



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

Cost Cutting Measures at Cooperative Banks in Germany as a Result of Digitalization and their Consequences

Carsten Giebe ¹⁺¹ and Kevin Schulz ²

¹Szent István University - Doctoral School in Management and Organizational Sciences, Kaposvár, Hungary

²FOM - Hochschule für Oekonomie & Management | University of Applied Sciences, Berlin, Germany

Abstract. *The banking market in Germany is facing big challenges due to digitalization. The digital transformation is significantly influenced by technological progress and the low-interest phase. The article deals with the group of cooperative banks, which consists of many individual cooperative credit institutions. Cooperative banks are credit institutions whose objective, according to their statutes, is the economic promotion of their members through joint business operations. The traditional classical business model is traditionally based on personal customer contact. More mergers are to be expected in the banking sector in the coming years. The process of branch closures and staff reductions is also inevitable. Although the role of branches is up for discussion, they are increasingly falling victim to increased cost pressures. These changes have an impact on many aspects of how bank customers demand, evaluate and ultimately purchase financial services. In recent years, it has become clear that banks lack a clear strategy. The aim should be that the strategy does not focus exclusively on cost-cutting, such as branch closures and staff reductions. The main purpose of this research is to investigate whether these cost-cutting measures in cooperative banks are operationally justified in relation to the available operating profit, cost-income ratio, and return on equity. The results of this article may be relevant for researchers dealing with Digital Transformation in the banking sector in Germany.*

Keywords: Cooperative Banks, Competition, Cost Cutting Measures, Digital Transformation

JEL Codes: D41, G21, M21

How to cite: GIEBE, C., & Schulz, K. (2021). Cost cutting Measures at Cooperative Banks in Germany as a Result of Digitalization and their Consequences. *Journal of Economic Development, Environment and People*, 10(2), 29-45.
doi:<http://dx.doi.org/10.26458/jedep.v10i2.693>

1. Introduction

The digital transformation can now be observed in many industries along various value chains (Kauffmann & Weber, 2018). The banking sector is also undergoing its greatest structural change. This structural change is being driven enormously by technological progress. Until now, banks have been able to achieve high market penetration with standard products. But nowadays they are forced to reposition

¹ + Corresponding author : carsten.giebe@gmx.de



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

themselves strategically. Innovative concepts and products are needed to stand out in the competitive banking market. On the end-customer side, the high transparency of banking services has led to increased service and quality demands on banks. The values of bank customers are also changing rapidly. Therefore, an individual conceptualisation of the business relationship is necessary for optimal customer service. It is becoming easier for non-banks, such as FinTechs, to intervene in the business areas of banks. Banks are thus forced to provide highly efficient banking services, and the large amount of personnel and material expenditure is causing increasing cost pressure (Moormann, 2000).

The banking sector in Germany is divided into a three-pillar structure. The first pillar includes private commercial banks, such as Deutsche Bank and Commerzbank. The second pillar includes the public institutions, Landesbanken and the savings banks. The third and last pillar symbolises the cooperative banks (aka Genossenschaftsbanken), such as the Volks- und Raiffeisenbanken (see Figure 1). Cooperative banks are credit institutions whose objective, according to their statutes, is the economic promotion of their members through joint business operations (Hammerström et al., 2019).

The three pillars of the German Banking System

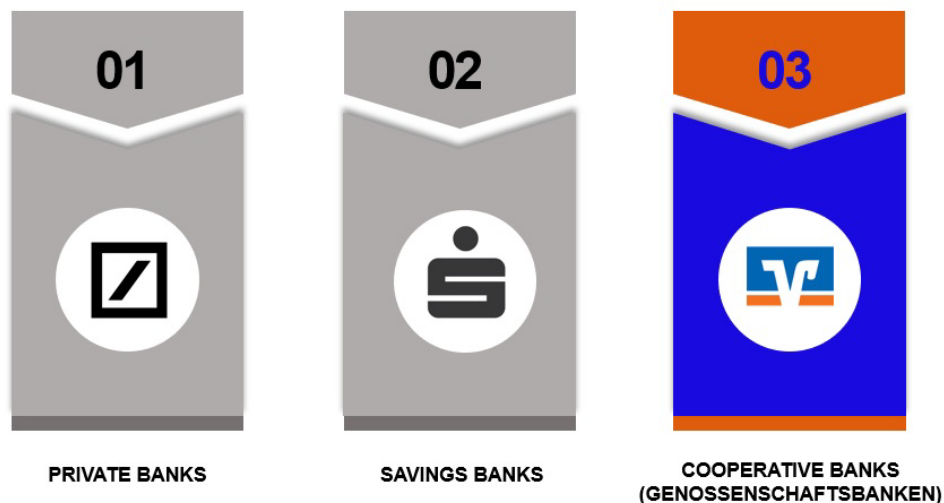


Figure 1. Own representation of the "German Banking System".

The challenges outlined above also apply to the cooperative banks. They are also strongly influenced by regulation and supervision, the low-interest phase, digitalization, and demographic change. In addition to developments within the banking market, these are also global developments. These increase the already existing intensity of competition in the German banking market. Increasing regulation and banking supervision, as well as the low-interest phase, are leading to falling revenues and rising costs (Arts, 2016).



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

In recent years, this has led to a reduction in the number of cooperative banks, branch closures and staff reductions.

2. Literature Review

Exploratory literature research lasting several months was conducted to examine the effects of digitalization using the example of cooperative banks in Germany. It should be noted that this comparison has been addressed little or not at all in the scientific literature. In the literature search, three categories can be categorised, with which we have worked out this article.

The first category of literature is academic work that deals with digital transformation. Literature that has enabled this are e.g. Moormann (2000), Hammerström et al. (2019) and Henke et al. (2016). The second category of literature deals with the banking market in Germany and specifically the role of cooperative banks. Here Arts (2016), Giebe (2019) and Waschbusch et al. (2016) were informative. The third category of sources is necessary data that we need to study cooperative banks in Germany. These are data that provide us with valid information on the number of institutions and their branches, the number of employees and key business figures in the form of time series.

3. Research Gap and Research Question

There is no alternative to the process of branch closures. Although the role of the branch is up for discussion, they are increasingly falling victim to increased cost pressure (Waschbusch et al. , 2016). In recent years, it has become clear that banks in Germany lack a clear strategy. The aim should be that the strategy should not focus exclusively on cost reductions such as branch closures (Henke et al. , 2016).

Due to this research gap, the following research question arises: Are the cost-cutting measures through branch closures and staff reductions at cooperative banks in Germany operationally justified in relation to the present operating result, cost-income ratio and return on equity?

4. Methodology and Hypotheses

Statista (<https://de.statista.com/>) is a German online portal for statistics that makes business data accessible. In order to answer the research question quantitatively, the following data was used for our research and limited to the period 1999-2018.

- Number of cooperative banks (in Germany)
- Number of branches of cooperative banks (in Germany)
- Number of employees at the cooperative banks (in Germany)
- Operating result of the cooperative banks (in Germany)
- Cost income ratio of the cooperative banks (in Germany)
- Return on equity of the cooperative banks (in Germany)



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

In addition to the number of institutions, branches and employees, business ratios were used in this research. Here, the key figures operating result, cost-income ratio and return on equity were used. The operating result is a business ratio and usually refers to the result from ordinary business activities. The cost-income ratio is an economic indicator in the operative business of banks and provides information on the efficiency of a bank. The lower the cost-income ratio, the more efficiently the bank operates. The return on equity is an indicator of the earnings situation of a credit institution that shows the result (net income after taxes) in relation to the equity capital employed.

In the context of this research, the following hypotheses are put forward:

Hypotheses

1st hypothesis:

H₁: **There was a** statistically significant change in the operating result between 1999 and 2018.

2nd hypothesis:

H₁: The cost income ratio has changed statistically significantly in the years 1999 - 2018.

3rd hypothesis:

H₁: There has been a statistically significant change in return on equity from 1999 - 2018.

If it turns out that an operational indicator has changed statistically significantly in the years 1999 - 2018, it is additionally tested whether the reduction of cooperative banks, branches and employees as cost cutting measures had a statistically significant impact on the respective operational indicator.

Descriptive analyses

The number of cooperative banks has steadily decreased over time (see Figure 2). Initially, a very strong consolidation is evident among the cooperative banks. The effect of the financial crisis in 2008 is only weakly pronounced. Around 2014, an accelerated reduction can be seen again.

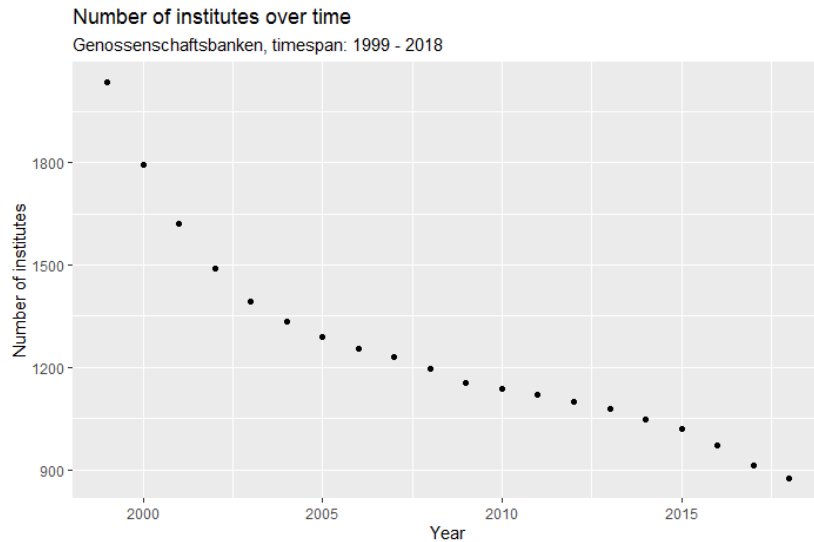


Figure 2. Own representation of the "Comparison of the number of institutes".

The number of branches of cooperative banks is also decreasing (see Figure 3). Around the year of the financial crisis in 2008, there is a stagnation. Around the year 2014, a rapid decrease in the number of branches can be observed again.

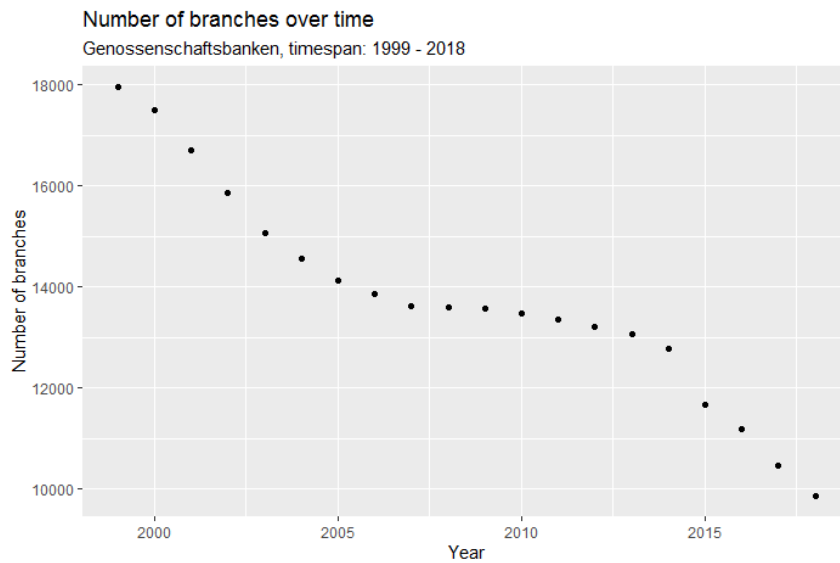


Figure 3. Own representation of the "Comparison of the number of branches".



The number of employees is decreasing at cooperative banks in Germany (see Figure 4). Around the year of the financial crisis in 2008, stagnation set in and by 2013 it had even risen again. From 2014 onwards, a clear decline is visible.

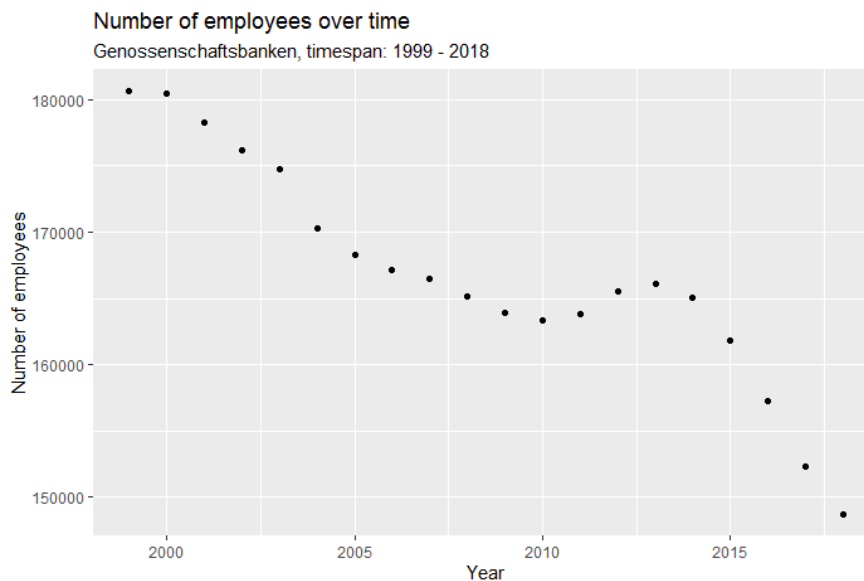


Figure 4. Own representation of the "Number of employees".

Inductive analyses

Methodology

First, a linear regression over time is used to test whether the operating profit, cost income ratio and return on equity have changed significantly. The significance level is set to 0.05 for all tests. Since the corresponding residual plots show strong signs of heteroskedasticity and autocorrelated residuals, a HAC estimator (heteroskedasticity and autocorrelation consistent) is used for the statistical tests. Subsequently, the influence of the individual cost reduction measures on the operating ratios could have been investigated in each case with a multiple regression. However, an analysis of the correlation characteristics of the individual cost reduction measures "number of cooperative banks", "number of branches" and "number of employees" reveals an unacceptable degree of multicollinearity. With the help of a Principal Component Analysis, linear combinations of the explanatory characteristics are found - so-called factors - which are uncorrelated. The first factor already explains more than 95% and can be described as the factor "sum of all cost reduction measures". The linear regression model works with the factor cost reduction measures as the only explanatory variable.



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

Statistical tests

For cooperative banks, operating profit has grown steeply between 1999 and 2018 (see Figure 5). There have been three sharp downturns, the high-tech crisis in 2001, the financial and economic crisis in 2008/2009 and in 2014. In 2017, fears of a recession were rampant. The International Monetary Fund significantly lowered its growth forecast for Germany.

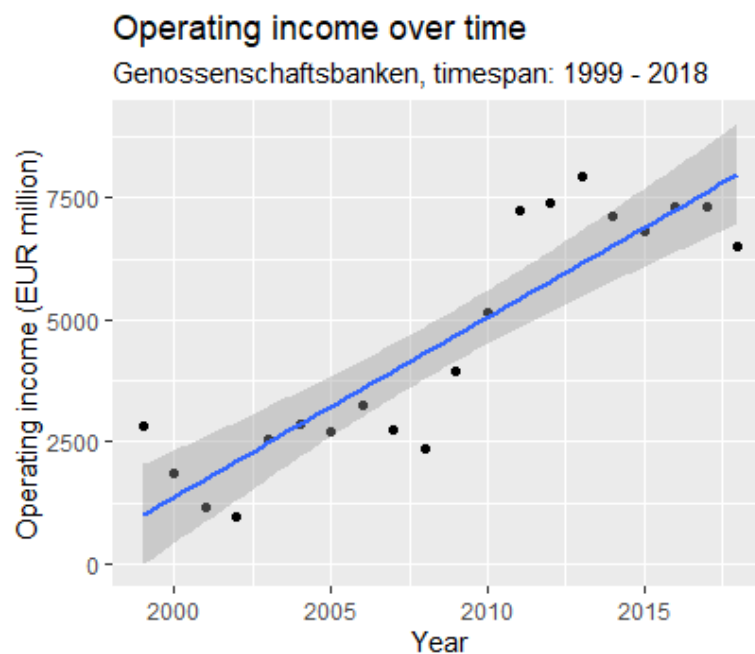


Figure 5. Own representation of the "Operating income"

The p-value for the characteristic 'year' is close to zero. The operating result has thus grown statistically significantly over the years 1999 - 2018 with an average of 368 million euros per year.

t test of coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-734562.334	88286.545	-8.3202	1.395e-07	***
Year	367.969	43.985	8.3658	1.289e-07	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1



The residual plot shows a strong autocorrelation between the characteristics and underlines the use of the more flexible HAC estimator for linear regression (see Figure 6).

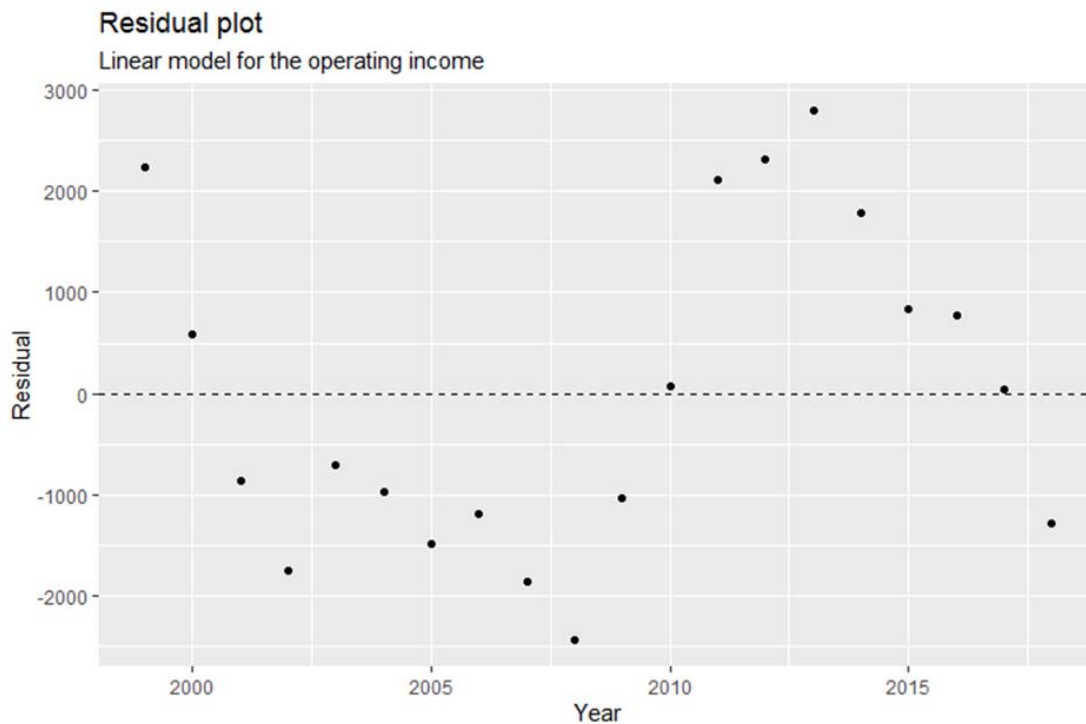


Figure 6. Own representation of the "Operating income"

The cost-income ratio of the cooperative banks has improved significantly overall. From 2010 onwards, it stagnated again (see Figure 7).

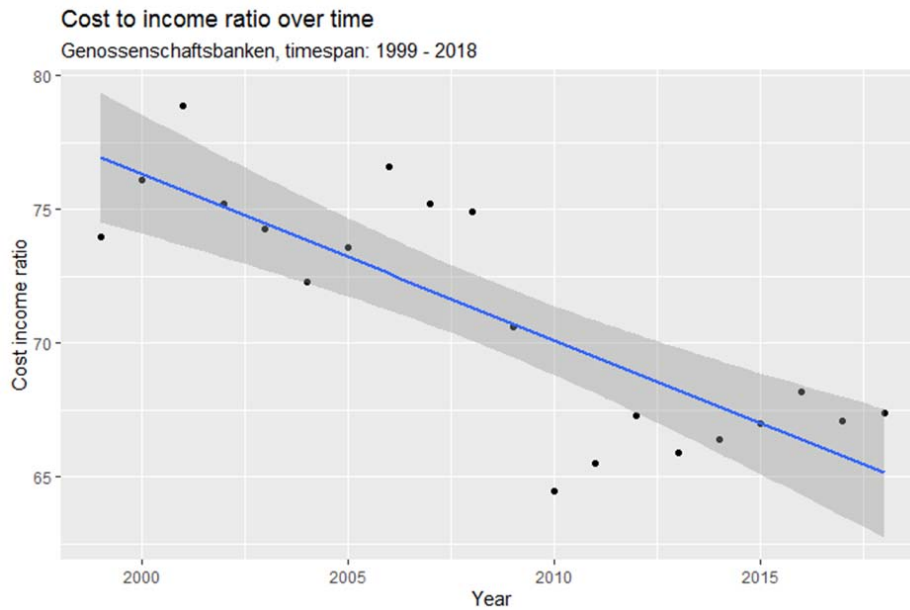


Figure 7. Own representation of the "Cost Income Ratio".

A test confirms that the cost income ratio has improved significantly. The p-value for the slope is close to zero. On average, the cost income ratio improved by 0.62 percentage points from year to year.

t test of coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	1318.434211	186.756646	7.0596	1.386e-06	***
Year	-0.621053	0.093175	-6.6655	2.970e-06	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

The residuals plot again shows autocorrelated residuals (see Figure 8).

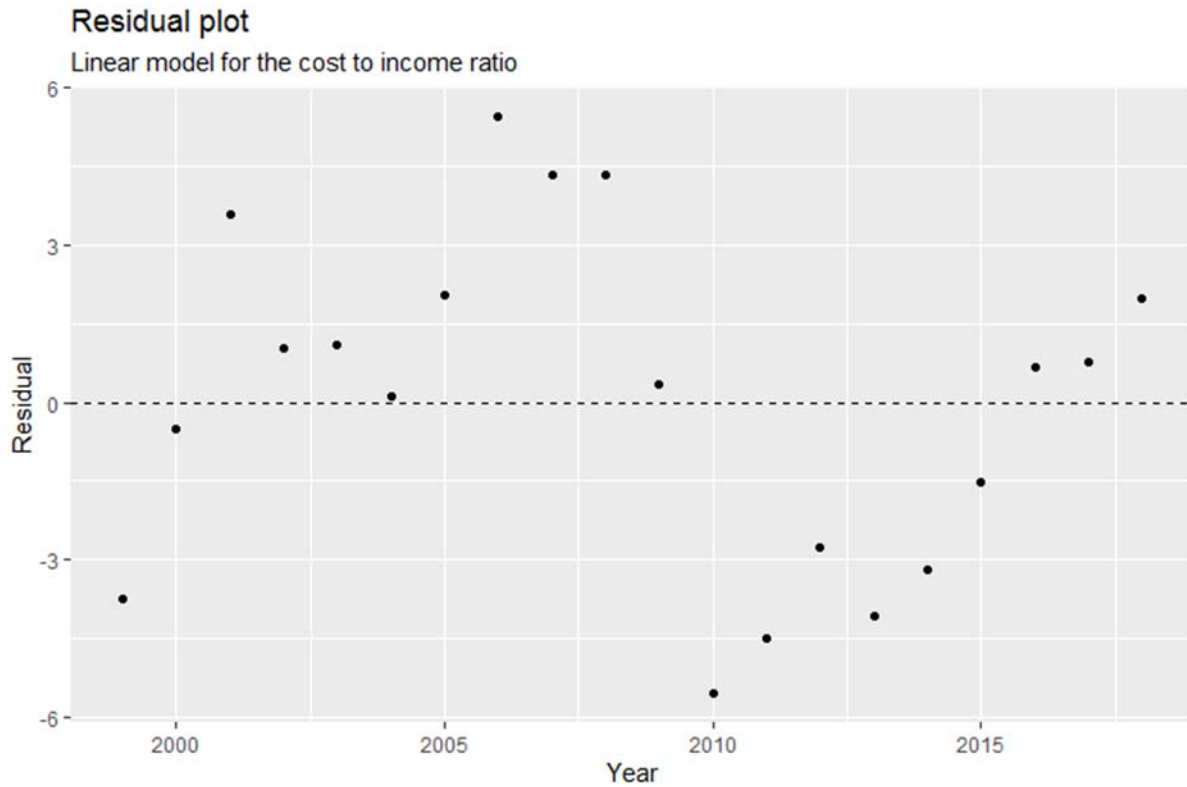


Figure 8. Own representation of the "Cost Income Ratio".

The return on equity has developed similarly to the operating result, but with more significant drops in 2008 and 2015 (see Figure 9). The apparent slight global increase needs to be tested for significance.

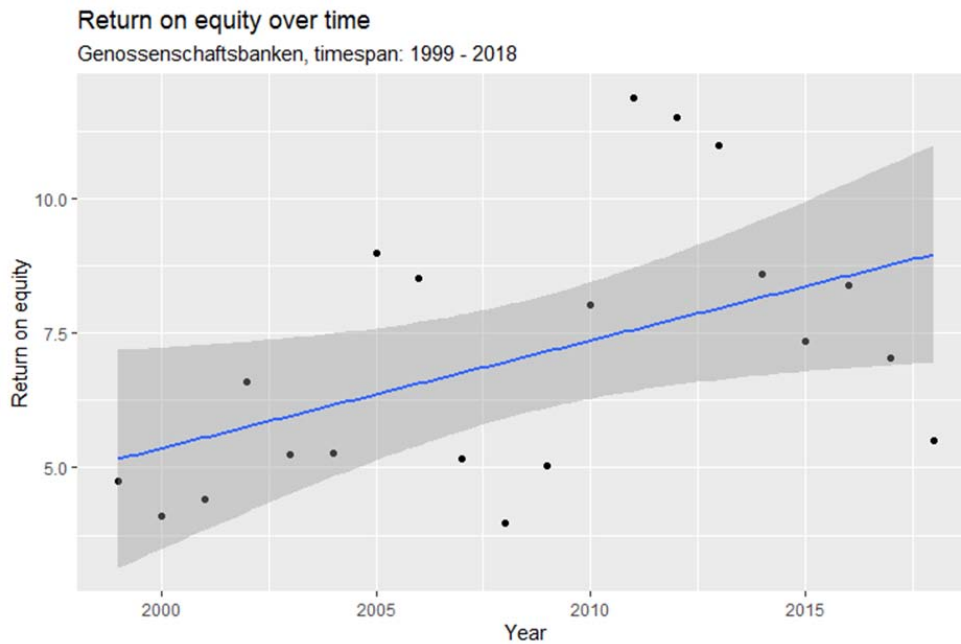


Figure 9. Own representation of the "Return on equity".

The p-value for the slope of 0.05254 is greater than the alpha value of 0.05. Thus, for the period 1999 - 2018, we cannot assume a significant increase in return on equity. Consequently, we exclude this key figure from further analysis.

```
t test of coefficients:
                Estimate  Std. Error  t value  Pr(>|t|)
(Intercept) -395.843120  193.764229  -2.0429  0.05599 .
Year          0.200602   0.096649   2.0756  0.05254 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

The residual plot shows a funnel-shaped distribution of residuals and thus heteroskedasticity (see Figure 10). The HAC estimator takes this distribution into account.



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

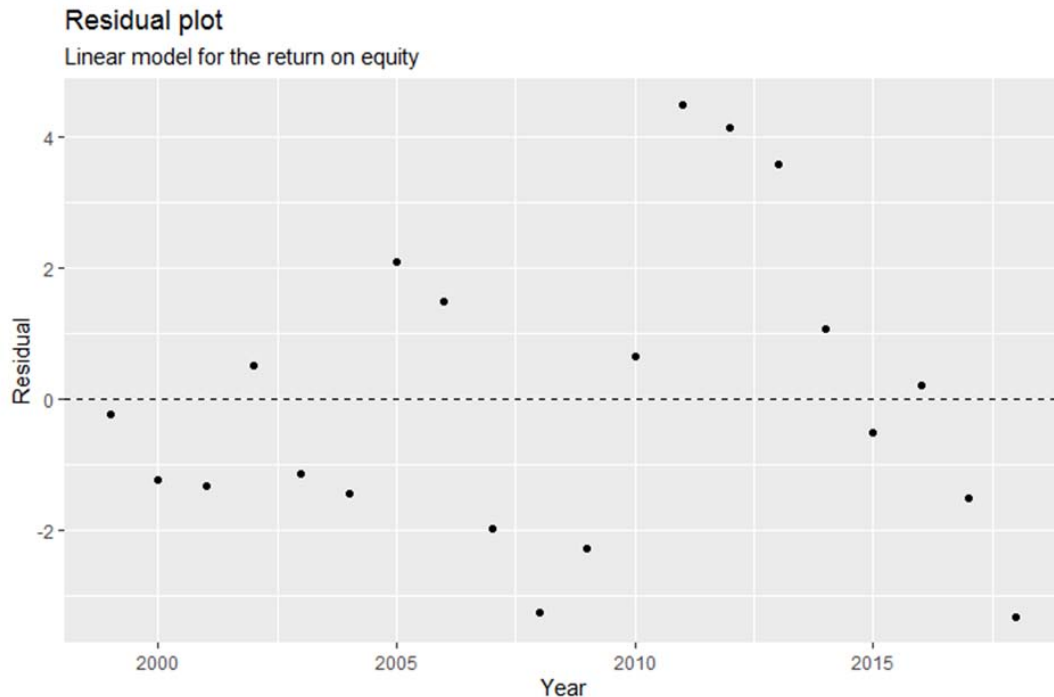


Figure 10. Own representation of the "Return on equity".

A significant improvement in the operating result and cost income ratio was observed between 1999 and 2018. The extent to which the cost cutting measures "closure of institutes and branches" and "reduction of staff" are related to this development will be examined.

The correlation can be analysed with a multiple regression. However, a strong correlation between the characteristics can be measured:

	Anzahl_Institute	Anzahl_Filialen	Anzahl_Beschäftigte
Anzahl_Institute	1.0000000	0.9602412	0.9157057
Anzahl_Filialen	0.9602412	1.0000000	0.9775577
Anzahl_Beschäftigte	0.9157057	0.9775577	1.0000000

In the context of regression analysis, such a scenario is referred to as multicollinearity. It typically represents a serious problem in the evaluation of parameter significances.

To counteract this, PCA was applied:



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

Importance of components:

	PC1	PC2	PC3
Standard deviation	1.7037	0.29264	0.10858
Proportion of Variance	0.9675	0.02855	0.00393
Cumulative Proportion	0.9675	0.99607	1.00000

The first factor subsumes the three individual cost reduction measures into a new variable and already explains 95% of the variance in the data. We refer to this factor as PC1 and interpret it as the sum of all cost reduction measures. A simple regression is used to examine the influence of this factor on the operating profit and the cost income ratio.

Operating result:

The p-value for the cost reduction measures PC1 is clearly none than the alpha value 0.05.

The cost cutting measures thus had a significant impact on the operating result between the years 1999 and 2018.

t test of coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	4503.75	576.14	7.8171	3.401e-07 ***
PC1	1084.04	229.29	4.7278	0.0001679 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Cost Income Ratio:

The p-value for the cost reduction measures PC1 is also significantly smaller than 0.05 for the cost-income ratio. The cost reduction measures, therefore, had a significant influence on the cost-income ratio.

t test of coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	71.05000	1.02328	69.4334	< 2.2e-16 ***
PC1	-1.85736	0.38386	-4.8387	0.0001318 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

5. Results and Discussion

As has been elaborated, cooperative banks have implemented a number of cost cutting measures in the years between 1999 and 2018. The number of cooperative banks and branches as well as the number of employees was significantly reduced during this period. At the same time, the operating profit and the cost-income ratio were significantly improved. The improvement in these operating ratios can be explained by the factor 'costcutting measures'. The return on equity, on the other hand, as a measure of economic success, was not significantly improved. It can be assumed that cooperative banks have reduced their costs on the one hand, but have not been able to expand their economic success on the other.

The pressure on retail banks is very high. And at the same time, digitalization offers many opportunities for traditional institutions and new market participants. In this context, the innovative approach is essential. To take advantage of the opportunities of the digital economy, banks need to successively become a digital bank (Ilie et al., 2017). However, the digital strategy of a cooperative bank only makes sense if investments are promoted and resources are pooled at the same time. Unfortunately, many companies are hesitant to define a digital strategy (Sebastian et al., 2017).

Credit institutions are increasingly neglecting proactive action and serving customer interests. The danger is that credit institutions are no longer optimally positioned for the future. The more passive a credit institution is, the more entrenched its structures and organisation become. The reason for this is that the focus is increasingly on optimising operational efficiency (Fischer & Arz, 2016).

6. Conclusions

More mergers are expected in the banking sector in the coming years. Furthermore, a centralization of task areas and even the merger of associations is assumed (Terliesner 2016). The adjustments to the branch system are imperative for cost reasons. However, this approach is detrimental to the bank in the long term. There is an urgent need to complement the established on-site advisory models. Convenient and quick solutions could emerge via digital channels (Frank & Mihm, 2016). As has been elaborated, the discussions about branch closures are quite justified. In the context of omni-channel management, a realignment of the branch system is required. This should include a strict orientation towards existing and future customer needs (Waschbusch et al. , 2016). As our research showed, banks in Germany are already thinking intensively about the introduction of omni-channel concepts. An introduction is even of fundamental importance for the German banking system (Menrad, 2020). For customers, the branch will therefore continue to play an important role in the future, as some customers still consider personal advice to be important. However, a prerequisite for this is a neutral advisor (Rohrmeier, 2015). This reveals another question. How can neutral advice to bank customers be guaranteed?

Last but not least, well-trained managers are needed for the analysis process, the identification of fields of action, the implementation ideas, and the motivation of the employees. It is advantageous to involve employees in the strategy development process (Henke et al., 2016). Furthermore, the development of specific competencies to ensure the digital transformation in the banking world is considered one of the



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

biggest tasks. Currently, changes in the demand for new solutions and technological competences of the company are observed (Mavlutova & Volkova, 2019). Despite the changes in the German banking landscape and the associated closures of branches, the bank advisor is still considered the most important advisory tool. However, with standardised online solutions, there is no room for individual needs (Freese, 2016). One solution component here could be Big Data & Analytics (BDA). BDA has been considered a technical innovation with enormous benefits for years. BDA is increasingly used to be more competitive (Hammerström et al., 2019). BDA is also being used in the banking sector. According to a study by Giebe et al. (2019), German bank customers agreed that BDA can provide more objective, comprehensive, individualised, and active advice. It was also proven that BDA can positively influence customer loyalty from the bank customers' perspective (Giebe et al., 2019).

In conclusion, it can be said that the support of the digital transformation is not a project that will come to an end at some point. Rather, it is a process that should permanently accompany the cooperative banks in order to become a natural part of their daily work and organisation. How successful this change management process will depend largely on the willingness to change each individual cooperative bank itself (Giebe, 2019).

7. Limits and directions for further research

In this research, a predefined selection of cooperative bank business ratios was used. Depending on availability, further key figures could be examined and further conclusions drawn from them. The banking system in Germany consists of a so-called three-pillar system and other banking groups, as outlined under 'Introduction'. It would be interesting to find out how private banks and savings banks are doing business under the digital transformation and draw comparisons.

The simultaneous and consistent digitalization and automation of business and sales processes could make up for the reduction in branch offices and staff. A proper strategy offers the potential to expand economic success again in the long run. To this end, it is advisable to further investigate the digital progress of banks in Germany.

8. References

- [1] Anzahl der Bankstellen von Volksbanken und Raiffeisenbanken in Deutschland in den Jahren von 1970 bis 2019 [Number of bank offices of Volksbanken and Raiffeisenbanken in Germany between 1970 and 2019], <https://de.statista.com/statistik/daten/studie/71934/umfrage/volksbanken-und-raiffeisenbanken---anzahl-der-bankstellen/> [Accessed April 2021]
- [2] Anzahl der Beschäftigten bei Volks- und Raiffeisenbanken sowie bei Sparda-Banken in Deutschland von 1991 bis 2018 [Number of employees at Volksbanken and Raiffeisenbanken as well as Sparda banks in Germany from 1991 to 2018], <https://de.statista.com/statistik/daten/studie/157028/umfrage/beschaeftigte-in-volks-und-raiffeisenbanken-sowie-sparda-banken-seit-2000/> [Accessed April 2021]



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

- [3] Arts, V. (2016). Aktuelle Herausforderungen für Genossenschaftsbanken: Eine Analyse der Umwelt [Current challenges for cooperative banks: An analysis of the environment]. *Arbeitspapiere des Instituts für Genossenschaftswesen der Westfälischen Wilhelms-Universität Münster* (No. 163), <http://hdl.handle.net/10419/129624>
- [4] Betriebsergebnis der Genossenschaftsbanken in Deutschland in den Jahren von 1999 bis 2018 (in Millionen Euro) [Operating profit of cooperative banks in Germany in the years 1999 to 2018 (in millions of euros)], <https://de.statista.com/statistik/daten/studie/217984/umfrage/betriebsergebnis-deutscher-kreditgenossenschaften-seit-1999/> [Accessed April 2021]
- [5] Eigenkapitalrentabilität nach Steuern der Genossenschaftsbanken in Deutschland in den Jahren von 1994 bis 2018 [Return on equity after taxes of cooperative banks in Germany in the years 1994 to 2018], <https://de.statista.com/statistik/daten/studie/242274/umfrage/eigenkapitalrentabilitaet-der-kreditgenossenschaften-in-deutschland/> [Accessed April 2021]
- [6] Entwicklung der Anzahl der Volksbanken und Raiffeisenbanken in Deutschland von 1970 bis 2019 [Development of the number of Volksbanken and Raiffeisenbanken in Germany from 1970 to 2019], <https://de.statista.com/statistik/daten/studie/71931/umfrage/volksbanken-und-raiffeisenbanken---anzahl-der-banken-seit-1998/> [Accessed April 2021]
- [7] Entwicklung der Cost-Income-Ratio der Genossenschaftsbanken in Deutschland in den Jahren von 1998 bis 2018 [Development of the cost-income ratio of cooperative banks in Germany in the years 1998 to 2018], <https://de.statista.com/statistik/daten/studie/755282/umfrage/cost-income-ratio-der-genossenschaftsbanken-in-deutschland/> [Accessed April 2021]
- [8] Fischer, B., & Arz, C. (2016). Innovationslust in Banken beurteilen [Assessing innovative spirit in banks]. *Bankmagazin*, 2-3, 28-31. <https://doi.org/10.1007/s35127-015-0721-2>
- [9] Freese, T. (2016). Der Berater bleibt Dreh- und Angelpunkt der Kundenbeziehung [The advisor remains the linchpin of the client relationship]. *Bank und Markt*, 5, 27-29. <https://www.kreditwesen.de/bankmarkt/themenschwerpunkte/aufsaeetze/berater-bleibt-dreh-angelpunkt-kundenbeziehung-id33014.html>
- [10] Giebe, C. (2019). The Chief Digital Officer–Savior for the Digitalization in German Banks?. *Journal of Economic Development, Environment and People*, 8(3), 6-15, <http://dx.doi.org/10.26458/jedep.v8i3.633>
- [11] Giebe, C., Hammerström, L., Zwerenz, D. (2019). Big Data & Analytics as a sustainable Customer Loyalty Instrument in Banking and Finance. *Financial Markets, Institutions and Risks*, 3(4), 74-88. [http://doi.org/10.21272/fmir.3\(4\).74-88.2019](http://doi.org/10.21272/fmir.3(4).74-88.2019)
- [12] Hammerström, L., Giebe, C., Zwerenz, D. (2019). Influence of Big Data & Analytics on Corporate Social Responsibility. *SocioEconomic Challenges*, 3(3), 47-60.
- [13] Hammerström, L., Zwerenz, D., Giebe, C. (2019). Taxonomy of an IIoT Device Based upon Production Functions. *European Journal of Economics and Business Studies*, 5(2), 6-22, <http://dx.doi.org/10.26417/ejes.v5i2.p6-22>
- [14] Henke, A., Petry, M., & Späth, B. (2016). Die Bank der Zukunft – Strategien für den Erfolg [The bank of the future - strategies for success]. *Bank und Markt*, 4, 29-31. <https://www.kreditwesen.de/bankmarkt/themenschwerpunkte/aufsaeetze/bank-zukunft-strategien-fuer-erfolg-id32465.html>
- [15] Ilie, O.-M., Popescu, C., & Iacob, S. E. (2017). Transforming the Banking Organization in the Context of Digital Economy. *Proceedings RCE 2017*, 284-292, <https://doi.org/10.18662/lumproc.rce2017.1.24>



(online) = ISSN 2285 - 3642

ISSN-L = 2285 - 3642

Journal of Economic Development, Environment and People

Volume 10, Issue 2, 2021

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

- [16] Kauffman, R. J., & Weber, T. A. (2018). The Digital Transformation of Vertical Organizational Relationships. *Journal of Management Information Systems*, 35(3), 837-839, <https://doi.org/10.1080/07421222.2018.1481646>
- [17] Mavlutova, I., & Volkova, T. (2019). Digital Transformation of Financial Sector and Challenges for Competencies Development. In *2019 7th International Conference on Modeling, Development and Strategic Management of Economic System (MDSMES 2019)*. Atlantis Press. <https://doi.org/10.2991/mdsmes19.2019.31>
- [18] Menrad, M. (2020). Systematic review of omni-channel banking and preview of upcoming developments in Germany. *Innovative Marketing*, 16(2), 104-125, [https://doi.org/10.21511/im.16\(2\).2020.09](https://doi.org/10.21511/im.16(2).2020.09)
- [19] Mihm, O., & Frank, B. (2016). Zukunft der Filiale–wie digital will der Kunde es wirklich [The future of the branch - how digital does the customer really want it]. *Bank und Markt*, 7, 35-38. <https://www.kreditwesen.de/bank-markt/themenschwerpunkte/aufsaeetze/zukunft-filiale-digital-will-kunde-wirklich-id33836.html>
- [20] Moormann, J. (2000). Die Digitalisierung des Bankgeschäfts [The digitalization of banking]. In: *Informationstechnologie in Banken* (pp. 3-16). Springer, Berlin, Heidelberg, https://doi.org/10.1007/978-3-642-56991-3_1
- [21] Rohrmeier D. (2015) Lebenswelten 2020 – Wie werden wir morgen unsere Finanzen managen? [Lifestyles 2020 - How we will manage our finances tomorrow]. In: Seidel M., Liebetrau A. (eds) *Banking & Innovation 2015*. FOM-Edition (FOM Hochschule für Oekonomie & Management). Springer Gabler, Wiesbaden. https://doi.org/10.1007/978-3-658-06746-5_7
- [22] Sebastian, I., Ross, J., Beath, C., Mocker, M., Moloney, K., & Fonstad, N. (2017). How big old companies navigate digital transformation. *MIS Quarterly Executive*, 16 (3), 197-213, <https://aisel.aisnet.org/misqe/vol16/iss3/6>
- [23] Terliesner, S. (2016). Wie Institute Ihre Zukunft sichern können [How institutions can secure your future]. *Bankmagazin*, 2-3, 12-18. <https://doi.org/10.1007/s35127-016-0002-8>
- [24] Waschbusch, G., Blaß, R., & Berg, S. C. (2016). Zukunft der Bankfiliale–Auslaufmodell oder Erlebniswelt [The future of the bank branch - a model to be discontinued or a world of experience]. *Bank und Markt*, 5, 30-33. <https://www.kreditwesen.de/bank-markt/themenschwerpunkte/aufsaeetze/zukunft-bankfiliale-auslaufmodell-erlebniswelt-id33007.html>