competitive conditions for all Jordanian banking institutions. The source of research data for this study is from the Amman Stock Exchange (ASE) database, and the Department of Statistics (DOS) in Jordan and primary data collected using questionnaires from the commercial banks listed at Amman Stock Exchange. 11 domestic commercial banks in Jordan were studied. The return on assets (ROA) was used to evaluate bank's performance. The research design of the study was descriptive in nature and data was obtained from both secondary and primary sources. To collect primary data, questionnaires were used. Statistical Package for Social Sciences was used to analyze the data. Inferential statistics which included t-tests and analysis of the variance was used to determine the significance of the results. The study found that adoption of technological innovations lead to improved commercial bank financial performance. Technological innovations were also found to have positive relationship on customer service by making banking services more easily accessible to the customers. To fully achieve the benefits of technological innovations, the study recommended that commercial banks in Jordan to sensitize their customers on the benefits of adoption of technology in banking. The study also recommended for more government participation in ensuring sound regulatory framework that promotes technological innovations among commercial banks.

Key Words: Technological Innovations, Financial Performance, Commercial Banks in Jordan

1. INTRODUCTION

In the global competitive business scenario, banks, among other organizations, have been facing many challenges caused by globalization, liberalization, technological advancements, and changing customers' expectations (Husni, 2011). Banks have been facing a dynamic business environment that is technologically driven, globally unbounded and customer focused (Greuning, & Bratanovic, 2004). These challenges, among many others, calls for extensive search for suitable strategies to be adopted by organizations for growth and survival in the changing and turbulent market place (Arnaboldi & Claeys, 2008). The Jordanian banking sector occupies a prominent place among other sectors of national economy that effects financial and social, which touches different segments of Jordanian society through a lot of businesses and activities that affect and are affected by elements of national economy in addition to the role of the influential played by commercial banks when providing banking services successive and modern to made it the most important sector for the efficiency and ability to deal positively and effectively with internal and external developments (Husni, 2011). This requires from commercial banks efficient capability to analyze and manage risks in scientific and practical modern methods, as well as efficient management of investment portfolios, departments of the creative management for sources of funds and their usages, to achieve high performance we must adopt plans and policies for each commercial bank, which rely on the translation of plans set to the achievements, and improve the operational efficiency of the optimal exploitation of the production inputs in order to reach a high quality product at the lowest possible cost, enabling them to progress and continue all the way to the best performance (Khrawish, 2011).

Khrawish (2011) asserts that innovations in the finance sector is the arrival of a new or better product and/or a process that lowers the cost of producing existing financial services. Innovation in the financial services sector has led to recent fundamental changes including; deregulation, increasing competition, higher cost of developing new products and the rapid pace of technological innovation, more demanding customers and consolidation of corporations (Khrawish, 2011). The innovation process has been underpinned by the widespread and ready electronic access to news and information on economic and financial developments and on market responses (Atanassov, Nanda & Seru, 2007). In the world of banking and finance nothing stands still. The biggest change of all is in the scope of the business of banking. Banking in its traditional from is concerned with the acceptance of deposits from the customers, the lending of surplus of deposited money to suitable customers who wish to borrow and transmission of funds. Apart from traditional business, banks nowadays provide a wide range of services to satisfy the financial and non-financial needs of all types of customers from the smallest account holder to the largest company and in some cases of non-customers. The range of services offered differs from bank to bank depending mainly on the type and size of the bank (Greuning, & Bratanovic, 2004).

Financial innovations have led to a revolution in the way the banking business is conducted as found by (Hirtle & Stiroh, 2007) who demonstrates evidence that Chinese commercial banks have moved from the traditional business operation mode; the wholesale credit operations to the retail mode as a result of technological innovations. In India, Pooja, (2009) conclude that internet banks were larger, more profitable, had higher asset quality, lower administrative expenses and were more efficient compared to the non-internet banks. In Jordan, e-banking resulted to more satisfied customers and better long-term cost saving strategies (Greuning, & Bratanovic, 2004). Jordan has begun banking and financial freedom, and reconsidering the existing regulations and laws, as well as the enactment of the new laws, as prerequisites to repair infrastructure and make it able to accommodate with datum of the era of globalization and economic openness ((Khrawish, 2011). These developments have been accompanied by new competitive challenges for all sectors of the national economy, including the banking sector, since this sector constitutes great importance in the Jordanian economy, as well as the repercussions of the global financial crisis in recent years on the reality of the Jordanian economy (Ramadan, Kilani & Kaddumi, 2011).

2. OBJECTIVE OF THE STUDY

This study was to evaluate the effect of technological innovations on the financial performance of commercial banks in Jordan.

3. RESEARCH METHODOLOGY

The research design of the study was descriptive in nature and data was obtained from both secondary and primary sources. To collect primary data, questionnaires were used. The source of secondary research data for this study was from the Amman Stock Exchange (ASE) database, and the Department of Statistics (DOS) in Jordan and primary data collected using questionnaires from the commercial banks listed at Amman Stock Exchange. 11 domestic commercial banks in Jordan were studied. Data was collected for a period of 10 years from 2007 to 2016. The return on assets (ROA) was used to evaluate bank's performance. Statistical Package for Social Sciences was used to analyze the data. Inferential statistics which included z-tests, t-tests and analysis of the variance was used to determine the significance of the results.

4. DATA ANALYSIS RESULTS

To achieve the overall objective of the study which was to evaluate the effect of technological innovations on financial performance of commercial banks in Jordan, regression analysis was used. Table 1 presents the relationship between dependent variable (commercial banks profitability) and independent variables (technological innovations).

Table 1: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.728	0.529	0.481	1.7956

a. Predictors: (Constant), Technological Innovations

The findings in the table above indicates that technological innovations had a strong positive effect on financial performance of commercial banks in Jordan (r=0.728). The coefficient of determination implied that the technological innovations explained up to 52.9% of commercial banks financial performance.

The results of model fitness was tested by the Analysis of Variance (ANOVA) presented in Table 2.

Table 2: ANOVA Results

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	42.78	1	14.2595	8.415	0.000

	Sum of Squares	df	Mean Square	F	Sig.
Residual	296.99	108	7.8156		
Total	339.77	109			

a. Predictors: (Constant), Agency Banking, Internet Banking, Mobile Banking
b. Dependent Variable: ROA

The ANOVA results indicated that technological innovations have a significant effect on financial performance (p<0.000, F= 8.415). Thus, technological innovations among commercial banks in Jordan will lead to significant positive effect on financial performance as measured by Return on Assets.

Table 3: Model Coefficients

	Unstandardized Coefficients	Standardized Coefficients		t	Sig.
B		Std. Error	Beta		
(Constant)	2.851	2.283		-1.0961	0.299
Technological Innovations	1.449	1.124	1.041	4.472	0.000

a. *Dependent Variable: ROA*

Technological innovations had a positive coefficient implying that increase in adoption of technological innovations will improve financial performance. The coefficient was significant at 95% confidence level (p<0.000, 4=4.472). The constant coefficient was not significant indicating that in the regression model, technological innovations had significant influence. These finding are in line with those of Husni (2011) who concluded that electronic banking lead to better incomes for the banks. Khrawish (2011) also concluded that internet usage in banks led to more income and profits.

5. RECOMMENDATIONS

To fully achieve the benefits of technological innovations, the study recommends that commercial banks in Jordan to invest in technological innovations with the aim of improving performance under competitive situation. Further, the banks should sensitize their customers on the benefits of adoption of technology in banking. Commercial banks must also continuously audit their banking systems to ensure they are secure and should be continuously updated. This will ensure that customers and general public are confident on use technological innovations. The study also recommends that banks be focused in terms of their needs and using the right technology to achieve goals, rather, than acquiring technology because other banks have it. Government participation is also recommended in ensuring sound regulatory framework and cost reduction while implementing mobile banking, agency banking and internet banking. Regulatory authorities like Central Bank of Jordan must stipulate standards for the banks to follow to avoid making Jordan Banking Sector a dumping ground for the outdated technological infrastructures and management of banking risks. Government policy makers should also review policies related to promotion of innovation adoption and transfer of technology. Government should encourage adoption of innovations that will improve profitability of organizations because it will convert to better tax revenues for the government.

REFERENCES

Arnaboldi, F., & Claeys, S. (2008). Financial Innovation in Internet Banking: A Comparative Analysis. Journal of Technology, 10, 233-234.

Atanassov, J., Nanda, V., & Seru, A. (2007). Finance and innovation: The case of publicly traded firms. *Working Paper. University of Oregon*, Arizona State, and Chicago.

Greuning, H.V., & Bratanovic, S. B. (2004). *Analyzing and Managing Banking Risk: A Framework for Assessing Corporate Governance and Financial Risk*. The World Bank, Washington D.C.

Hirtle, B. J., & Stiroh, K.J. (2007). The return to retail and the performance of U.S. banks. *Journal of Banking and Finance, 31*, 1101-1133

Husni, (2011). Determinants of Commercial Banks Performance: Evidence from Jordan ", *International Research Journal of Finance and Economics* , Issue 81

Khrawish, H. (2011). Determinants of Commercial Banks Performance: Evidence from Jordan. *International Research Journal of Finance & Economics*, (81), 148–159.

Ramadan, I. Z., Kilani, Q. A., & Kaddumi, T. A. (2011). *Determinants of Bank Profitability: Evidence from Jordan. International Journal of Academic Research*, 3(4), 180–191

Simpson, J. (2002). The impact of the internet in banking: observations and evidence from developed and emerging markets. *Telematics and Informatics, 19*, 315-330.