

The Relationship between Banking Desertification and Poverty Rates: Iraq as a Case Study

Ameer Ali Khaleel¹, Noor S. Alramadan², Sheimaa Hadi Neamah³
Faculty of Management and Economics,
University of Kerbala, Iraq

ABSTRACT

Economic and environmental factors often exacerbate the deterioration of financial services in certain regions, a phenomenon known as "banking desertification". This phenomenon could significantly impact local economies, potentially exacerbating poverty rates. The goal of the research is to understand the impact of banking desertification on poverty rates, as represented by the number of ATMs and bank branches. We selected Iraq as the case study for the period 2003-2022. We analyzed the multiple regression model using the SPSS software. The study indicates that banking deserts significantly impact poverty rates, and the number of ATMs decreases poverty rates.

Keywords: banking desertification, poverty rate

INTRODUCTION

Desertification is a serious issue with a negative influence on several countries. Iraq has approximately 670 km of desert with more than 38% territory of the country (Al-Obaidi et al., 2022). The banking desertification is related to the reduction of access to financial services mainly ATMs and banks in particular geographical areas. This study will explore the relationship between banking desertification and poverty rates in the context of Iraq. There will be showing the Banking desertification indicators consisting number of ATMs and bank branches.

LITERATURE REVIEW

The Relationship between Banking Desertification and Poverty Rates: Iraq as a Case Study

Banking desertification is related to the lack or absence of banking services like financial institutions, ATMs, and bank branches in specific areas. It is a main issue that raises the social and economic consequences and access the financial services is necessary for wealth generation, poverty alleviation, and economic development. Iraq has experienced decades of conflict, economic downturns, and political instability, the banking desertification affected the poverty rates mainly in the conflict-affected and rural areas (Adeniran, Jadah, & Mohammed, 2020).

The financial sector of Iraq has been shaped through political instability, conflict, and economic sanctions. These factors have declined the infrastructure of the country consisting the banking system. Iraq was the main geographical area for a strong financial sector mainly in the urban areas such as Basra and Baghdad. Therefore, the economic disruptions and wars affected the financial institutions and banks forcing several to operate in a restricted zone or

¹ameer.ali@uokerbala.edu.iq; ORCID ID: <https://orcid.org/0000-0002-3216-8882>

²noor.salah@uokerbala.edu.iq

³sheimaa.h@uokerbala.edu.iq; ORCID ID: <https://orcid.org/0000-0003-2573-3334>

close the banks. It resulted in banking desertification, mainly in regions which are outside of the main urban areas (Salim Abdulrahman, 2019).

The banking system of Iraq passed by many stages beginning in 1867 and the oldest banks were the Ottoman Bank, Eastern British Bank, Iraqi National Banking, and Bank of Shah of Iran. After the economic sanctions and war on, Iraq's 2003 US-led invasion the banking sector of Iraq would play an important role in economic development (Mahmoud, 2024). Banking deserts, where whole populations had no or little access to financial institutions, emerged as a result of a disparate distribution of financial services. These "banking deserts" are particularly prevalent in the nation's distant rural areas and conflict zones (Vinott et al., 2022).

In the context of the technology and banking sector, Iraq is close to the global trends. The people of Iraq are reliant on cash payment and as per the World Bank, 23% owned a bank account in the year 2017. Challenges like trust issues in banking and insufficient knowledge about cashless payment methods have slowed financial progress (Kaptita, 2024).

At the end of the year 2023, the total assets of the banking system of Iraq had grown by 15.1% year over year to reach USD156.7 billion, primarily due to a 15.3% increase in deposits to USD101.9 billion. The greatest contribution to total investment growth was made by current deposits, which increased 17.2% to reach USD82.1 billion and account for 80.5% of all deposits in the banking system (Rabee Securities, 2024).

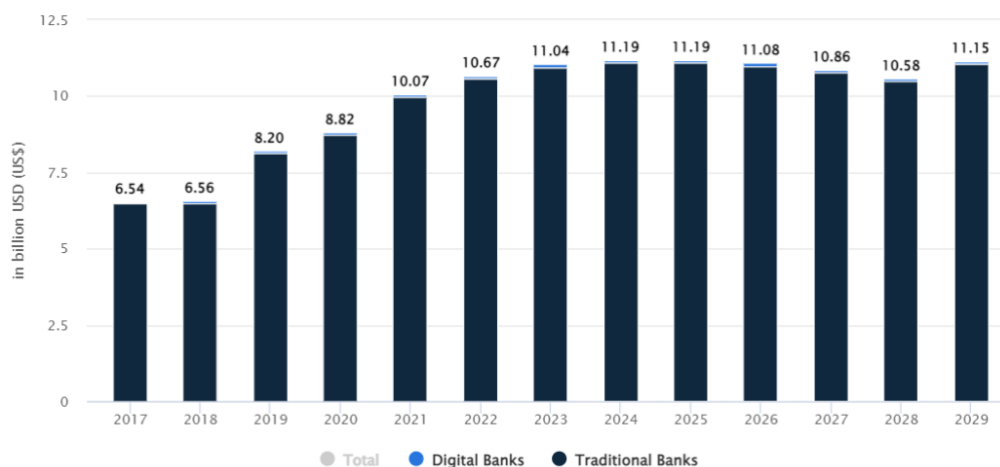


Figure 1: Net Interest Income of Iraq Banking
(Source: Self-developed)

In Iraq, it is anticipated that the banking sector will generate US\$11.19 billion in net interest income by 2024. It is significant to highlight that Traditional Banks, with an anticipated market value of US\$11.10 billion in the year 2024, lead this particular market sector. A steady rise in Net Interest Income is anticipated depending on the anticipated annual growth rate (CAGR 2024-2029) of -0.07%, leading to a market volume of US\$11.15bn throughout 2029. China is predicted to produce the greatest Net Interest Income in the worldwide comparison, coming in at US\$4,332.0 billion in the year 2024. As more customers adopt online banking as well as mobile payment methods, the banking industry of Iraq is seeing a boom in digital banking services.

In Iraq, poverty is the main issue. The pandemic and its related socioeconomic effects have caused 4.5 million (11.7%) Iraqis to fall below the poverty line. Due to employment losses and price increases, the country's poverty rate increased from 20% in the year 2018 to 31.7%. Children are the ones most affected by the crisis, accounting for an additional 15.8%

of the poverty rate. Prior to the crisis, 1 in 5 children lived in poverty; as the crisis worsens, that percentage nearly doubles to 2 in 5 children (37.9%) (UNICEF, 2018).

Around a quarter of the Iraqi people are in poverty and Iraq suffers from inequalities beyond the bad wealth distribution into unequal employment, public services, and social protection. In Iraq, the inequality among men and women is pronounced. In Iraq, the gap between men and women is still noticeable. With only 10.6% of women working in Iraq in the year 2021, it was one of the lowest rates in the world. Those who are left behind include young adults, individuals who have disabilities, refugees, as well as internally displaced people (ILO, 2024).

Banking services like remittance facilities, savings accounts, loans, and credit are considered the necessary tools for businesses and people to refine their financial standing as well as capitalization in economic opportunities. It worsens the financial issues that individuals face mainly those who face poverty. Therefore, the absence of ATMs and banks restricts the ability of individuals to money transfer as well as store funds pressurizing several to operate a cash economy that can be incompetent and risky (Hamoudi, Köppe, & Winston, 2023).

Through increasing financial exclusion, banking desertification impacts poverty. Financial exclusion is related to inability of the businesses or individuals to access the necessary financial services that restrict their potential to be involved in the economy. In the rural areas of Iraq, financial exclusion is widespread. It impacts disproportionately the marginalized groups, poor and women who live without access to financial services such as credit facilities, savings accounts, and loans (Jadah et al., 2020). On the other hand, in the banking desertification areas, limited financial services that the people are not able to capitalize on the business, save their money, and purchase assets. It restricts their potential to refine the economic situation and leads to a poverty vicious cycle. In the context of entrepreneurs and small businesses, banking desertification is the main issue to their growth as they cannot able to access the credit which they require to start or expand their business. In rural areas, it is causing where small size businesses are the main employment source (Bérenger, 2023).

Therefore, in addition, the occurrence of banking desertification hinders individuals from accessing financial resources that might assist in their future planning, like retirement savings accounts or insurance. Individuals are more susceptible to financial shocks, including losing their jobs or experiencing medical issues without these services, which can cause them to fall particularly into poverty. The absence of financial services also makes it more unlikely for the rural poor of Iraq to get government assistance or advantages, as they are frequently provided through the banking sector (Obaid, 2021).

In Iraq, the banking sector faced several issues that contributed to the banking desertification persistence. Security is one of the primary issues faced by the banking sector of Iraq. Several banks were abandoned or destroyed in conflict-affected areas, especially in territories controlled by the Islamic State (ISIS), depriving whole communities of accessibility to financial services. Financial institutions have not been able to resume operations in areas that have been free from ISIS due to the lengthy restoration process and continued security concerns. Even while there is still a large need for financial services, financial institutions are still reluctant to branch out into these areas due to concerns about more instability and attacks (Ibrahim, 2022). On the other hand, bureaucracy and corruption play an important role in restricting the business sector expansion. The financial institutions of Iraq hindered by red tape, making this complex for them to be efficiently operate (Rabea et al., 2023). It is mainly for the public banks that control the banking environment of Iraq. The effectiveness of these banks shared with the corruption, restricts their potential to serve in the

under-preserved or ruler areas that contribute to the perseverance of banking desertification (Nanda et al., 2024).

In Iraq, technological issues obstruct the banking services development. In rural areas, the telecommunication infrastructure is underdeveloped, restricting the bank's potential to provide ATMs or digital banking services. It develops the reliance on the bank branches which are expensive to develop as well as manage in the regions with the high safety risk and low population. As a consequence, several banks are not ready to expand their branches in these areas.

In Iraq, poverty, and banking desertification are intertwined with strengthening the other. The poverty restricts the banking services demand, making this not profitable for the financial institutions to set up their ATMs or bank branches in rural and poor areas. Without the financial institutions, these areas individuals are not able to access funds that could assist them to escape poverty like saving accounts to develop financial security and loans for startups or small businesses. It continues the poverty that restricts the banking sector growth. In the banking desert, the limited financial services obstruct the local economic development. Without access to banking services or credit, entrepreneurs and small businesses are not able to expand, restricting economic development and job opportunities (Amjad, Cabrera, & Phadera, 2023). It increases poverty and demotivates the individual from capitalizing in communities. As a consequence, banking desertification does not affect the people only but also develops a wider influence on the development of the regional economy.

Banking Desertification Indicators (Number of Bank Branches – Number of ATMs)

The number of bank branches and the number of ATMs is the two main indicators that can effectively be used to analyze the banking desertification extent in Iraq. These indicators show the financial services present in the specific reason and their absence shows the banking desertification for Iraq. Especially in rural areas, the per capita bank branch number in Iraq is significantly lower than the global average. While there is a comparatively high number of bank branches in large cities such as Basra and Baghdad, rural areas frequently have no or little banking infrastructure. This inequality is indicative of larger social and economic disparities that exist in Iraq among the country's rural and urban people (Hameedi et al., 2021).

In the rural areas of Iraq, the ATMs number is low in comparison to the urban areas. ATMs are considered important financial services for individuals who are staying in banking deserts as enable them to access basic cash and banking services without the requirement of a physical branch. Therefore, the restricted ATM availability in the rural region of Iraq worsens the financial exclusion as well as pressurizes individuals to go long distances to get their funds. It raises issues for low-income people who do not have the time or resources to travel to the distinct ATMs or banks (Salim Abdulrahman, 2019).

As per the data of 2022, in Iraq, the total number of banks is 70.

Banks and the Number of their Branches in Iraqi Governorates

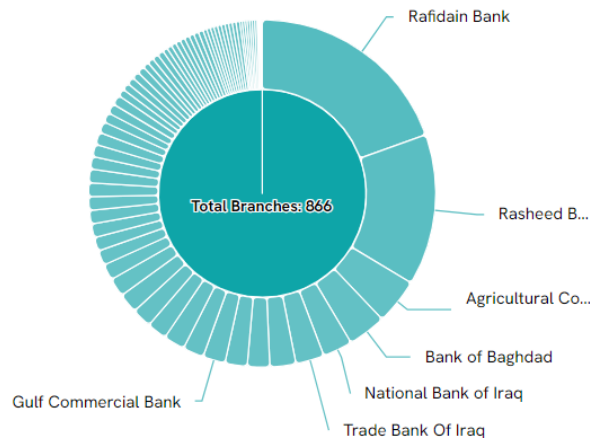


Figure 2: Banks and the number of their Branches in Iraqi Governorates
(Source: iData, 2024)

As per the mentioned graph, in the year 2022, the total number of bank branches in Iraq is 866.

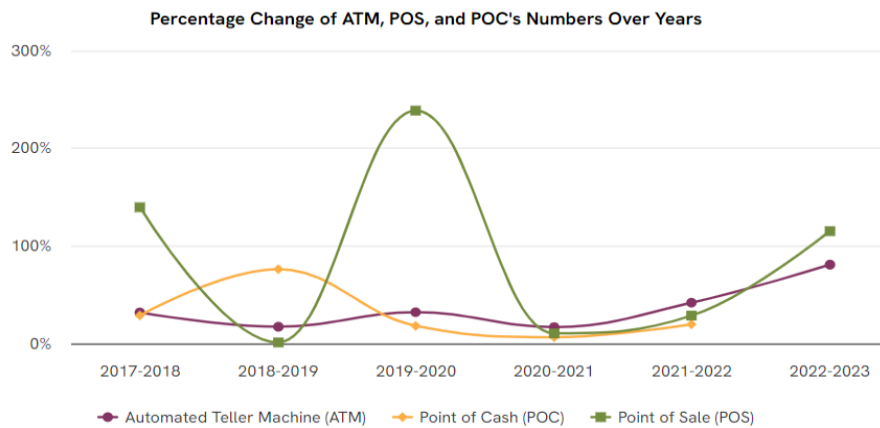


Figure 3: Percentage Change of ATM, POC, and POS numbers over the years
(Source: iData, 2024)

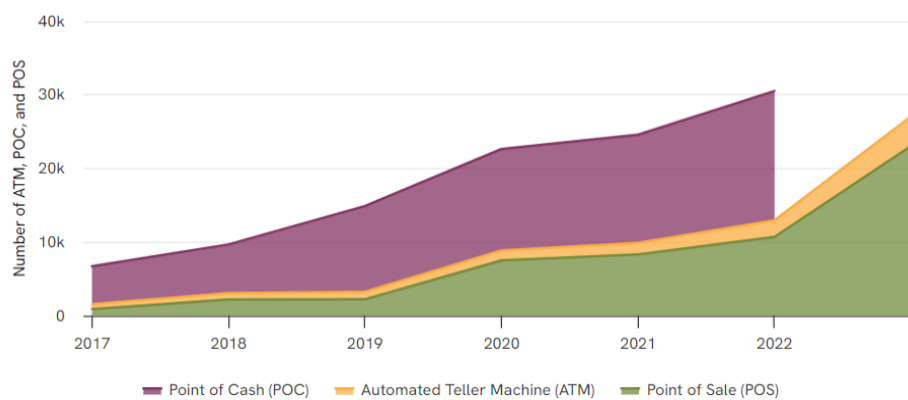


Figure 4: Number of POC, ATM, and POS in Iraq
(Source: iData, 2024)

As per the mentioned graph, in the year 2022, the total number of ATMs in Iraq is 2223.

RESEARCH METHODOLOGY

The Significance of the Research

The importance of the research stems from its study of the phenomenon of banking desertification, which is a very important issue in the Iraqi economy, and its subsequent impact on poverty rates. Providing banking services to rural and poor areas enhances financial inclusion and changes the conditions of the population in those areas, which is the goal we seek to achieve through statistical analysis of the research variables

Research Problem

Poverty rates are significant indicators of economic activity levels. The government examines poverty rates to assess the growth and stability of the nation's economic condition. Financial services facilitate the flow of funds from surplus to deficit units, perhaps mitigating the worsening of poverty rates in regions without access to these services, should banking desertification be addressed. The study's dilemma may be encapsulated in the following inquiry: Does the desertification of banking impact poverty rates in Iraq?

Research Objectives

- Analysis of the number of bank branches in Iraq
- Analysis of the number of ATMs and POS
- Measuring the impact of banking desertification on poverty rates in Iraq

Research Hypotheses

There is no statistically significant effect of banking desertification on the poverty index of the research sample.

Research Approach

The research used the descriptive approach and the analytical approach to identify the research variables for the purpose of measuring the magnitude of the impact between the variables.

ANALYSIS OF THE FINDINGS

The main hypothesis: “There is no statistically significant effect of banking desertification on the poverty index of the research sample”

This main hypothesis can be put forward that geographical areas that suffer from banking desertification may have higher poverty rates when compared to areas with sufficient access to banking services as follows:

Table 1: Coefficients^a

Model	R	R Square	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
(Constant)	.663 ^a	.440	.540	.137		3.939	.001
Number of ATMs			.065	.021	.597	3.088	.008
Number of Commercial Bank Branches			-.045	.030	-.291	-1.505	.153

Note: ^aDependent Variable: Poverty Index; ^bPredictors: (Constant), Number of Commercial Bank Branches, Number of ATMs

The relationship between the independent variables of banking desertification (number of commercial bank branches and number of ATMs) and the dependent variable, the poverty index, is examined in Table 1, which also shows the partial significance of the estimated parameters in the multiple linear regression model. The Pearson correlation coefficient of 0.66 signifies a moderate positive direct link among the independent variables. The significance levels are inferior to the computed T value for the variable representing the number of commercial bank branches (3.088) and the significance level of (0.008). This significance level is inferior than the threshold of 0.05, indicating that the computed T value is statistically significant. The parameters of the regression equation concerning the number of ATMs per 100,000 adults exert a substantial direct influence on the poverty index of those persons. Augmenting the number of ATMs might improve access to financial services in particular regions, perhaps resulting in indirect advancements in poverty alleviation and financial inclusion, hence fostering economic growth.

The calculated T value for the variable representing the number of commercial bank branches per 100,000 adults is (-1.505), which is less than the significance level of (0.153). This result is not statistically significant at the 0.05 level, suggesting that the estimated parameter for the number of commercial bank branches is not significant. This suggests that this variable may lack a direct causal influence on the poverty index within the proposed multiple linear regression model. The coefficient of determination was 44%, indicating that the poverty index's response to changes in the independent variables accounted for over 44% of the variance. Other unexplained factors, such as random error, account for the remaining 56%, limiting the direct measurement of the effect. This suggests a notable impact of the estimated parameters of the independent variables (ATM and number of branches) on the variations in the poverty index. Therefore, we reject the null hypothesis and support the alternative hypothesis, which asserts a statistically significant effect between the independent variables and the poverty index at a significance level of 0.05. These results demonstrate the actual influence of the research variables on changes in the poverty index. The expansion of administrative bank branches and the proliferation of ATMs facilitate the accessibility of banking services across various societal segments, thereby aiding in poverty alleviation and enhancing individual economic conditions. Efficient financial management for individuals requires the fiscal authority to base decisions on accurate data that enhance financial distribution within the country. The presence of government initiatives, coupled with the necessity to promote access to both traditional and electronic banking services, is likely to positively influence the reduction of poverty indicators and may contribute to sustainable economic growth.

Table 2: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.309	2	.154	5.891	.013 ^b
Residual	.393	15	.026		
Total	.702	17			

Note: ^aDependent Variable: Poverty Index; ^bPredictors: (Constant), Number of Commercial Bank Branches, Number of ATMs

The statistical parameters presented in Table 2 demonstrate the importance of the F statistical test, highlighting the overall significance of the multiple linear regression model. The comparison of the calculated F value with the tabular F values reveals that the calculated F value of 5.891 exceeds the significance level F value of (.013). This finding underscores the full significance of both the number of commercial bank branches and the number of ATMs

in the estimated regression model. The findings regarding the partial and total significance of the regression model in this study demonstrate that the independent variables are crucial in elucidating the poverty index. Specifically, both the number of commercial bank branches and the number of ATMs collectively contribute to alleviating poverty within the community at large. We can dismiss the null hypothesis and acceptance the alternative hypothesis, which suggests a statistically significant effect of the banking desertification variable on the poverty index for the investigated sample, based on the presented analysis.

CONCLUSION

It has been concluded from the above-mentioned information that there is a clear relationship among the poverty rate and banking desertification. In the underserved and rural areas, the non-appearance of financial services develops barriers to poverty, economic mobility, and inequality. Banking desertification aligns with financial exclusion, affects economic development, and restricts the necessary financial methods. Managing the banking desertification is important for improving poverty in conflict-affected and rural regions. Solutions like improving infrastructure, encouraging the investment of the private sector in underserved areas, and increasing digital banking services will be important for managing poverty and banking desertification in Iraq.

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