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LOCATION OF COOPERATIVE BANK AND ITS IMPACT ON FINANCIAL RESULTS

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Abstract. The research aim was to examine the impact of location of cooperative bank on its financial results. The study was based on financial statements of BPS Group Banks which from period 2013-2015 and included the following issues: distance from county town to bank headquarter, level of return on equity, return on assets, net financial result and capital adequacy ratio. The data analysis showed that distance from nearest bigger town was positively correlated with ROE, ROA and CAR, but also was negatively correlated with net financial result.

Key words: location, financial result, CAR, ROE, ROA, cooperative bank

INTRODUCTION

Cooperative (co-op) banks in Poland have had a significant impact on the functioning of the local community since second half of the XIX century. In a large majority of banks, headquarters are located in the towns of county or municipal. Co-op banks operate in the vicinity of farms, cooperatives, craft and small enterprises, which combined with its typically long period of activity, make a great value for customers. Moreover, it determines a huge competitive advantage over commercial banks. The operation of Co-op banks affected by many factors, such as socio-demographic and the economic situation of the region, which have a substantial impact on its financial situation.

The scale of operations, which the bank can afford, is very much connected to its own funds. According to the law on the functioning of cooperative banks, banks whose equity is in which range from 1 to 5 million PLN (the minimum value

of the equity is 1 million PLN) can only continue their operations in the region, where their headquarters are located. Banks with equities over 5 million PLN, can operate within the entire country. Such distribution was not established by the legislature coincidentally. By assigning the place of business of the bank, there is potential to achieve social goals, such as financial satisfaction of the local units and supporting tasks that are socially important. While co-op banks have an impact on the local area, the characteristics of the location also affect the co-op banks.

The core business of the bank, which is providing deposits and offering loans, depends on several factors: The most important of these factors is that the loan offer is subject to the gathered shareholders' equity, which, combined with a limited area of operation means that banks have to cooperate with local companies. The condition of these local companies strongly affects financial stability and the effectiveness of co-op banks. One positive side effect of the need to cooperate with local companies is a better knowledge of their financial condition, and thus – the ability to repay obligations to the bank [Żółtkowski 2012].

Co-op banks are also said to be the largest intermediary in the transfer of direct financial aid from the European Union to farms and the agricultural sector. This mediation between EU subsidies and agricultural sector involves granting preferential loans to clients. The distribution of these subsidies significantly contributes to the development of rural areas. It is done through the modernization of agriculture, reduction of unemployment and activation of the local society, also significantly shapes the financial result of bank. In 2007–2013 the EU has earmarked about 30 billion EUR for the development of the Polish countryside, which were transferred mainly by co-op banks [Siudek 2011].

RESEARCH METHODS

The main goal of the research was to investigate if locations of bank headquarter affects its financial results. To achieve that goal to research was selected a group of 359 co-op banks associated in BPS Group in the period of 3 years i.e.: 2013–2015.

Implementation of this goal is associated with the solution to the following tasks:

- Find out how distance from nearest bigger town to headquarter or branch affects level of return on equity (ROE) and return on assets (ROA),
- Find out how distance from nearest bigger town to headquarter or branch affects level of net financial result,
- Find out how distance from nearest bigger town to headquarter or branch affects level of capital adequacy ratio (CAR).

As a distance from nearest bigger town is understood as a road distance, in kilometres, from county town to bank headquarter or its branch.

The following statistical methods were used in the research: multiple regression and Pearson correlation coefficient. To test multiple regression model, independent variables were road distances, in kilometres, from county town to bank headquarter or its branch; as a dependent variable was chosen selected financial indicator. To measure the equality of model and data adjustment, there were used two indicators of model quality: R-squared which indicates the proportion of the variance in the dependent variable that is predictable from the independent variable [Cameron and Windmeijer 1997]; and p-value which is used in the context of null hypothesis testing in order to quantify the idea of statistical significance of evidence [Bhattacharya and Habtzghi 2002].

In terms of Pearson correlation coefficient, there were tested correlations between selected financial indicators and road distances, in kilometres, from and county town to bank headquarter or its branch. The correlation coefficient ranges from −1 to 1. Value >0 means that there is a positive correlation between variables, that is, if the value of X (i.e., road distances, in kilometres, from county town to bank headquarter or its branch) increases, the Y (financial indicators) is also growing. A value <0 implies that there is a negative correlation between variables, that is, if the value of X (i.e., road distances, in kilometres, from county town to bank headquarter or its branch) increases, the Y (financial indicators) is falling [Buda and Jarynowski 2010].

RESULTS

Good indicators reflecting the financial situation of banks are ROE (return on equity), a rate of return on equity and ROA (return on Assets), a rate of return on assets. ROE is a measure of how well a bank uses investments to generate earnings growth and ROA shows the percentage of how profitable a bank's assets are in generating revenue. In the case of a positive ROE and ROA, the first this indicator will always be greater than the second, because the assets are always greater than the equity.

As can be seen in table 1, distance from county town had significant impact on ROE in 2015 with the significance level p-value<0.01. Distance from county town had significant impact on ROA in 2013 and 2014 with the significance level p-value<0.01.

Another analysed financial indicator was net financial result, which shows generated profit or loss. Impacts of distance between bank and county town on banks net financial result are showed in table below.

TABLE 1. Multiple regressions of ROE and ROA for distances from county town to bank

Independent variables	Dependent variables					
	ROE			ROA		
	coefficient	ST-DEV	p-value	coefficient	ST-DEV	p-value
2013						
Const	7,2954	0,5866	***	0,7655	0,0613	***
Distance from county town	-0,0060	0,0235	0,8879	0,0085	0,0022	***
R-squared	0,0025			0,0503		
2014						
Const	7,5439	0,3728	***	0,7556	0,0434	***
Distance from county town	-0,0231	0,0129	0,3190	0,0058	0,0012	***
R-squared	0,0134			0,0613		
2015						
Const	6,7243	0,4836	***	0,6451	0,0531	***
Distance from county town	-0,0640	0,0135	***	0,0029	0,0024	0,5375
R-squared	0,0307			0,0201		

Source: Own elaboration based on data from financial statements of BPS Group Banks

Note. * denotes p< 0.1, ** denotes p <0.05, and *** denotes p < 0.01.

As presented in table 2, in every year of studied period, distance from county town to banks headquarter or branch has significant impact on its net financial result with the significance level p-value<0.01.

Another selected indicator which tells about banks financial condition is capital adequacy ratio (CAR). CAR is the ratio that protects banks against excess leverage, insolvency and keeps them out of difficulty. It is defined as the ratio of banks capital in relation to its current liabilities and risk weighted assets. Risk weighted assets is a measure of amount of banks assets, adjusted for risks [Nikhat 2014].

As presented in table 3, in every year of studied period, distance from county town to banks headquarter or branch has significant impact on its CAR with the significance level p-value<0.01.

Next to study on relations between location and bank financial indicators, there were tested correlations between selected financial indicators and banks location. In this section, correlation between distance from county town to bank and selected financial indicators was subject of research.

As showed in table 5, correlations between distance from county town to bank and its financial indicators are significantly. Correlations between distance from county town to bank and ROE, ROA and CAR are positive, with the strongest

TABLE 2. Multiple regressions of net financial result for distances from county town to bank

Independent variables	Dependent variables		
	ROE		
	coefficient	ST-DEV	p-value
2013			
Const	1620,7600	198,7310	***
Distance from county town	-28,1402	7,2975	***
R-squared	0,0421		
2014			
Const	1684,2645	189,4020	***
Distance from county town	-30,9185	6,7588	***
R-squared	0,0652		
2015			
Const	1565,7800	289,9390	***
Distance from county town	-34,9972	11,0024	***
R-squared	0,0316		

Source: Own elaboration based on data from financial statements of BPS Group Banks

Note. * denotes p< 0.1, ** denotes p <0.05, and *** denotes p < 0.01.

TABLE 3. Multiple regressions of CAR for distances from county town to bank

Independent variables	Dependent variables		
	CAR		
	coefficient	ST-DEV	p-value
2013			
Const	15,9864	0,7836	***
Distance from county town	0,1398	0,0308	***
R-squared	0,0665		
2014			
Const	19,4058	0,8678	***
Distance from county town	0,1565	0,0434	***
R-squared	0,0513		
2015			
Const	18,4537	0,8244	***
Distance from county town	0,1883	0,0240	***
R-squared	0,0742		

Source: Own elaboration based on data from financial statements of BPS Group Banks

Note. * denotes p< 0.1, ** denotes p <0.05, and *** denotes p < 0.01.

TABLE 4. Correlations between distance from county town to bank and its financial indicators

Measures	Years		
	2013	2014	2015
ROE	0,0898	0,4532	0,1568
ROA	0,6823	0,9079	0,8524
Net financial result	-0,8009	-0,7234	-0,7586
CAR	0,8002	0,8462	0,8150

Source: Own elaboration based on data from financial statements of BPS Group Banks

concerning CAR, about 0,82 in studied period. Correlation with ROA has similar strength to CAR. ROE correlation is the weakest and varies from 0,09 to 0,45. Significantly strong but negative correlation can be observe with net financial result and it varies from –0,72 to –0,80.

CONCLUSIONS

These considerations are fragmentary and do not comprehensively explore the issue. They may have missed actual conditions yet may be motivation for further consideration. The following conclusions are offered as a result of this research:

1. There is significant impact of banks headquarter or branch location on Return on equity. Only in 2015 distance from county town had significant impact on this indicator. However distance from nearest bigger town had positive correlation with ROE, about 0,25 in studied period, thus it means that banks located further from nearest bigger town had higher level of ROE.
2. There is significant impact of banks headquarter or branch location on Return on assets. Distance from county town had not significant impact on this indicator only in 2015. Also, distance from nearest bigger town had positive correlation with ROA, about 0,81, thus it means that banks located further from nearest bigger town had higher level of ROA.
3. In terms of relation between banks headquarter or branch location and its net profit results, there was concluded that distance from count town had significant impact. Distance from nearest bigger town had strong negative correlation with net financial result, about –0,75, thus it means that banks located closer to or in bigger town had lower level of net financial result.
4. Multiple regression analysis shows also that relation between distance from county town and capital adequacy ratio is significant with significance level

p-value<0.01 in whole studied period. Distance from nearest bigger town had positive correlation with CAR, about 0,82, thus it means that banks located further from nearest bigger town had higher level of CAR.

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