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SCIENTIFIC ARTICLES

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• **RENÉ M. MITTELSTÄDT:**

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Editorial

JAN MERTL

Dear readers,

we are bringing to you a new issue of ACTA VŠFS journal. Before we go through the articles that it contains, I would like to get you informed with two changes whose target is to improve the impact and quality of the journal. First, to streamline the publishing process and ensure the widespread availability of the journal, we publish it since this issue in the electronic form only. The new issues will always be available at the journal's website. Additionally, if you want to be notified about the new issues of ACTA VŠFS, please fill in the website form with your e-mail, name and/or institution. You will receive a verifying e-mail and when you complete the verification, you will be present on our mailing list. If you decide in the future to unsubscribe, just send the request to the journal's e-mail.

Second, we changed the format of the articles' abstract to a structured one, with compulsory and voluntary part for higher author's flexibility. While it can be a bit more demanding for the authors, we believe this is going to improve the quality and understandability of the abstracts.

This issue contains four research articles.

The first one, "Enhancing corporate performance through debt financing: evidence from Nigerian consumer goods firms" came to the editorial desk from far away Africa. The article examined enhancement of corporate performance of Nigerian Consumer Goods Firms through debt financing for a period of eleven years from 2011 to 2022. Based on the findings, this research concluded that long-term debt and firms' size enhance the Nigerian consumer goods firms' performance while short-term debt and loan quality do not enhance Nigerian consumer goods firms' performance. Thus, long-term debt financing, if needed, is recommended.

The second article, "Financial crisis management from the perspective of national MPs: A qualitative assessment" was written by the German author. Financial crises have characterized economic history since the Roman Empire. Despite intensive political debate and extensive scientific research, parliaments in their role as legislators have failed to develop effective protection mechanism. The paper aims to provide insights into how financial politicians use their individual knowledge in policymaking and how knowledge management tools can help achieve financial market stability. The results show that while the majority have the skills and understanding, the topic itself is underrepresented in everyday parliamentary life. The article concludes with a discussion of the need to introduce knowledge management systems in the parliamentary context.

The third article was written by a German author, too and its title is "User cost of housing analysis of the German real estate market". It looks at the development of the German real estate landscape, which recorded a continuous rise in prices between 2009 and 2022. The owner-occupier costs are determined using the user cost of housing approach and compared with the current rental prices in the respective cities and districts. Various

factors are considered, including the purchase price, financing costs, maintenance and rental prices. The results of the analysis show that home ownership still offers a considerable cost advantage on average across Germany: In mid-2023, it is around 57% cheaper per square meter to invest than to rent.

The fourth article by Teymur Akhundov, "Factors influencing customers' bank selection decision in Azerbaijan" is focused on the situation at the boundary of Eastern Europe and West Asia. The findings reveal that speed and quality of service, proven and strong shareholders, innovativeness and variety of services (credit cards), ATM network and accessibility, respect and friendliness staff, brand name at the market, and low interest rate on loans are the most important influencing factors for customers during the bank selection decision. The study could be used by banks and as the starting point for the next similar studies in the country.

As you see, the topics tackled by the articles in this issue are interesting and worth to explore and get acquainted with. In the dynamic landscape of contemporary scholarship, our journal remains a beacon of insightful discourse and rigorous analysis. Each issue is meticulously curated to bring forth groundbreaking research and diverse perspectives that push the boundaries of knowledge. We are dedicated to fostering a rich intellectual environment where ideas flourish and contribute to meaningful advancements in economics. As you delve into this issue, we invite you to engage with the abovementioned articles that reflect our commitment to excellence and our passion for discovery. Thank you for being an integral part of our academic community, and we look forward to continuing this intellectual journey together. I wish you a pleasant reading and a nice, restful summer.

Doc. Ing. Jan Mertl, Ph.D.

editor-in-Chief

Enhancing Corporate Performance through Debt Financing: Evidence from Nigerian Consumer Goods Firms

BILIQUEES AYOOOLA ABDULMUMIN, DAVID KAYODE KOLAWOLE,
ABDULRASHEED BOLAJI YUNUS

Abstract

Background: Consumer goods firms play a significant role in any economy, like other businesses, require a mix of financing methods to amplify their performance.

Aim: The study examined enhancement of corporate performance of Nigerian Consumer Goods Firms through debt financing for a period of eleven (11) years from 2011 to 2022.

Methods: The data obtained were estimated using descriptive statistics and panel regression model of fixed effect.

Results: The study found a positive and significant impacts of long-term debt ($\beta=0.469729$, $P=0.0311$) and firms' size ($\beta=0.154547$, $P=0.0251$) on the performance of Nigerian consumer goods firms' but negative and significant impacts of loan quality ($\beta=-0.037431$, $P=0.0241$) and short-term debt (-0.023417 , $P=0.0124$) on their performance.

Recommendation: The study recommends financing through Long-term debt for businesses in Nigeria.

Keywords

Corporate Performance, Debt Financing, Long-term Debt, Short-term Debt, Consumer goods firms, Nigeria

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Introduction

Consumer goods firms play a significant role in the economies of Nigeria and other African countries. They are a vital and rapidly growing sector characterized by high production capacity and a substantial market share (Chaleeda, et al, 2019). These firms are engaged in the manufacturing and distribution of essential consumer products that households rely on for their daily needs. The growth in a consumer goods firm's turnover is a key indicator of its performance. It reflects how well the firm has harnessed its assets to generate returns (Onoja & Ovayioza, 2015). Therefore, the corporate performance of these consumer goods firms is not only essential for their long-term sustainability but also plays a crucial role in driving economic growth through their economic activities within the country. In essence, the success and effective operation of consumer goods firms not only ensure their survival but also contribute significantly to the overall economic development of Nigeria and other African economies.

Consumer goods firms, like other businesses, require a mix of financing methods, including both equity and debt, to sustain their operations and replace aging assets. Ali (2020) suggests that an increase in the proportion of debt in a firm's capital structure can potentially lead to improved profitability. Therefore, the adequacy and appropriateness of corporate financing, including debt, are crucial factors that can significantly impact their performance. Such access can strengthen their financial position, boost productivity, and contribute to better overall performance (Olowe & Abubakar, 2019). Conversely, a lack of access to financing can hinder their growth potential. To avoid financial mismatches and ensure strong corporate performance, it is imperative for consumer goods firms to effectively mobilize debt capital. Proper debt management and utilization are essential to maintain a healthy balance between equity and debt, thereby supporting sustainable growth and avoiding potential financial challenges.

From the foregoing, using debt to run a business may be highly risky but an advantage of it is the tax saving (Abeywardhana & Magoro, 2017). Optimization of a firm's value and minimization of its borrowing costs required financing through debt by increasing it to reduce equity until the optimal level is reached. Debt financing of a firm may be short-term, long-term but each form of debt may not have similar impact on corporate performance due to differences in their risk profiles and returns (Chaleeda, et al., 2019). Short-term debt is more economical to use than long-term debt as it covers a greater proportion of total debts of small and medium businesses (Harelimana, 2017). Most of the firms prefer using short-term loan in developing countries are numerous in number than those using long-term debt because it is easier to settled faster, less risky and a less-interest bearing debt financing than long-term loan, and it is most widely being used by most of the newly incorporated small firms struggling for survival (Ikapel & Kajirwa, 2017). However, using long-term loan source of capital improves firms' productivity (Micah, et al, 2014). In the past, companies raised long-term debt simply to increase their capital base in order to gain ground in the market and improve their financial performance (Omete & Isabwa, 2017). Therefore, the use of both short and long-term debt financing is important in determining corporate performance.

Prior research, including studies by Olowe and Abubakar (2019), Sohail and Ulfat (2019), Uzokwe (2019), and Ali (2020), has explored the link between debt financing and corporate performance in various industries such as oil and gas, agriculture, financial services, wholesale and retail, education, industrial goods, and healthcare. However, these studies have not specifically investigated the consumer goods sector. Furthermore, a significant financial challenge affects the effective performance of many global corporate organizations (Abeywardhana & Magoro, 2017). Many firms face constraints in their ability to secure sufficient and suitable debt capital, leading to adverse effects on their performance. Hence, the primary objective of this study is to contribute further by researching and identifying appropriate sources of debt capital that can enhance the corporate performance of the consumer goods sector in Nigeria. This research aims to fill the gap in the literature by shedding light on how debt financing can be optimized within this specific sector, ultimately promoting better business performance in the Nigerian context.

1 Literature Review

1.1 Conceptual Review

1.1.1 Corporate performance

Corporate performance is an assessment of firms' ability to maintain and control their investment opportunity and strategies to achieve stability objective (Chaleeda, et al., 2019). Thus, measuring corporate performance is a significant way of satisfying the interests of all business stakeholders as it is going to serve as a yard stick for comparisons within an industry or among industries (Olayemi & Fakayode, 2021). Return on assets is a measure of corporate performance and it is estimated as the net profit after tax and interest divided by total assets (Sohail & Ulfat, 2019). Return on assets is used by investors to determine how well the firms' managers have employed their financial resources to generate returns for them (Abubakar, 2016). It is a firm's return on its investment in total assets (Abeywardhana & Magoro, 2017).

From the forgoing, corporate performance simply means a result from conducting a business activity. Hence, corporate performance is the firms' expected outcomes to be accomplished in a particular period. Similarly, it is apparent that return on assets measures how a business has employed its assets from ordinary course of business to generate revenue and or profits.

1.1.2 Debts financing

Debt capital refers to the funds acquired through loans intended to support a firm's operations (Atambo, et al, 2016). Debt can take the form of short-term or long-term financing options (Ali, 2020). Short-term debt typically involves loans that are expected to be repaid within a period of ninety to one hundred and twenty days (Olowe & Abubakar, 2019). This type of debt is commonly used to finance various business activities, such as the acquisition of necessary raw materials and covering administrative expenses (Hayam, 2013). It serves as a source of capital for corporate entities with a repayment timeline of

one year or less (Denis, 2017). Short-term debt typically incurs lower interest charges and results in reduced tax liability (Edori, et al, 2020). Ali (2020) has affirmed that Nigeria's business financing landscape is characterized by underdeveloped debt markets, which is why many companies primarily rely on short-term debt as their preferred form of debt capital.

Long-term debt represents a type of financing that becomes due for repayment after a period exceeding one year (Kajirwa, 2015). It serves as a means for businesses to save on taxes, consequently reducing the tax liability of taxpaying companies. Long-term debt encompasses a firm's capital that is repayable after one year and is often used to fund expansion and capital investment requirements. An illustrative example of such a loan is a debenture. Debentures have played a significant role in enhancing the financial capabilities of small businesses, enabling them to compete effectively with larger enterprises in open markets (Onoja & Ovayioza, 2015). Based on the perspectives of these researchers, debt represents a financial resource obtained with an obligation for repayment in the near future. It can be categorized into short-term debt, which must be repaid within a year, and long-term debt, which has a repayment period extending beyond a year. It is a common practice to finance long-term investments using long-term capital sources like debentures to ensure financial alignment and avoid financial mismatches.

1.2 Theoretical Framework-Trade-off theory

This research work is pinned on Trade-off Theory propounded by Kraus and Litzenberger in 1973 (Rahman, et al, 2020). The theory established that firms with high level of profits will enjoy tax shield benefit by increasing their debt financing. Trade-off Theory assumed that there exist firms' optimal capital structures. Thus, to maximize firms' present value and reduce their average cost of capital, they need to reduce their equity to switch up their debt for reduce debts to switch up their equity till the marginal cost is researched. The theory also assumed that trading-off implies that firms will benefits from the cost of financing their activities though debt because their asset will remain constant. Debt determines firms' optimal equity-debt ratio. More so, the trade-off theory is of the opinion a major benefit of debt financing is tax saving which can be used to off-set cost of bankruptcy or liquidation (Olayemi & Fakayode, 2021).

Based on the theoretical analysis provided earlier, the concept of trade-off involves making a choice where something is exchanged for something else. In the context of a firm's capital structure, this trade-off occurs when weighing the advantages and disadvantages of using debt financing. Utilizing debt financing depends on comparing its associated benefits against its costs. Therefore, when making financing decisions, it is crucial to conduct a cost-benefit analysis of a loan facility. The optimal debt ratio is achieved when the tax advantages offset the distress costs, as investors perceive investment in debt capital as less risky than equity. Given these assertions, it is essential to regularly assess and document a company's debt profile and returns. This rationale has led to the initiation of a study on improving corporate performance through debt financing, focusing on evidence from Nigerian consumer goods firms. Consequently, the trade-off theory aligns well with the objectives of this research.

1.3 Empirical review

The view of researchers need to be sought on corporate performance and debt financing as the study conducted by Abeywardhana and Magoro (2017) to determine the “relationship between debt capital and financial performance Companies between 2011 and 2015 in Sri Lankan and South African and used fixed effects for data analysis, and found that short-term debt positively impact firms; performance in South Africa but negatively in Sri Lanka. Denis (2017) investigates “the effect of debt financing on the private secondary schools’ financial performance in Nairobi” and employed multiple regression models for the analysis and found a positive significant impact of long-term debt and revenue growth on the schools’ financial performance. In addition, Uzokwe (2019) found that financial leverage that is, loan quality has positive influence on performance of quoted firms in Nigeria using data set from 2000 to 2017 which were analyzed using the multiple regression analysis.

Furthermore, Olowe and Abubakar (2019) and Ali (2020) in their respective studies discovered that firm size, financial leverage, and combined leverage have positive and significant impact on the return on assets (ROA) of the companies. Mukumbi, et al (2020) used regression analysis on relationship between capital structure and performance of non-financial firms in Nairobi from 2013 to 2017 and found that debts improve firm performance. Also, Olayemi and Fakayode (2021) carried out a study on “the effect of capital structure on quoted manufacturing companies’ financial performance in Nigeria and used panel regression models for data analysis, the results revealed that both short-term and long-term debts have significant and positive effect on ROA. Segun et al. (2021) used random effect model to analyze the relationship between capital structure and financial performance of oil and gas firms in Nigeria from 2010 to 2019 and found that total debt, Long-term, and Short-term debts have negative relationship with performance.

Moreover, Aliyu (2022) used panel regression analysis to examine the effect of capital structure on commercial banks performance in Nigeria from 2010 to 2019 and found that debt to equity ratio, total debt and firm size has negative relationship with return on assets, while debt to total capital has positive relationship with banks performance. Bawa (2022) found negative relationship between long-term debts, short-term debt to total assets on financial performance of industrial goods companies in Nigeria from 2003 to 2018 using multiple regression analysis. Similarly, Ibrahim, et al. (2022) used data of listed deposit money banks in Nigeria from 2012 to 2020 which were analyzed using random effect model, and it was found that long term debt to assets and total debt to assets have positive effect on banks performance. Nwafor, Yusuf and Shuaibu (2022) examined the relationship between capital structure and profitability using pharmaceutical companies in Nigeria from (2011-2020) using pooled ordinary least square and found that total debt ratio has negative relationship with profitability. More so, examining the relationship between capital structure and deposit money banks performance in Nigeria, Idolor and Omehe (2022) used pooled regression to analyzed data from 2015 to 2021 and found that debt to equity has negative relationship with performance. Olaoye (2023) utilized pooled ordinary least regression and found that short-term debt and Long-term debt has positive effect performance of South African consumer goods firms from 2011 to 2021.

2 Methodology

2.1 Model specification

This study adapted the work of Olowe and Abubakar (2019) shown below:

$$ROA_{i,t} = f(STD_{i,t}, LTD_{i,t}, DE_{i,t}, FS_{i,t}) \quad (1)$$

The model adapted was modified to form this research's model specified as follow:

$$ROA_{i,t} = f(LONQ_{i,t}, LTD_{i,t}, STD_{i,t}, FS_{i,t}) \quad (2)$$

Where:

$ROA_{i,t}$ = Return on assets of Nigerian consumer goods firms i in year t ;

$LONQ_{i,t}$ = The quality of loan which is the ratio of total debt to total asset of Nigerian consumer goods firms i in year t ;

$LTD_{i,t}$ = Long-term debt which is the ratio of long term debt to total asset of Nigerian consumer goods firms i in year t ;

$STD_{i,t}$ = Short-term debt which is the ratio of short term debt to total asset of Nigerian consumer goods firms i in year t ;

$FSIZE_{i,t}$ = Nigerian consumer goods firms' size in year t measured as the natural log of total assets.

2.2 Research design

The use of an expo facto research design was suitable for this study because it focused on analyzing existing information without any intervention or manipulation. The choice of an ex post facto research design was deemed appropriate for this study because it centered on investigating naturally occurring events and conditions, where the researcher had no control over the variables being studied.

2.3 Population and sample size of the study

This research work covered a period of eleven (11) years (2012-2022) to investigate "Enhancing corporate performance through debt financing: evidence from Nigerian Consumer Goods Firms". This research purposively sampled ten (10) firms that have required data from the population of twenty-one (21) listed consumer goods firms on Nigerian Exchange Group plc. The selected firm include: Honey-well Flour Mill plc (HWFM), Flour Mills Nigeria plc (FMN), Champion Breweries plc (CB), Nigerian Breweries plc (NB), Vitafoam plc (VITAFOM), Guinness Nigeria plc (GN), Unilever Nigeria plc (UN), Nestle Nigeria plc (NN), Cadbury Nigeria plc (CN) and Dangote Sugar Refinery Plc (DSR).

2.4 Variables measurement

The study's independent variable of debt financing is represented by three (3) explanatory

variables of loan quality (LONQ) measured in term of total debt to total assets (TD/TA); long-term debt (LTD) measured as long-term debt to total assets (LTD/TA) and short-term debt (STD) measured as a short-term debt to total assets (STD/TA). The dependent variable of corporate performance (CPFM) is represented by return on assets (ROA) while firm size (FSIZE) stood as a control variable as previously used by various researchers like Olowe and Abubakar (2019); Sohail and Ulfat (2019); Uzokwe (2019) among others. All the above methods and procedures were put in place to achieve the research objectives.

2.5 Data sources and method of data analysis

The study utilized secondary data sourced from the annual reports and accounts of the firms. Descriptive statistics and panel regression models, including random effect (RE), fixed effect (FE), and pooled ordinary least square (POLS), were employed for data analysis. Additionally, the Breusch-Pagan test was applied to choose between the RE and POLS techniques. These estimation techniques were deemed appropriate, as they have been previously utilized by other researchers such as Uzokwe (2019), Olowe and Abubakar (2019), and Ali (2020), among others, to assess the impact of explanatory variables on the study's dependent variable.

3 Data presentation and discussion

This section contains the results of panel models analysis, descriptive analysis and their explanations.

Table 1: Descriptive analysis results

Variables	ROA	LONQ	LTD	STD	FSIZE
Mean	0.1260	0.9330	0.2370	0.6580	0.6340
Median	0.0400	0.9000	0.0400	0.9500	0.5300
Maximum	0.3800	2.4600	0.7800	0.9800	0.9500
Minimum	0.0100	0.0500	0.0100	0.0400	0.2900
Std. Dev.	0.1560	0.8500	0.3340	0.4110	0.2730
Observations	110	110	110	110	110

Source: Data Analysis (2023)

Table 1 shows the outcome of descriptive statistics on the variables of loan quality (LONQ), long-term debt (LTD), short-term debt (STD) and firms' size (FSIZE). Based on the findings, the average of LONQ is 0.93 which above its standard deviation (SD) of 0.85 implying a cluster around the mean. The mean percentage of LTD is 0.24 and its SD is 0.34 greater than its mean value meaning that LTD is far from the mean. The average value of STD is 0.66 while its SD stood at 0.33 indicates that STD deviation from the mean is lower.

Table 2: Random effect model result
SERIES: ROA, LONQ, LTD, STD, FSIZE

Model 2: Random-effects (GLS), using 110 observations Included 10 cross-sectional units Time-series length = 11 Dependent variable: ROA				
Variables	Co-efficient	Std. Error	z-Statistic	P-value
Constant	0.163163	0.00406184	40.17	0.0001
LONQ	−0.037431	0.00118486	−31.59	0.0241
LTD	0.469729	0.00161698	290.5	0.0311
STD	−0.023417	0.00155241	−15.08	0.0124
FSIZE	0.154547	0.00416485	37.11	0.0251
Breusch-Pagan test:	Chi-square (1) = 5.5, P = 0.019 0.999813 0.999805 Z stat. = -2.22486, P = 0.087			
R2				
Adjusted R2				
Pesaran CD test				

Source: Authors’ Analysis, 2023

The adjusted R^2 value of 0.999805 indicates that when other variables are accommodated in the error term, *loan quality*, *long-term debt*, *short-term debt* and *firms’ size* will still enhance the firms’ performance by 99%. From the RE results, the beta value (Co-efficient) of *loan quality* (LONQ) is negative and significant ($\beta=-0.037431$, $P=0.0241$) implying that LONQ has no impact or influence in enhancing the performance of Nigerian consumer goods firms (NCGFs). Also, the co-efficient of *long-term debt* (LTD) is statistically significant and positive ($\beta=0.469729$, $P=0.0311$) implying that LTD enhances the performance of NCGFs. More so, the beta value of *short-term debt* (STD) is negative but statistically significant ($\beta=-0.023417$, $P=0.0124$) indicating that STD cannot enhance the performance of the firms in Nigeria. And also the Co-efficient of *firms’ size* (FSIZE) is positive and significant statistically ($\beta=0.154547$, $P=0.0251$) meaning that the size of the firms has a great impact or influence in enhancing the firms’ performance. Besides that, the result of Pesaran CD test shows that the z-statistics of 2.22486 with a p-value of 0.087 implying no fundamental error committed in the value of all the probabilities used for the study, thus no cross-section dependent in the data residual value.

Table 3: POLS result
SERIES: ROA, LONQ, LTD, STD, FSIZE

Model 2: Random-effects (GLS), using 110 observations Included 10 cross-sectional units Time-series length = 11 Dependent variable: ROA				
Variables	Co-efficient	Std. Error	z-Statistic	P-value
Constant	0.163163	0.00406184	40.17	0.0231
LONQ	−0.037431	0.00118486	−31.59	0.0162
LTD	0.469729	0.00161698	290.5	0.0321
STD	−0.023417	0.00155241	−15.08	0.03401
FSIZE	0.154547	0.00416485	37.11	0.04121
R2	0.999813			
Adjusted R2	0.999805			

Source: Authors' Analysis, 2023

Pooled ordinary lease square result (POLS) result in table 3 discloses that the Co-efficient of *loan quality* (LONQ) is statistically significant and negative ($\beta = -0.037431$, $P = 0.0162$). That means LONQ does not enhance the *firms' performance*. Again, the beta value of *long-term debt* (LTD) is statistically significant and positive ($\beta = 0.469729$, $P = 0.0321$) showing that LTD enhances the performance of Nigerian consumer goods firms (NCGFs). Besides, the Co-efficient of *short-term debt* (STD) is statistically significant but negative ($\beta = -0.023417$, $P = 0.03401$) meaning that STD does not enhance the firms' performance in Nigeria. Also the beta value of *firms' size* (FSIZE) is statistically significant and positive ($\beta = 0.154547$, $P = 0.04121$) indicating that the firms size enhances the firms' performance. Finally, R-square disclose that 99% (0.999813) changes in corporate performance (ROA) is explained by LONQ, LTD, STD and FSIZE, while the remaining 0.01% changes in ROA is explained by error term.

Table 4: Fixed effect model result
SERIES: ROA, LONQ, LTD, STD, FSIZE

Model 2: Random-effects (GLS), using 110 observations Included 10 cross-sectional units Time-series length = 11 Dependent variable: ROA				
Variables	Co-efficient	Std. Error	z-Statistic	P-value
Constant	0.163163	0.00424797	38.41	0.0341
LONQ	−0.037431	0.00123916	−30.21	0.0423
LTD	0.469729	0.00169108	277.8	0.0350
STD	−0.023417	0.00162354	−14.42	0.0212
FSIZE	0.154547	0.00435570	−5.48	0.0321
R2	0.999813			
Adjusted R2	0.999805			

Source: Authors' Analysis, 2023

Table 4 shows fixed effect model result where the beta value (Co-efficient) of *loan quality* (LONQ) is statistically significant and negative ($\beta = -0.0374317$, $P = 0.0423$) meaning that 1% increase in *loan quality* will reduce the performance of Nigerian consumer goods firms (NCGFs) by 3.7%. Additionally, the co-efficient of *long-term debt* (LTD) is positive and statistically significant ($\beta = 0.469729$, $P = 0.0350$) showing that 1% increase in long-term debt will enhance the performance of NCGFs by 46.9%. Similarly, the co-efficient of *short-term debt* (STD) is negative and significant ($\beta = -0.0234174$, $P = 0.0212$). That means 1% increases in the short-term debt will cause decline in the performance of the Nigerian consumer goods firms (NCGFs) by 2.3%. Furthermore, the Co-efficient of *firms' size* (FSIZE) is positive and significant statistically ($\beta = 0.154547$, $P = 0.0321$) meaning that the size of the firms increment by 1% will enhance the performance of Nigerian consumer goods firms (NCGFs) by 15.4%.

The result of random effect is shown in table 4.2 where Breusch-Pagan Lagrange multiplier test result discloses a χ^2 of 5.5 with a probability value of $0.019 < 0.05$ significant level, thus the research accepts that fixed effect is the most suitable estimator for panel models than random effects model. The adjusted R^2 value of 0.999805 implies that if other variables are accommodated in the error term, LONG, LTD, STD and FSIZE will still enhance the firms' performance by 99% in Nigeria.

3.1 Discussion of results

This study investigated enhancing corporate performance through *loan quality*, *Long-term debt*, *Short-term debt*, and *firms' size*: with evidence from Nigerian consumer goods firms. The study's results found positive and significant impacts of *Long-term debt* and *firms' size* on the performance of Nigerian consumer goods firms. This means that as the amount of *Long-term debt* held by Nigerian consumer goods firms increases, their performance also improves. Consumer goods firms often use Long-term debt to finance their operations, invest in growth opportunities, or manage their capital structure. When firms can effectively manage their *Long-term debt* and use it to fund productive investments, it can lead to improved performance. This was in line with the findings of Denis (2017), Mukumbi et al. (2020), Olayemi and Fakayode (2021), and Olaoye (2023) but contrary with the findings of Segun et al (2021) and Bawa (2022) that long term debt has negative relationship with performance.

More so, the *size of the consumer goods firms* in Nigeria also positively affects their performance. In general, this means that the firms tend to have more resources, diversified product portfolios, and greater market reach compared to smaller firms. These factors can contribute to improved performance. It may also have better bargaining power with suppliers and retailers, allowing it to secure favorable terms. Additionally, a consumer goods firms may have a stronger brand presence, which can lead to increased consumer trust and loyalty. This contradicts the findings of Aliyu (2022) which found that firm size has negative impact on banks. This may be as result of using banks whereas this study used consumer goods firms. Study by Ali (2020) agreed with this finding that size of firm impact positively on performance.

Furthermore, *loan quality* and *Short-term debt* has negative and significant impacts on the performance of consumer goods firms in Nigeria. This suggests that as the ratio of

total debt to total assets increases, the performance of consumer goods firms in Nigeria tends to deteriorate. Consumer goods firms in Nigeria have higher ratio and it indicates that larger portion of the firm's assets are funded by debt, which can increase financial risk and interest expenses. Therefore, the firms may be heavily leveraged, and if it cannot generate sufficient income to cover its debt obligations, it may lead to financial instability or poor performance. This aligns with the findings of Segun et al (2021), Aliyu (2022), and Idolor and Omehe (2022) but contrary to findings of Olayemi and Fakayode (2021) that loan quality has positive impact on performance.

Lastly, *Short-term debt* has a negative impact on the performance of consumer goods firms in Nigeria. Consumer goods firms with elevated levels of *Short-term debt* may face challenges in managing their liquidity and cash flow. If they are unable to meet their *Short-term debt* obligations, it can lead to financial distress and negatively impact their overall performance. *Short-term debt* may also come with higher interest rates compared to *Long-term debt*, which can increase interest expenses and reduce profitability. The generated result was contrary with the outcomes of previously reviewed related studies like Abeywardhana and Magoro (2017), Ali (2020), Olayemi and Fakayode (2021) and among others, which found the positive impact of short-term debts on the firms' performance. This finding however aligned with the findings of Idolor and Omehe (2022), Segun et al. (2021), and others.

Conclusions

Based on the findings, this research concluded that *Long-term debt* and *firms' size* enhance the Nigerian consumer goods firms' performance while *Short-term debt* and *loan quality* do not enhance Nigerian consumer goods firms' performance. These results implying those consumer goods firms in Nigeria and other countries can enhance their performance through *Long-term debt* as against the firm *Short-term debt*. The study therefore recommends financing through *Long-term debt* for business entities in Nigeria and other Africa countries to enhance their performance. Similarly, the stakeholders of consumer goods firms should be aware of how *Short-term debt* and *loan quality* as *Short-term debt* may come with higher interest rates compared to *Long-term debt*, which can increase interest expenses and reduce profitability. This will help the firms' managers during their financing decision if the recommendations are complied with.

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Financial Crisis Management from the Perspective of National MPs: A Qualitative Assessment

RENÉ M. MITTELSTÄDT

Abstract

Background: Financial crises have characterized economic history since the Roman Empire. Despite intensive political debate and extensive scientific research, parliaments in their role as legislators have failed to develop effective protection mechanisms. The example of the financial crisis of 2008 showed a major lack of political foresight with regard to the long-term consequences of decisions.

Aim: The paper aims to provide insights into how financial politicians use their individual knowledge in policymaking and how knowledge management tools can help achieve financial market stability.

Methods: Seven qualitative interviews with Members of national Parliaments in Europe were conducted in mid-2023. The evaluation was carried out using qualitative content analysis.

Results: The results show that while the majority have the skills and understanding, the topic itself is underrepresented in everyday parliamentary life. The article concludes with a discussion of the need to introduce knowledge management systems in the parliamentary context.

Practical relevance: This paper helps to uncover structural knowledge deficits among MPs. Knowledge management instruments could provide easy-to-implement support.

Keywords

Decision-making, Financial crises, Financial Policy, Knowledge Management, Member of Parliament, Parliament, Policymaking

JEL Codes

G01, G18, G28, H12

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Introduction

The very first financial crisis in history can be dated to the capital of the Roman empire in the year 33 AD. The economic shocks that ancient Rome experienced must have been enormous, since all the important historians of the time – Tacitus, Suetonius, and Dio – wrote down the events, which is unusual, since ancient writers usually showed no interest in such topics (Thornton & Thornton, 1990, p. 655). The origin of the crisis was the reactivation of a law obligating landowners that had been in force for years but had never been put into practice. This decision resulted in many court cases, which ultimately required the intervention of Emperor Augustus, who ordered all cases to be ended within 18 months. Instead of calming the situation, the markets panicked due to the money shortage that was now occurring (Frank, 1935). This mismanagement leads Bartlett (2018) to draw a comparison to the 2008 financial crisis.

„The juxtaposition of these crises suggests that widespread acceptance of certain political projects can lead to legislation that distorts particular investments, that the resulting situation may be unstable, and that if a crisis does emerge, politicians and bureaucrats, rather than jurists or lawyers, are often the ones who make first-order decisions aimed at stopping the crisis.“

Hähnel (2016) also takes a similar position, when he comes to the conclusion that the financial crisis of 2008 was the “unintended result of inadequate institutional framework conditions” as he called his excellent and award-winning doctoral thesis. Pointing out the relevance of knowledge for political decisionmakers is a self-evident fact. Politicians, public administration and governments are in continuous need of current information (e.g. demographic trends, tax revenue, demoscopic data towards public opinion etc.) for situation analysis and decision making (Felfoldi and Donoso, 2012). But the two examples mentioned, which could easily be continued as a look at the history books shows (Reinhart and Rogoff, 2009), show obvious deficits here. Although economics has long recognized the need for knowledge management (Nonaka & Takeuchi, 1995), these models have only sparse application to the political sphere. Indeed, Ahamed, Amarakoo and Senevirathne (2015, p. 4) point out, “knowledge in Parliaments tends to be tacit/informal and not recorded.” Whilst the politics and governance of crises have been much discussed by both economics and political science there has been very little research directed at understanding how politicians understand and act upon the issue. Following Willis (2018), who researched the level of knowledge about climate change, this study examines what level of knowledge political decision-makers have about financial crises. The paper aims to provide insights into how financial politicians use their individual knowledge in policymaking and how knowledge management tools can help achieve financial market stability. A qualitative approach is being pursued, for which seven interviews were carried out with financial politicians from a total of six EU countries between May and June 2023. The qualitative content analysis according to Mayering (1994) shows that financial crises tend to be something abstract that cannot be measured in stressful everyday life. In general, the specialist knowledge can be classified as good, as politicians can usually build on previous professional and academic experience and there is a well-developed infrastructure within parliaments. Nevertheless, the deficits listed in previous studies regarding a lack of knowledge culture were once again proven. It also became clear that decisions are often made against better knowledge, for example due to pressure from the political elite or other lobby interests. The following section will briefly

discuss the current state of the literature. I will then go into more detail about the aspect of political knowledge regarding financial crises themselves. After the presentation of the method and the results, they should be discussed in detail. Here I will make some suggestions for a political knowledge management system and explain to what extent these could provide support in future financial crises.

1 Literature Review

In Mittelstädt (2022) I presented a case study on the German Bundestag, contributing to the understanding of how parliaments and its members collect, use and archive their personal knowledge in terms of policy making. I was able to show that there is no uniform and stringent knowledge management system. This confirmed previous research that came to comparable results. The neglect is surprising at first glance, as knowledge is undeniably one of the most important resources in our modern society (Boltmann and Bankole, 2017, 995). Since the beginning of the 21st century, this discussion has been increasingly developed in the direction of a knowledge society, arguing that „knowledge and learning are the new battlefields for the evolution of our society and mankind“ (Lytras & Sicilia, 2005, p. 1). Parliaments are highly information resource entities due to their constitutional duties and responsibilities. To fulfil their core roles within legislation and governmental control, information and knowledge are crucial components (Boltmann and Bankole, 2017). A few case studies have already addressed the topic. The Finnish Parliament Committee for the Future published its first report in 2002. It highlights the significance of knowledge management for democracy and economic growth while also outlining a knowledge management strategy for the legislative context (Felföldi & Donoso, 2012, p. 1). A few years later, the Federal Government Plan (PPA) 2004-2007 presented by the Brazilian Government included a program for Knowledge Management, obliging all federal policies to implement e-gov procedures, “such as inter-institutional learning networks, strategic approaches to information and the use of information technology” (Mendes et al., 2004, p. 2). One of the first comprehensive studies was carried out by Mingmitr (2016) on the Thai Parliament in 2016, where he applied various success factors for good KM mentioned in the literature to the Thai parliament. Although these studies provide a good start, they neglect the role of MPs. However, these are essential due to their prominent position. As the work of Willis (2018, p. 486) shows for climate policy, how the politicians approach complex topics “is Influenced by their understanding of scientific evidence, but also by their professional identity, their concept of their role as a representative, and the way they navigate the day-to-day realities of life as an MP.” I therefore contend that maintaining an informed and efficient government depends much on the quality of the information influencing and flowing into the decision-making process (Orton et al., 2000, p. 207).

First of all, a parliament or its members are not a homogenous group, but divided into various sub-groups including government and opposition, coalition fractions, and regional or sociological groups (Rudzio, 2015). There is no professional counterpart where a group of people with drastically different backgrounds and skill sets are expected to do challenging new jobs without any prior professional or educational training (Orton et al. 2000, p. 216). In addition, the access to and the need for knowledge differs widely depending on which group an MP belongs to. There are institutions installed within most

parliaments, such as libraries or research and documentation services, but these facilities normally use public information only. As Ahamed, Amarakoo and Senevirathne (2015, p. 4) point out, "knowledge in Parliaments tends to be tacit/informal and not recorded." In addition, MPs vary considerably in terms of their professional background, so neither the awareness of the importance of nor the ability to manage knowledge can always be expected. Furthermore, it appears unlikely, that MPs would be willing to share their knowledge with their colleagues or the public since politicians are constantly fighting for their re-election (Esaïasson & Holmberg, 1996). However, elected officials have important duties and authority. Governments and parliaments can only take action when politicians, among other things, present their case, resolve conflicts of interest, and suggest solutions. Politicians' daily lives are governed by more than simply abstract ideas of representation and identity. The limitation imposed on them by the routine politics of the day is a third consideration. According to ethnographies of Parliament and administration, politicians' days are a flurry of meetings, decisions, and follow-ups (Willis, 2018, p. 478).

Facing the ever-growing need for information and fast decision-making because of globalisation, demographic change, and crises (Cong & Pandya, 2003) the need of parliaments and its members for proper knowledge management is obvious. A variety of circumstances might drive an organisation to develop a formal and systematic knowledge management system. These include the desire or need to: (a) get a better understanding of how the organisation operates; (b) save time and effort searching for information and documents; (c) minimise mistakes and needless duplication of labour; and (d) reduce the time it takes to respond to questions (Ahamed, Amarakoo and Senevirathne, 2015).

2 Methodology and Data

This study is based on the thesis that the knowledge work of MPs is not systematic. It was decided to use a qualitative approach. First, it quickly turned out that there was no literature or theory available for this specific topic. In addition, the research question "How do financial politicians collect, manage and analyse their relevant knowledge for political crisis management?" tries to present a subjective view of the test group in order to develop new ideas for political knowledge management system. A pure quantitative approach would have been less suitable because the sample size has to be small (Sandelowski, 1995). A qualitative approach is therefore preferable. Another advantage of qualitative research is that the content analysis, which is used as a method based on Mayring (1994), allows both deductive and inductive as well as deductive-inductive approaches. Deductive procedures primarily relate to existing knowledge, which can usually be derived from theory or is also based on the questionnaire. Inductive procedures are characterised by the fact that results can be derived from the material and are process oriented. There is also a mixed form of both approaches, in which a deductive category system is supplemented, expanded or adapted by the inductive process beforehand (Pohontsch, 2019). In the present work, it was decided to follow a deductive approach. Although the theoretical basis related to knowledge management by Members of Parliament is insufficient, there is relevant material from the field of economics and increasingly also from public administration. Therefore, based on the structure of the questionnaire, it can already be guessed that the leading questions can

be established as main categories. In the context of qualitative research, there are various ways of obtaining data material. In general, there is also the possibility of using existing communication materials. In the present work, however, new communication material is to be analysed. Several approaches are possible, but interviews are one of the most common methods of obtaining material. Interviews have the great advantage that you are in direct contact with the person being interviewed. Furthermore, subjective and individual impressions can be recorded through interviews (Helfferich, 2014).

In order to prepare for an interview, it is necessary to provide a written interview guide (Kallio et al., 2016). The guide serves to control the course of the conversation in such a way that the interviewer always knows that the aspects relevant to him are definitely taken into account. A semi-structured interview also offers the possibility for the researcher to ask questions at a suitable point and if necessary. A pre-test was carried out with an employee of a representative's office, and slight changes were made afterwards. The questionnaire begins with several questions about knowledge management in general. This includes, for example, questions about employees, office organisation, learning methods or the willingness to share knowledge. A second section is formed by the block on the questions related to the topic of crisis management and how the MPs use and collect knowledge here. I would like to point out that socio-demographic issues have deliberately not been included. The reasons for this are, on the one hand, that the duration of the interview should be kept as short as possible in order to accommodate the members' tight time budget. On the other hand, the relevant data can be viewed by the public anyway, since the respondents are public figures. To conclude it can be stated that the guide includes 14 questions, including several sub-questions, and, if necessary, is prepared for inquiries, if answers are very short or deviate too far from the actual question. Expert interviews are a special form of interview that differs from focus group interviews. Experts represent a special observation group because they have a special perspective or special expertise (Helfferich, 2014). In this study, which specifically refers to the group of Members of Parliament, these subjects should also be understood as corresponding experts. Specifically, this means an elected Member of a national parliament who exercises this position full-time. Around 8,000 people within the European Union meet this criterion. Now it is evident that such a number is far too large for a qualitative approach. Therefore, the size of the sample in qualitative social research is a challenging problem in the realm of sampling. There are no universal points of reference either, in contrast to quantitative social research. It is obvious that non-standardised data evaluation is typically more difficult, which is why qualitative samples are frequently small. However, drawing large samples is typically not necessary because the aim is to theoretically generalise the sample results. These can then be validated through further research. With a relatively small number of carefully picked cases, a wide range of in-depth information about the topic can be collected, and beyond a certain point, only redundant material can be retrieved. The idea behind theoretical sampling is that sample size considerations should, in theory, be of secondary significance since just a few cases usually allow a wide range of information to be obtained (Akremi, 2014). In addition, there is a high probability that the willingness for scientific interviews is generally very low among the target group due to the assumed low time budget. It can also be assumed that the topic of knowledge management will not be of interest to many. Nevertheless, care should be taken to ensure a balanced choice of interview partners who fit the requirements needed. These are at least one year's membership in

parliament and a focus on financial policy. Secondly, the aim was to cover all regions of the EU with Northern, Southern, Western and Eastern Europe. Finally, men and women, different age cohorts and opposition and government politicians should be interviewed. All political groups should also be represented. For the sake of simplicity, these are only indicated with left or right. For reasons of practicability, it was also necessary to have a good knowledge of German or English. The search for interview partners began in May 2023. For this purpose, the members of the finance committees of selected parliaments were contacted personally by me by email. As expected, the process proved challenging. The response rate was extremely low and MPs' offices often declined the request due to lack of time, insufficient language skills or lack of competence in the subject. In the end, however, seven suitable interview partners could be found. While the political spectrum was covered, the originally intended equal gender distribution of the test subjects could not be achieved, so that $n = 6$ subjects were male, while only $n = 1$ subject was female. A summary can be found in Table 1.

The interviews took place between May and July 2023. It was carried out completely online via Microsoft Teams or Zoom. The languages were English or German. With the permission of the participants, the interviews were recorded and then transcribed. Embarrassed sounds, digressions and disturbances were not taken into account. The transcription takes place in written language. The German-language transcripts were later translated into English. They have been numbered chronologically from A - E. The original audio files of the interviews from which the transcripts were created are archived by the author.

Table 1: Overview of the interview partners

Subject	Nation	Party	Duration
1	Germany	Right-wing	41.12 min
2	Austria	Right-wing	59.12 min
3	Sweden	Left-wing	46.24 min
4	Sweden	Right-wing	47.02 min
5	Estonia	Left-wing	29.07 min
6	Malta	Left-wing	29.35 min
7	EU	Right-wing	33.14 min
Average	/	/	40.72 min

Source: own research

The course of the interviews was as follows. First, the author and the research project were briefly introduced. The reference to the complete anonymity of the participation was assured again. Finally, the questions were read out according to the guidelines. Questions were reduced to an absolute minimum due to time constraints. No changes to the questionnaire itself were necessary. At the end of the conversation, open questions were clarified and the offer was made to provide information about the further course of the research project. In the context of the present work, qualitative content analysis was used as the evaluation method. It is one of the most common methods in qualitative social research alongside grounded theory and objective hermeneutics (Wilson & Hutchinson, 1991). Mayring and Fenzl (2014) define the method by explaining the individual sub-terms. As a result, content

analysis means that this type of text analysis is primarily about its content. Content analysis was developed in the first half of the 20th century in order to be able to carry out quantitative analyses of content aspects in the emerging mass media. An expanded understanding quickly developed, which also included latent meanings and subjectively made meanings as the aim of the analysis. The term qualitative in turn suggests that it is exclusively about qualitative-interpretative handling of text. However, also in the qualitative content analysis category frequencies are determined and statistically analysed. In the first step, categories that have been developed inductively on the material or that have been postulated in advance, based on theory and deductively, are assigned to individual text passages. The second phase then examines if certain categories can be applied to various text passages. Qualitative content analysis is generally used to structure communication material and then reproduce the summarised text sections in a generalised form (Goold & Damschroder, 2007). Various authors cite different processes in the context of qualitative content analysis. For this paper, the content analysis according to Mayring (1994) was applied. It includes a total of six steps when determining the analysis unit is included as it is done here.

1. The analysis unit is to be determined. In the case of the present work, the seven interview texts are defined as the unit of analysis.
2. All relevant text passages in connection with the research question are marked and then paraphrased. This means the shortening of the text passages to the most important content, with an identical wording of the original text passage.
3. Building on this, generalisations are determined in the third step. The generalisation should be formulated in your own words and reflect the essential content as briefly and concisely as possible.
4. After that, the so-called first reduction takes place, in which the content is shortened again. Furthermore, paraphrases and generalisations with the same content are deleted and only appear once in the evaluation folder.
5. Hence there is a second reduction where similar generalisations are merged. The second reduction should consist of one, maximum of two words. This should roughly reflect the core idea. A loss of information cannot be prevented at this point.
6. This then results in the categories, which usually agree with the second reduction. If necessary, subcategories can be formed. Now this category system can be used for coding the original texts. This step is designed to ensure the validity of the proposed categories. Categories are assigned to all text passages that are covered in terms of content. A text passage can have several codes.

The program *MAXQDA*, which can be considered a leader in the field of qualitative data analysis, was used for the practical implementation of the data analysis. The interview texts were uploaded to *MAXQDA* as a Word document and then processed there according to the analysis steps described above. Subtasks were performed in Excel.

3 Results

As part of the qualitative content analysis according to Mayring and Fenzel (2014) a category system with a total of 5 main categories and 4 subcategories of the first level could be worked out through a deductive process. In the following section, the main

and subcategories will be discussed by defining, explaining, and supporting them with quotations.

3.1 Knowledge

I start with the main category of *knowledge*, as it represents the core aspect of this work. This category includes all statements about the wealth of knowledge. This refers both to individuals or institutions and even to nation-states. Knowledge is understood here as general knowledge, factual knowledge, cultural and social knowledge as well as private knowledge. Political opinions, norms and values are expressly not included. Interviewee A put it this way: "Well, I would say that the labour market and social affairs are easy because I really have a lot of previous experience. And still, extremely benefit from everything I did before politics. And then a new law falls on solid ground for me. Where I can immediately think: What does that mean in practice? And there, I believe, bring in an approach that colleagues from the other groups appreciate as input, even if they don't share it. I think I can say that now without exaggerating" (A, Pos. 4). Overall, it was noticeable that all interviewees rated their level of knowledge as relatively good. Without exception, this was justified by a combination of professional activity and political experience (D, Pos. 2). The knowledge of the parliamentary colleagues, on the other hand, was rated mixed. One participant said that the substantive work is done by just 20 percent of the mandataries (B, Pos. 16). This is also due to the high level of specialisation of knowledge so there is hardly any in-depth debate outside of the committees (A, Pos. 4). Although the importance of knowledge as a basis for decision-making was unanimously recognised, the Maltese MP declared that political success was only half based on expertise. Rather, "gut feeling" is also needed (D, Pos. 2). However, it was also noted that one had the impression many colleagues acted in a strongly populist manner and put their own political success first. Expertise is not important for this group because they are not elected for expertise (B, Pos. 14). Previous discussions have shown that professional experience is of central importance, so this represents the next category. In fact, all respondents were able to make a direct connection between their political area of expertise and their previous work/education. However, it also often happened that individual topics had to be completely rediscovered. But these were more representative functions (A, Pos. 2). But even for the subject areas that were, at least theoretically, closely linked to their own biographies, several MPs pointed out that they were often presented with individual issues where their expertise was inadequate. Examples of this are tax policy for the mathematician (A, Pos. 2), or cryptocurrency for the scientist (G, Pos. 8). Nevertheless, *knowledge gaps* cannot be avoided and are therefore also included as a subcategory. This means that tasks are not or not completely fulfilled or facts cannot be adequately assessed. In addition, the processes for closing such gaps were also included. One of the interviewees summed it up aptly as a "completely new world where you have no idea" (G, Pos. 8). The interviewees were all realistic about the fact that it was hardly possible to be an expert in everything given the multitude of topics and the fast pace of changes in society. Although you must actively follow the general debate, for example through regular exchanges with stakeholders, a topic often must be developed within a short period of time (C, Pos. 8). Therefore, at the individual level, all respondents agreed that learning was an important part of the job. Although many MPs can rely on a wealth of experience and knowledge, the range of topics is so wide and the development so fast that you have to keep learning (C, Pos. 18). The most common means were the study of files, media consumption (G, Pos. 4) and

discussions with experts (B, Pos. 4). Further education and training played a minor role in the interviews and where only mentioned once. Only one MP explicitly said that he was able to build on the experiences of his immediate predecessors (E, Pos. 10). It was also striking that all representatives of smaller states clearly emphasised the need to learn from neighbouring countries to, if possible, follow a common line (E, Pos. 26). However, the majority stated that a large part was also learning by doing, especially as a result of the parliamentary process when government proposals are discussed (A, Pos. 24). The amount of time required for reading and familiarising themselves with new subject areas was emphasised several times. The MP explained: "Yes, I do allocate at least 50% of my time for me to think, to read, and to assess what I'm going to do" (D, Pos. 4). However, the majority viewed the question of whether governments or parliaments can learn with scepticism. There was consensus that ideology plays a role, after all, it "naturally shapes the view of [...] knowledge. And I can draw different conclusions from objectively the same data" (A, Pos. 26), as one MP put it. This sometimes makes communication between the political camps considerably more difficult (E, Pos. 16), as assessments of factors - one example was inflation - can differ significantly from one another. According to another MP, this is particularly problematic when determining a political course in times of crisis (B, Pos. 22). Once again, it was primarily opposition politicians who criticised many of the government's measures for ignoring the facts (C, Pos. 34). The representative of the EU Parliament assessed the development as very negative. He increasingly observed that certain political groups and organisations close to them no longer sought dialogue with the other side. Instead, more and more parliamentarians stay in their political bubble, where entire perspectives no longer exist. Thus, this input is missing in the decision-making process (G, Pos. 30).

3.2 Processes

The *processes* category addresses all work processes in the MPs' offices, in a parliamentary group, in a committee, between parties or parliamentary groups with regard to the organisation of knowledge. One parliamentarian summarised a typical legislative process as follows: "So when a law is proposed by the government, it usually goes under six weeks for consideration. And all stakeholders can submit statements" (B, Pos. 8). Here too, large overlaps could be identified. The party groups are organised in such a way that they work according to specialist topics. Members of Parliament are sent to the individual committees and have primary responsibility for the entire legislature (B, Pos. 6). Within the committees, the MPs take on individual aspects and act as rapporteurs (A., Pos. 4). The tasks then include obtaining a good level of knowledge about this topic, which is sometimes highly specialised and receives little media attention, evaluating government proposals and advising the parliamentary group and, if necessary, making their own suggestions (C, Pos. 8). The internal votes within a party are largely invisible to the public in order to enter parliament with as unified a position as possible (C, Pos. 14). An often tedious and time-consuming process (F, Pos. 4). Coordinated government proposals are then discussed in a broad consultation process with stakeholders and experts. In some cases, they are actively invited by parliament or the MPs make contact on their own (F, Pos. 30). The insights and opinions gained in this way could, if necessary, be incorporated into the draft. There were clear differences in the extent of support from employees. The committees have their own employees who are not affiliated with any party. You are responsible for simply organising the meetings. They are also usually responsible for

preparing the drafts. A Swedish MP explained that “they are highly skilled and educated within the area of the committee’s work. They are a very good knowledge resource. Their main task is not to inform us in some vocal manner. They are writing committee reports for us to decide upon and discuss in our committee, but they are highly skilled. We could not work without them” (F, Pos. 6). Most of the respondents also had their own staff, although Estonia does not have such resources, meaning that MPs are much more on their own (E, Pos. 6). The way the MPs work within their offices also differed in various ways. A group such as the German parliamentarian worked very meticulously and continuously recorded all developments and aspects in order to be able to access them if necessary: “And we have that here or we have organised it here in such a way that we have a kind of, I call it the basic note for almost every single reporter topic. Well, this is a document that really contains the basics, for example, the electricity tax. How is the history? What is the legal basis? What controversies are there? What is the position of the individual parties on this? Where is there a need for reform? Where is there perhaps also a specific legislative need for action that was included in the coalition agreement? Et cetera, et cetera. And we have this note for almost all reporter topics, which I then develop together with my employees. And that’s a living document, so to speak. So, whenever I read something interesting about electricity tax in the *Handelsblatt* [German Newspaper, the author], or a new study has somehow been published, then we work this information, so to speak, into this so-called, I just call the basic note accordingly” (A, Pos. 4). Others seemed to have a more on-demand style of working, meaning that when topics came up, they worked on them with great focus. It is often the responsibility of employees to write a short, succinct summary (D, Pos. 10). Any consultations with experts or inquiries from the government round off the opinion (F, Pos. 14). Finally, there is an aspect that should not be underestimated. The independence of MPs in their work varies, as some formulate their opinions independently, while others are more influenced or controlled by their offices or political parties. It was noticeable that hardly anything was said about digital tools that went beyond simple Microsoft applications. Only one parliamentarian spoke of the parliament’s own database, which also functions as a knowledge platform (B, Pos. 6). When asked whether knowledge is tacit and disorganised in parliament, the vast majority agreed. Only one person did not see it that way, one had a mixed opinion. It also became clear that the demands were very different, as it was often said that they were not aiming for scientific accuracy (B, Pos. 6). The number of staff fluctuated quite significantly. One MP, in fact, had no human resources of his own (E, Pos. 6). Most had 2-3 people. The division of tasks is roughly divided into three parts. Administration, content and marketing. However, due to the low capacity, several MPs pointed out that employees in all areas must provide support if necessary (B, Pos. 4). The substantive work, i.e. supporting the legislative process, was the most time-consuming and dominated the interviews. In addition, parliamentary groups or parties, parliamentary administration and ministries offer services, but these are used and evaluated very differently. Some MPs relied entirely on their own office (A, Pos. 34), while others made extensive use of it. The main motive was often to research facts and obtain scientific assessments (F, Pos. 4). There has been some criticism of the fact that there are no government-independent bodies that advise parliamentarians (B, Pos. 4). Regardless of position, length of membership in parliament, or whether government or opposition, all respondents said that time pressure was an ever-present dilemma. Some MPs expressed the feeling that they were often dissatisfied with decisions or the basis for decisions, because of the “overload” of decisions (F, 18). The

Austrian MP specifically said that he found a lot of the content being discussed “too shallow.” This is due, on the one hand, to the lack of time for preparation and, on the other hand, to the fact that once the government has finally reached an agreement, there will be no time for the opposition to speak to experts and make concrete suggestions for changes (B, Pos. 14). Anger was also expressed about the fact that there was no longer any time away from day-to-day business to delve deeper into the matter or even into topics outside of one’s own political field. Even reading books is often a luxury. This is precisely what is necessary for the big picture (G, Pos. 4). The problem is getting even worse because it exists at all levels and party leaders in particular, but also the legislative process, usually set clear deadlines (A, Pos. 18). However, many MPs seemed to accept this situation as a given: “You don’t have enough time. Just have to see how you get on with it. But you always have as much time as you need. I mean, work always takes as long as there is time, that’s the way it is. If I say that you have to decide tomorrow, then you have to decide tomorrow. Well, we never have enough time, but it’s enough” (G, Pos. 28). One of the most important tools, which became clear in all interviews, is *communication*. Various aspects such as poor communication from the government or the insufficient sharing of knowledge have already been discussed in detail. The exchange with experts is an important source of knowledge for many MPs, which is why this should be examined in more detail as a subcategory. This relates to communication with external stakeholders; overlaps with lobbying are unavoidable. One MP explains this as follows: “Also take time to sometimes go deeper within a subject and not only reading, also meeting people that have the knowledge and can give me, you could say compromising” (F, Pos. 4). One of the MPs tries to have as many discussions with experts as possible because he was convinced that a law would become significantly better after multiple rounds of consultation, as so much new knowledge would be added during this time that would otherwise not have been taken into account (A, Pos. 4 and 24). This view was shared by all other respondents (e.g. B, Pos. 8).

3.3 Government and Opposition

The *government* category will be discussed in the next section. Contents include functionality, composition, communication and cooperation between other actors. The aspect of knowledge dominance of governments will also be important. To put it succinctly: “It depends on the government, I would say, and which party is in power” (C, Pos. 26). Members of the opposition in particular brought up this issue again and again. The power imbalance and the excessive dominance of knowledge were particularly criticised (A, Pos. 12). Government representatives, in turn, assessed the processes much more positively and emphasised the high level of transparency and the broad participation of various stakeholders (C, Pos. 20). This also applied to the question of whether governments were able to learn. While from the opposition’s point of view, the view was that the measures taken were not being adequately evaluated, that they were acting too ideologically and were working too much in a power-oriented manner (B, Pos. 26), the respondents close to the government expressly affirmed it. Realistically speaking, governments work according to the principle of “learning by doing”; after all, politicians are often forced to make quick decisions in new situations without sufficient data (D, Pos. 26). A typical standard process in legislation was summarised in such a way that new developments, for example from the EU Commission, are processed at a technical level in the individual ministries in order to then submit a proposal to the minister (D, Pos. 2).

After the minister's approval, a participation process will be initiated with both the other ministries and external experts. After this first vote, a coordinated draft will be sent to parliament and, at the latest, made available to the public (C, Pos. 10). The direction in terms of content is of course dictated by the political orientation of the parties in power respectively the ruling coalition (E, Pos. 14).

According to several members of opposition parties, they are always the last to see a legislative draft. In some cases, they even have to obtain documents from third parties. Members of Parliament are often confronted with the statement that changes at this point in the process are no longer possible due to time constraints. The opposition's right to information must be demanded again and again, although the information received is usually reduced to the absolute minimum (B, Pos. 12). However, a former government representative had to self-critically admit that they were not good at sharing knowledge either (A, Pos. 12). A lot of criticism was also expressed regarding the specific organisational process. It was criticised that when formulating the agenda of committees, the opposition's concerns are often prevented by the government majority. In addition, flimsy arguments are often put forward to reject proposals in parliament (B, Pos. 8). But not only in parliament but also outside of it, opposition often faces difficulties. Especially small parties find themselves ignored or, in extreme cases, even avoided by many institutions in countries that are traditionally dominated by the people parties (B, Pos. 12). When asked about this, a government representative replied that the opposition itself was not contributing to the improvement. In his opinion, crises have already been conjured up in the media and the population has been unsettled (C, Pos. 22). Another interviewee criticised the lack of expertise and that it was all about enforcing one's own policies in parliament (D, Pos. 4). And in fact, the question of what the MPs wanted was answered more than once: "Well, to be in government, of course" (C, Pos. 36).

3.4 Lobbyism

The next category describes aspects of *lobbyism*. This means external influence on the legislative process. The special focus is on evaluating information provided by lobby groups. Indeed, all MPs confirmed that lobbyism is part of the parliament system: "[...] of course, many associations or interests also actively approach us as MPs' offices. Especially if they know, of course, that we are responsible for their specific topic" (A, Pos. 30). Lobbying represents the professionally organised representation of one's own political interests to parliamentary officials to influence the legislations process in one's favour (Lowery, 2007). This was generally viewed as positive, as a lot of useful input can be generated (A, Pos. 10). Frequently, many stakeholders are involved in the process early on, when the deliberations in the parliamentary committees begin. In some cases, statements are also submitted independently (B, Pos. 8). Depending on the financial resources of the groups, MPs can sometimes be "flooded" with information (B, Pos. 10). It was absolutely clear to all those interviewed that this was a matter of particular interest, which is why the evaluation was given central importance. Some representatives seemed to rely heavily on their experience or general assessment of certain groups (B, Pos. 14), while others asked the parliamentary administration for neutral advice (C, Pos. 16). As a rule, the points of contact here were less pronounced than between the political camps, but there was also occasional criticism that some groups refused contact with certain parties. In terms of a complete picture, this was rated very negatively (B, Pos. 12; C, Pos. 32). Although lobbying

itself was not questioned, it was seen as possible that bad decisions could be made because people were listening to groups that were selling themselves well. Therefore, as a politician it is absolutely necessary to have good knowledge and expertise in order to prevent this (D, Pos. 2). This is quite demanding, as the representative from Sweden added, as it requires a lot of time and skill. According to her, the first rule in her office is to always check the sources first (F, Pos. 14). The fact that lobbying is viewed as immoral by large parts of the population causes a lack of understanding among the parliamentarians. This is the only way he can see the big picture and recognise discrepancies in the Commission's arguments. This is not possible without this direct insight. In his opinion, it is therefore imperative to talk to all sides, which unfortunately some parties are now refraining from doing for ideological reasons (G, Pos. 14 and 30).

3.5 Crisis Management

Finally, *crisis management* is considered. This is of particular importance for this work. Individual aspects of this category are management processes, defining of crises, government crisis management, experts as advisors during crises, populism in crises, lack of knowledge in crises, international cooperation in times of crises, and learning from crises. One MP summarised his experiences: "If you look back from the Corona crisis, then we had a committee of the best doctors and the doctors advised the government what to do. As I said, even if we had different viewpoints, we couldn't do it because the other countries had closed the borders. Even if we had their good decisions, we couldn't manage the situation like the advisory board advised" (D, Pos. 24). The general assessment of crisis management from a political perspective was cautious. Several MPs confirmed the hypothesis that parliament is too busy with day-to-day business and that the long-term dimension is neglected. In fact, it is difficult to summarise at this point. All MPs interviewed were involved in some form of crisis management (e.g. pandemic, the war in Ukraine, the 2008 financial crisis), but a strategic, planned approach was not evident. The member of the German Bundestag replied: "Well, we'll deal with the crisis when it's there. You can see that now in the discussion about how to deal with Corona in parliament. Where there is also a discussion about it. Should there actually be some kind of commission or not? Nothing has happened in the last two years. Actually, one should now deal with this outside of day-to-day business using the example of pandemics" (A, Pos. 20). The reason given was that governments tended to close their eyes to emerging negative developments and to relax too much in supposedly good times (C, Pos. 24). One MP called it "the prevention paradox. As long as nothing happens, everyone thinks that the measures are not helpful. And if something happens then, there's a lot of screeching that nothing has just been done" (A, Pos. 22). The Estonian MP did not accept that, as the cultural dimension had to be taken into account. In his country, for example, the conflict with Russia has been much more present for years than in most other countries, which is why this situation is being actively discussed (E, Pos. 24). Overall, government representatives were once again significantly more optimistic. Although there was a lack of focus on crisis prevention for a long time and people were often too reactive, they have learned from the many experiences of the last few years (F, Pos. 20). In fact, the MPs seemed to be aware of its immense importance. Politics must always act first and create a framework (A, Pos. 24). Politicians are confronted with new situations (at least from their perspective) for which there is no experience and no data. At the same time, the pressure from the population to act immediately is very high (A, Pos. 24). It is therefore essential to

get support from experts. Ideally, they will be integrated into the relevant committees as permanent advisors (E, Pos. 24). One Swedish MP was very satisfied because the reporting system could be significantly improved. There are also committees that deal with the aftermath of crises - a specific example was the pandemic (F, Pos. 20). A procedure that is apparently rare, as other MPs complained that this was exactly what was missing: "We don't have such a review" (B, Pos. 26). A big problem seems to be the speed of change, as one crisis virtually replaces another. The MEP said that the "financial crisis [of 2008] doesn't exist anymore" (G, Pos. 22). What this means is that crises disappear from public discussion and are only a marginal political issue. We were aware that this short-term nature was extremely problematic. Several MPs spoke about the need for readjustments, because measures that once seemed sensible did not have the desired effect or turned out to be over-regulation (A, Pos. 22; G, Pos. 22). Fixed structures, further training, discussion groups or strategic approaches were not mentioned by the interviewees with regard to crisis management. On the contrary, it seems that individual MPs work on individual topics more randomly and based on their interests. Specifically, a Swedish MP mentioned an emerging housing bubble in his country, which he said is rarely debated in parliament (C, Pos. 24). Finally, the respondents called for more realism. A crisis cannot be solved ad hoc with standard knowledge, "otherwise it wouldn't be a crisis" (G, Pos. 24).

4 Discussion

Crises are an integral part of our history and affect practically all areas of society. There is an immense risk inherent in the financial and economic crises discussed here. The fact that crises and crisis prevention represent an important field of action for the political system does not require any further justification. And in fact, the extensive literature on this topic can be seen as evidence that there is awareness of it. Now it is unrealistic to assume that crises on the financial markets can ever be completely avoided. But good politics, i.e. a policy that is forward-looking, fact-oriented and comprehensive in all areas of society, should clearly be an advantage in preventing and containing emerging crises. However, Reinhart and Rogoff (2009) rightly point out the obvious grievances when they speak of the "this time is different" syndrome, i.e. the political class's mantra-like justification in the face of turbulence on the markets that was once again not recognized in time. Parliaments, as one of the most decisive institutions in Western democracies, naturally have a special role to play (McConnell, 2003).

My interviews clearly showed that crises were certainly an issue for all interviewed MPs, but it seemed to be of secondary importance. In the fast-paced political world, where one topic replaces the next, there is a lack of resources and probably often a lack of will to deal with (potential) crises of the future. This framework is extremely dependent on the time limits of the legislative periods. What makes matters worse is that there is little incentive to deal with potential risks, as it can be assumed that voters will not reward this abstract work in future elections. A problem that has been raised several times. Nevertheless, despite numerous experts, well-trained staff and the technical infrastructure, the conclusion of this study when it comes to knowledge work financial politicians was ambivalent. Willis (2018, p. 486) concludes her analysis of climate policy, that "the ways in which the politicians in this study approach climate change is influenced

by their understanding of the scientific evidence, but also by their professional identity, their conception of their role as a representative, and the way they navigate the day-to-day realities of life as an MP." This agrees with the results compiled here. I see two main reasons for this. The accusations of a lack of competence that often arise in public should be expressly rejected (Rienks, 2023). On the contrary, the interviews clearly show a high level of professional competence, which usually goes hand in hand with appropriate political tasks. Problems arise when there are no suitable personnel who can take on highly complex topics. Here the political parties have a duty to field sufficient specialist expertise as candidates. However, as has been mentioned several times, specialist expertise is often no guarantee of electoral success. Indeed, we face a dilemma. Parliaments should (even if, from a realistic perspective, this has probably never been the case) be a mirror of society and represent all opinions. Conversely, this does not mean that the elected representatives do not have to have the necessary knowledge. Parties will have to focus more on this in the future, knowing that the recruitment process is not an easy undertaking (Norris & Lovenduski, 2004).

The first reason that will only be briefly mentioned here is the fact that crisis politics is not the focus of parliamentary operations enough. Crises are always an issue when they occur, i.e. when it is too late. Since crisis prevention is an abstract topic that has no immediate benefit, MPs have no incentive to focus on it specifically. At the same time, it can be assumed that voters, who are suffering massively from the financial crisis, tend not to reward restrictive policies. This contradiction was mentioned several times in the interviews and seems understandable. In a plural society, citizens pursue countless political demands. Your interest lies in ensuring that those responsible for politics take this seriously. Abstract crisis prevention is probably a concrete concern for very few people. Other factors such as time pressure and limited legislative periods make this difficult. I would therefore like to focus on the second aspect. My thesis is that another core problem here is poor political management of the resource knowledge. Although both economics and the private sector have long recognized this and remedied it through numerous theories and models, this does not yet apply to the public service. "In the public sector, information management systems are well developed while knowledge management systems are still in its infancy" (Romanelli, 2016, p. 655). Given the widespread agreement in the analysis that knowledge is still viewed as implicit and disorganised, there is an undeniable need for reforms. I therefore advocate the establishment of a knowledge management system (KMS) specifically developed for parliaments and designed for their specific needs. These are IT-based systems created to assist and improve organisational processes for knowledge production, storage/retrieval, transfer, and application. They are a sub-class of information systems (Alavi & Leidner, 2001). The first step would certainly be to formulate a holistic KM strategy that encompasses all areas of parliament and encompasses the peculiarities of the political space. However, this should not be viewed as just a "nice to have" but must definitely become part of the culture of the house. New MPs will certainly need more support in their dealings at the beginning of their term of office, for example through appropriate training.

However, to prevent a proliferation of technology, or in the worst case even double structures that are not interoperable, from emerging, a clear KM strategy must be written for parliament. This must define clear goals and structures, clarify responsibilities, and formulate the rights and obligations of both the government and Members of Parliament

(Greiner et al., 2007). The ostensibly most important task will be to establish a greater awareness of knowledge as a resource. I believe that the role of the MP must be defined and, above all, supported much more than before as a knowledge worker (Davenport et al., 1998). Such systems must be located directly at the level of parliamentary administration as a neutral institution and administered from there. Only then will MPs be able to build enough trust in this source of knowledge. Its main focus must be using internet directories and database searches to locate an expert or a documented source of knowledge, sharing expertise and cooperating in virtual teams, accessing data on the previous legislature, and learning about the newest scientific findings (Alavi & Leidner, 2001). Nevertheless, it is essential to create interfaces to the parliamentary groups or individual parliamentary offices so that a higher-level network is created. A possible way to solve the data problem that has been mentioned again and again could involve the government putting its proposals on the knowledge platform. In addition, statements from affected stakeholders can be added and commented on by independent experts in order to create an overall picture that is as neutral as possible. Of course, the ability to work independently with these documents must remain. Solo national efforts must be avoided at all costs. Rather, there must be a European solution that ensures the greatest possible level of networking. AI tools can provide valuable services in translation and categorisation (Tsui et al., 2000). This will certainly mean restructuring and additional staffing in many parliaments, but a functioning democracy should be worth it to us. Like many commercial companies, departments responsible for knowledge work should be set up as standard. The MPs' assistants are technically experienced all-rounders. Combined with independent KM departments, immense services would be available. The specialist committees in parliaments also play a central role. These are - perhaps contrary to general opinion - mostly staffed by technical experts on the part of the MPs (at least at the management level). Each committee should have a certain number of advisory, obligatory experts who accompany the legislative process from the beginning.

Conclusion

Crises pose a significant danger to the stability of the financial markets and, consequently, to societal prosperity. It is not without reason that Thomas Mann (2022, p. 473) gave the fictional Buddenbrock merchant family the motto "show zeal for each day's affairs of business, but only for such that make for a peaceful night's sleep" in the novel of the same name. Speculative transactions coupled with unexpected events – in the novel the destruction of the grain harvest by hailstorms – then lead to the slow decline. Sure, the fact that risks can never be completely ruled out in commercial undertakings must simply be accepted. Some authors even go so far as to regard them as an "inevitable phenomenon" (Csiszárík-Kocsir, Varga, and Garai-Fodor, 2021, p. 212). In view of the immense damage that crises can cause both for individuals and for nation states, it should be understandable that the aim of state financial policy should be to identify emerging crises as early as possible and, at best, to prevent them altogether. The global financial system has been growing increasingly complicated during the 20th century, and especially after the GFC of 2008. Even the most recognized regulatory specialists, like Federal Reserve Chairman Alan Greenspan, have stated that with the rising globalization of capital markets, regulators do not have the knowledge to avert a big catastrophe (Ramirez, 2000). The

increase of macroprudential policy makes it all too clear that politics had obviously lost confidence in a pure self-regulation of financial institutions (Tomuleasa, 2015, p. 651). The objective of the paper was to provide insight into how politicians responsible for financial stability could use their individual knowledge in terms of policy making and, building on that, how knowledge management tools could help achieve strategic outcome as well as societal goals. The main theses that knowledge management is carried out inadequately or unsystematically, and that the loss of knowledge is very high due to the short electoral periods, has been confirmed. MPs require knowledge to make policy decisions, understand current social contexts and envision future trends and challenges (Felfoldi & Donoso, 2012). The need for a political KM is becoming obvious, when considering the poor political regulation of at least part of the 2007/2008 financial crisis. I propose that there was insufficient understanding and knowledge which at least slowed down the control process, if not made it more difficult. Let us not to forget that incorrect regulation led to this extent of the crisis in the first place (Goodhart and Tsomocos, 2019; Borio et al., 2020). But this will be the focus of future research, as well. The MP is an almost unique profession, having little control over the subject areas in which he may get involved and must become an expert, in response to party, constituency, public, and media demands. Information need is, therefore, very often reactive and, as a result, information seeking may be rushed, unsystematic and uncritical (Orton et al., 2000). I am convinced that KM could provide valuable support here and see this paper as a modest contribution towards developing a future model.

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User Cost of Housing Analysis of the German Real Estate Market

FELIX FLORIAN BALZ

Abstract

Background: This study looks at the development of the German real estate landscape, which recorded a continuous rise in prices between 2009 and 2022. These were due to a genuine excess demand, a shortage of supply and favorable financing conditions. In the course of 2022, mortgage rates then rose after a historically long period of low interest rates.

Aim: This study aims in particular to assess whether the financial advantage of home ownership remains robust. The aim is to determine the relative attractiveness of home ownership compared to renting in all 401 German districts and independent cities.

Methods: The owner-occupier costs are determined using the user cost of housing approach and compared with the current rental prices in the respective cities and districts. Various factors are taken into account, including the purchase price, financing costs, maintenance and rental prices.

Results: The results of the analysis show that home ownership still offers a considerable cost advantage on average across Germany: In mid-2023, it is around 57% cheaper per square meter to invest than to rent. However, it is important to point out that this result does not take into account differences in the population's ability to afford home ownership. Furthermore, the analysis raises questions about the sustainability of past house price growth and whether this increase is due to fundamental factors or low mortgage rates. In this sense, the study confirms that home ownership on the German real estate market remains economically favorable compared to renting, even with increased interest rates. It underlines how important it is to consider the long-term benefits for wealth accumulation when deciding between owning and renting.

Practical relevance/social implications: The study is of practical relevance for people who rent an apartment or house in Germany and are considering whether it is sensible and economical for them to invest in property. The findings from the analysis are helpful for current purchasing decisions.

Originality/value: It also offers original results and provides the reader with added value, as it captures and evaluates current real estate developments on the German market in a well-founded manner.

Keywords

Property Price Boom, Real Estate, Real Estate Economics, Residential Property, User Cost of Housing, User Cost of Housing Analysis

JEL Codes

D23, R2, R3

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Introduction

The real estate market plays a central role in the economy and the everyday lives of citizens in Germany. Changes in this market can have far-reaching effects, from the stability of the financial system to consumer choices. In particular, strong demand for real estate can quickly turn into speculative bubbles (imbalances). In this context, the “user cost of housing” approach offers an alternative to identify regional speculative bubbles and evaluate the advantageousness of homeownership compared to renting. This paper aims to apply this approach in the German real estate landscape and to analyze its impact on the market. The following two research questions are to be answered:

Q1: Will owner-occupier housing costs be higher than rental costs in Germany in 2023?

Q2: Has the rise in interest rates in 2022 put an end to the advantages of home ownership?

The central motivation for this work lies in the need to better understand the German real estate market and the question of home ownership versus renting. It is of great importance to determine whether, despite possible interest rate increases, it is still more cost-effective to purchase a property instead of renting. This question not only concerns potential real estate buyers and tenants, but also has a significant impact on financial stability and the economic situation in Germany. Identifying speculative bubbles in the real estate market is crucial, as these bubbles can not only lead to distortions in the market but also jeopardize the financial well-being of citizens.

The main objective of this paper is to apply the “user cost of housing” approach in Germany and to evaluate the cost of home ownership compared to renting. We will investigate whether it is still advantageous to buy a property even after a possible increase in interest rates. Our analysis will help not only to understand the current situation in the real estate market, but also to identify potential signs of speculative bubbles.

In the “user cost of housing” approach, the costs for tenants and property owners are compared. This requires converting the purchase price of real estate into ongoing costs incurred by the owner. These costs include the purchase price, utility costs, financing costs, and lost returns on invested equity. Taxes, maintenance and depreciation costs as well as expected price increases of the real estate are also taken into account.

Various data sources were used for this analysis. The purchase price per square meter of living space and price changes were used from available real estate data sources. Data on

mortgage rates, yields on bearer bonds, and tax rates were obtained from reliable sources. These data sources enable the cost of home ownership to be calculated in comparison with renting in various regions of Germany for the period from 2017 to 2023.

The results of the analysis show that in Germany, despite potential interest rate increases, it is still cheaper to buy than to rent residential property. In all 401 districts and independent cities in Germany, there is a positive cost advantage of home ownership. Even in metropolitan regions, where real estate prices have risen sharply, this cost advantage remains. The study also illustrates that the cost of home ownership is lower on average in the eastern states than in the western states. This could mean that it is financially more attractive for citizens in the eastern states to purchase residential property.

This paper is organized as follows: In the next section (Section 1), the user cost of housing approach is explained in more detail, including the theoretical foundations and possible applications. Section 2 is devoted to the methodology, describing the calculation of housing costs and the data basis. Section 3 presents the results of the analysis, highlighting regional differences and metropolitan areas. Finally, Section 4 will interpret the results and summarize their significance for the German real estate market. The summary of this paper will then once again note the key points. This introduction is intended to provide the reader with a comprehensive overview of the paper, clarifying the motivation, the objective, the approach, the data, the results and the structure of the following sections.

1 User Cost of Housing Approach

In general, the real estate market is assumed to be divided into a rental housing market and a residential property market. It is assumed that both the purchase price of real estate and the rental price on the market are determined primarily by the macroeconomic factors of supply and demand (Gürtler & Rehan, 2008). Strong demand for real estate can quickly lead to speculative bubbles. In this context, the user cost of housing approach represents an alternative approach to identify regional speculative bubbles (Schier & Voigtländer, 2015). It allows for a comparison of the costs incurred by renters and the regular costs incurred by a homeowner (Lehmann, 2016; Voigtländer & Sagner, 2019). In addition, it aims to determine the relative advantageousness of homeownership compared to renting (Voigtländer & Sagner, 2019). If the analysis then identifies strong differences in costs, this indicates a need for correction and thus provides evidence of overheating in the market (Schier & Voigtländer, 2015). The European Central Bank (2024) sees the user cost of housing approach as key driver of housing investment, by which the affordability of housing can be measured by the cost of the capital invested by a household in its housing, i.e. the user cost of housing.

The user cost of housing approach is a widely used international approach that can be used to evaluate developments in the housing market (Poterba, 1984; Himmelberg et al., 2005). This approach was also used, for example, by the U.S. and Irish central banks to identify speculative excesses in their housing markets in the run-up to the financial crisis

(Himmelberg et al., 2005; Browne et al., 2013). It is particularly well suited to reflecting the effect of monetary policy changes (Lehmann, 2016). According to Lehmann (2016), it is much better suited for this purpose than the price-to-rent ratio.

Basically, the approach goes back to Poterba (1984) and Himmelberg et al. (2005), who used this approach to study the impact of taxes on residential use forms of buying and renting. The approach is based on the premise that households are in principle indifferent between buying a home or living for rent in the same property (Voigtländer & Sagner, 2019; Hill et al., 2023). However, this is only true if the relative costs of the two options are identical. For, example if the costs change in favor of homeownership, the relative attractiveness of buying a home increases and the demand for real estate increases. This increased demand in the market for owner-occupied property would then subsequently also lead to purchase price increases in the corresponding regions, and renting becomes relatively less expensive until a new equilibrium is reached.

It should additionally be noted that the residential real estate market is rigid in the short term (Voigtländer & Sagner, 2019). For example, if the demand for housing in a region increases, new construction can only respond with delay, in most countries with a significant one. More importantly, relocations occur infrequently, so the speed of adjustment is very slow. This slow reaction speed, even in the face of a decline in demand, means that housing occupancy costs and rents can drift apart in the short term (Voigtländer & Sagner, 2019).

1.1 Methodology

In the user cost of housing approach, as in any empirical analysis, the data used and the underlying assumptions are reviewed and adjustments are made if necessary (Voigtländer & Sagner, 2019). Comparing the costs of renters and owners of a property is not trivial in this context because, after all, rental costs are incurred as a flow variable and the purchase price is due once. This is where the concept of owner-occupier costs comes in: The purchase price, including ancillary acquisition costs, taking into account financing costs and lost returns on the equity used to purchase the property, is converted into a flow variable (Voigtländer & Sagner, 2019). This allows for the comparison of rental costs and the costs faced by an owner-occupant. According to Schier and Voigtländer (2015), annual owner-occupied costs in the county at the time can be determined as follows:

$$(1) \quad SNK_{kt} = P_{kt} * (1 + g_{kt} + m_{kt} + e + n) * [b * j_{F,t} + (1 - b) * j_{A,t} * (1 - \tau_t)] + s + a - \Delta P_k$$

P_{kt} is the purchase price of the property in euros per square meter of living space. The term in the following parenthesis summarizes the ancillary costs incurred when purchasing the property: g stands for the amount of land transfer tax; depending on the federal state, between 3.50 and 6.50 percent of the purchase price is payable here in Germany. In addition, the calculation assumes that the property is purchased through a broker. The brokerage fee m differs thereby likewise between the German Lands of the Federal Republic. Here, as a rule, between 3.57 and 7.14 percent of the purchase price must be

paid. However, since this is a purchase of a property for private use, according to the newly applicable commission division, the same must be shared between buyer and seller. Therefore, an average of just over 3.00 percent is to be expected. A flat rate of 2.00 percent is estimated for the mandatory entry in the land register e and any notary fees (n) incurred (Homeday, 2024; Homeday, 2023). As a rule, the purchase price is financed with a mortgage loan. The average debt ratio b in recent years was around 78.12 percent (Voigtländer & Zdrzalek, 2022).

For the time-variable borrowing rate i_F , we assume the average effective interest rate of German banks for housing loans to private households with an initial fixed interest rate of more than 10 years. The time-variable debit interest rate i_F that could be determined for the period from 2003 to July 2023 is 3.26. To calculate this value, the average of the interest rates received from the bank for real estate financing during this period was formed. Data from the German Federal Bank (2023) was used for this purpose. In addition to the actual payments to be made for the house purchase, opportunity costs are incurred for the equity invested (on average 21.88 percent of the purchase price (Voigtländer & Zdrzalek, 2022)). As an opportunity interest rate, we assume the mean current yields of domestic bearer bonds i_A (2.14% (German Federal Bank, 2020)). A mean value was also calculated for this, analogously to the time-variable borrowing rate i_F .

The income generated from the investment on the capital market must be taxed at the τ tax rate. For this purpose, the average tax rate was determined after accrual of the Finanzstatistik (25.02% (calculation based on data from BMF, 2023)). Added to this are the annual costs in the form of maintenance s and depreciation a incurred by homeowners. A flat 3 percent is assumed for this (Clamor et al., 2013). These costs must be considered on an opportunity basis. Assuming that the residential property owner would not actually invest these costs in the property, for example in the form of a renovation or modernization measure, the property would lose value annually (Voigtländer & Sagner, 2019). Last, the long-term expected price increases of the residential property in the respective count ΔP with a negative sign have to be included in the calculation. The long-term price expectations are based here on the mean annual price increase rate of the years 2017 to 2023. The mean annual price increase rate was calculated as follows:

$$(2) \quad P = \left(\frac{VPI_2}{VPI_1} - 1 \right) * 100$$

For this purpose, data from the second-largest German real estate portal (immowelt, 2023a) were used. The individual price increases were calculated for each of the 401 districts using the formula provided above. These are list prices.

2 Data

To determine the housing occupancy costs in each county, various data sources were utilized. The equation comprises numerous variables that are not available in a single dataset (at least not publicly accessible). Table 1 is intended to list the various components of the equation along with their data sources. See Table 1: Variables and data sources.

Table 1: Variables and data sources

Variable	Explanation	Source
P_{kt}	Purchase price in euros per square meter of living space	immowelt (2023a)
g_{kt}	Amount of real estate transfer tax	Wüstenrot (2023)
m_{kt}	Brokerage fee	Homeday (2024)
e, n	Entry in the land register and notary fees	Homeday (2023)
b	Debt financing portion	Voigtländer and Zdrzalek (2022)
$i_{F,t}$	Mortgage interest rate	German Central Bank (2023)
$i_{A,t}$	Current yields on bearer bonds	German Central Bank (2020)
T_t	Tax rate	BMF (2023)
s	Maintenance	flat-rate
a	Depreciation	flat-rate
ΔP_k	Change in the purchase price	immowelt (2023a)

Sources: Own representation. Formulas based on Schier and Voigtländer (2015).

As can be seen from the table, both the purchase price in euros per square meter of living space (P_{kt}) and the purchase price change (ΔP_k) were calculated using data from immowelt (2023a). In this calculation, the square meter prices of individual districts from 2017 to 2023 were included, and the average square meter price of the past years was determined, or the annual purchase price change was calculated using the equation described earlier. Both values for condominiums and houses were included in the calculation. An average purchase price in euros per square meter of living space was deliberately calculated, rather than using the 2023 value, to prevent speculative price exaggerations. Currently, only values from 2017 to 2023 are publicly available, which is why older values could not be included in the calculations.

For the mortgage interest rate i_r , we assume the average effective interest rate of German banks for home loans to private households with an initial fixed interest period of over 10 years, which is 3.26 percent. To determine this rate, monthly average interest rates from 2003 to July 2023 were used, and the annual average was calculated to subsequently determine the overall average effective interest rate. Data from the Deutsche Bundesbank (2023) were used for this purpose. As for the opportunity cost of capital, we assume the average yields on domestic bearer bonds i_A (2.14%) (Deutsche Bundesbank, 2020). Similarly, an average was calculated for this using the same method as for the time-varying external capital interest rate i_r . To determine the tax rate τ , the average tax rate was calculated based on financial statistics (25.02% (calculation based on BMF data, 2023)).

3 Results of the analysis

After carrying out the calculation, it quickly became clear that the price growth rates determined for the various districts and independent cities would lead to negative signs in the owner-occupier costs. As costs cannot be negative, but represent expenditure, the equation had to be adjusted. To prevent speculative exaggerations, the price growth rate was therefore capped at a maximum of 4.00 percent. The trend in property prices, as seen in the square meter prices in recent years (immowelt, 2023a), indicates that a price decrease can be expected in the coming years. Such high annual price growth rates would distort the current comparison between purchasing a property now or entering into a rental agreement. Other experts have set a maximum price growth rate of 3.00 percent (Voigtländer & Sagner, 2019) or 2.50 percent (Voigtländer & Sagner, 2022) in recent years. However, as these values are significantly lower than the observed price increases, the mentioned 4.00 percent is used here. Since the values used are only supply values and not actual sales prices, this measure appears necessary to eliminate overly optimistic offers from the calculation and to use realistic sales prices as the basis.

After conducting the calculations, numerous results were recorded. First and foremost, the owner-occupier costs on the average across Germany amount to approximately €4.11 per square meter. For a 100 square meter apartment, this would correspond to costs of €411.00 per month or €4,932.00 per year. In comparison, the average rental price in Germany is currently around €9.14 per square meter. Therefore, a 100 square meter rented apartment would cost €914.00 per month or €10,968.00 per year. Considering these values, a cost advantage of ownership over renting can already be estimated. Currently, on average across Germany, this advantage is 56.57%. This means that the average advantage of homeownership over a rental agreement is about 56.57%, and this holds true on average across all 401 counties and independent cities in Germany. Thus, it currently costs people less than half as much in euros per square meter to invest in ownership rather than a comparable apartment.

Metropolitan areas always play a significant role in the analysis of the German real estate market, as extreme developments are often observed here. Table 2 shows the owner-occupier costs, rental prices and cost advantages of the German metropolitan regions. See Table 2: Analysis of Germany's metropolitan regions.

Table 2: Analysis of Germany's metropolitan regions

Metropolis	Owner-occupied cost (in € per sqm)	Rent price (in € per sqm)	Cost advantage over rents (in %)
Berlin	7.69	13.51	43.08
Cologne	7.76	13.56	42.77
Düsseldorf	7.91	11.21	29.44
Frankfurt am Main	9.57	16.43	41.75
Hamburg	9.01	13.00	30.69
Munich	14.57	21.41	31.95
Stuttgart	9.05	16.64	45.61

Source: Based on own calculation and own presentation. Rent prices data from: Immobilien Scout GmbH (2023); Immowelt (2023b); SmartMiete GmbH (2023); SP Software GmbH (2023); Zarenga GmbH (2023).

With the help of the user cost of housing analysis, it was possible to determine that Munich is currently the leader in terms of owner-occupancy costs and rents. None of the other metropolitan areas record such high owner-occupier and rental prices. However, at the same time, Munich does not exhibit the lowest cost advantage of homeownership over renting. With approximately 29.44%, homeownership in Düsseldorf is “least” advantageous when directly compared to the other German metropolitan areas. Hamburg (30.69%) and Munich (31.95%) narrowly miss claiming the top spot for “lowest cost advantage among German metropolitan areas”. However, in the context of an overall analysis of the German real estate market, it is not only the largest cities that are of interest but also a comparison among the individual federal states. In the following table, the corresponding values for the 16 federal states were determined with the help of the user cost of housing analysis. See Table 3: Analysis of the German federal states.

Table 3: Analysis of the German federal states

Federal state	Owner-occupied cost (in € per sqm)	Rent price (in € per sqm)	Cost advantage over rents (in %)
Baden-Württemberg	5.26	11.00	52.52
Bavaria	5.28	10.15	49.80
Berlin	7.69	13.51	43.08
Brandenburg	3.54	8.62	59.71
Bremen	3.70	8.55	57.13
Hamburg	9.01	13.00	30.69
Hesse	4.60	9.99	55.30
Lower Saxony	3.22	8.32	61.34
Mecklenburg-Western Pomerania	3.26	7.97	59.59
North Rhine-Westphalia	3.93	8.68	54.81
Rhineland-Palatinate	3.54	8.78	60.20
Saarland	2.71	8.84	69.24
Saxony	2.44	6.51	63.64
Saxony-Anhalt	2.00	6.27	68.58
Schleswig-Holstein	4.60	9.83	53.53
Thuringia	2.25	7.02	68.61

Source: Based on own calculation and own presentation. Rental prices data from: Immobilien Scout GmbH (2023); Immowelt (2023b); SmartMiete GmbH (2023); SP Software GmbH (2023); Zarenga GmbH (2023).

In a direct comparison of the federal states, Saxony-Anhalt stands out as the most affordable state for homeownership, with owner-occupier costs of only €2.00 per square meter. On average, a 100 square meter apartment here costs only €200.00 per month or €2,400.00 per year. Thuringia (€2.25 per square meter) and Saxony (€2.44 per square meter) closely follow Saxony-Anhalt as the next most affordable options. In this comparison, the highest owner-occupier costs are found in Hamburg (€9.01 per square meter) and Berlin (€7.69 per square meter). Excluding the two city-states, Bavaria (€5.28 per square meter) and Baden-Württemberg (€5.26 per square meter) occupy the last positions in terms of affordability. Analyzing the average rental prices of the federal states also revealed that renting is most expensive in Baden-Württemberg (€11.00 per square meter) and Bavaria (€10.15 per square meter) when excluding Hamburg and Berlin from consideration. Currently, renting is most affordable on average in Saxony-Anhalt (€6.27 per square meter).

Lastly, it is important to compare the cost advantages of the individual federal states. In this category, Saarland is currently the most attractive state for investing in homeownership rather than renting, with a cost savings of 69.24%. Thuringia (68.61%) and Saxony-Anhalt (68.58%) closely follows in this comparison. Currently, the states with the lowest cost advantages are once again Hamburg (30.69%) and Berlin (43.08%). Since these two city-states are excluded from this comparison, Bavaria currently has the lowest cost advantage at 49.80%. Just behind are Baden-Württemberg (52.52%) and Schleswig-Holstein (53.53%).

4 Interpretation of the results

After a comprehensive analysis and calculation, the question arises as to what insights can be derived for the real estate market and its future development. It is also important to determine whether and in what form the research questions Q1 and Q2 posed in the introduction can be answered. First and foremost, it is worth noting that even after an increase in interest rates towards more normal levels, investing in homeownership will still be significantly more attractive than renting. A positive cost advantage was found in all counties in Germany, even though the expected price increases in real estate were not fully incorporated into the evaluation. Therefore, in Germany at the current time, it is more expensive to rent a comparable apartment or house than to invest in one.

However, it is important to note that the user cost of housing approach does not take into account that the approximately 22% assumed as the equity ratio cannot be universally applied to the population. While the average German had per capita financial assets of €88,600 in 2022 (Statista, 2023), there has been a trend for decline (Statista, 2023). Additionally, it raises the question of whether this high level of per capita financial assets is evenly distributed across the entire country or concentrated in high-income regions. In this regard, the analysis quickly reveals that the eastern states of German have high cost advantages, low owner-occupier costs, and “relatively lower” rental prices. Therefore, living in these states is generally more affordable than in western Germany. A closer look at the two southern states of Bavaria and Baden-Württemberg shows that they often have lower cost advantages and high rents.

Even in the German metropolitan areas, despite significant price increases in recent years, positive cost advantages continue to exist. However, it should be noted that the high entry prices do not necessarily provide every citizen with the opportunity to invest in homeownership instead of renting.

Overall, the following can be stated with regard to research questions Q1 and Q2: On average nationwide and without exception, owner-occupier costs are lower, in some cases significantly so. This means that it is still advantageous to invest in home ownership instead of paying monthly for a rented apartment or house. Research question Q1 must therefore be answered in the negative: Residential user costs are not higher than rental costs, but the other way around. With regard to research question Q2, it can be stated that the rise in interest rates has not ended the advantages of home ownership. As explained at the beginning of Chapter 3, the calculated price increase rate of real estate in the districts and independent cities even had to be limited to 4.00 percent, as the results would otherwise yield “negative costs” for owner-occupiers. In other words, owner-

occupiers would mathematically receive money for living in their own property. It can therefore be concluded that the interest rate increases did not have a significant impact on the price increase rates either. This research question can therefore also be answered in the negative.

Conclusion

The study of the German real estate market using the “user cost of housing” approach shows that buying real estate is still cheaper than renting, despite possible interest rate increases. This cost advantage extends across all 401 counties and independent cities in Germany and is also maintained in metropolitan regions. It was found that the average cost of home ownership in Germany is about 57% lower than the cost of renting. This finding not only has an impact on potential property buyers and tenants, but also contributes to Germany’s financial stability and economic situation. The study shows that, even taking into account possible price increases for real estate, home ownership remains advantageous over renting. The calculations take into account various factors, including financing costs, taxes, maintenance costs and expected price increases. Interestingly, the eastern states of Germany have lower average ownership costs than the western states, indicating that it may be more financially attractive for citizens in the eastern states to purchase residential property.

It should be noted, however, that the “user cost of housing” approach does not take into account the individual financial situations of the population, especially the amount of equity that can be raised by citizens. This finding highlights the need to consider the distribution of assets in Germany. Lower cost advantages and “relatively lower” rental prices were found in the eastern states, indicating that living in these regions is generally more affordable than in the west. Finally, it was found that although high price increases were recorded in the real estate market in German metropolitan areas, the cost advantage of home ownership remains. The objective of the study, to determine whether home ownership will still be cheaper than renting in 2023, was therefore fully achieved. The two research questions Q1 and Q2 were also answered satisfactorily in this context.

However, it is important to note that the high entry prices do not offer all citizens the opportunity to invest in home ownership. Overall, this study shows that the real estate market in Germany continues to offer favorable conditions for homeownership, despite existing challenges, particularly with respect to the financial situation of the population and the regional distribution of wealth. Future research directions could focus on analyzing these factors and their impact on the real estate market.

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Appendix

Table 4: Owner-occupied cost, rental price and cost advantage of the 401 German counties

	Region	Owner-occupied cost (in € per sqm)	Rent price (in € per sqm)	Cost advantage over rents (in %)
Schleswig-Holstein				
01001	Flensburg	4.25	8.82	51.81
01002	Kiel	5.29	11.70	54.79
01003	Lübeck	5.48	9.85	44.37
01004	Neumünster	3.36	8.05	58.26
01051	Dithmarschen (dist.)	3.29	9.30	64.62
01053	Duchy of Lauenburg (dist.)	4.27	9.12	53.18
01054	North Frisia (dist.)	7.34	10.82	32.16
01055	East Holstein (dist.)	5.30	10.22	48.14
01056	Pinneberg (dist.)	5.33	11.96	55.43
01057	Plön (dist.)	4.38	10.33	57.60
01058	Rensburg-Eckernförde (dist.)	3.86	9.18	57.95
01059	Schleswig-Flensburg (dist.)	3.62	8.22	55.96
01060	Segeberg (dist.)	4.68	11.25	58.40
01061	Steinburg (dist.)	3.04	7.44	59.14
01062	Stormarn (dist.)	5.46	11.17	51.12

Hamburg				
02000	Hamburg	9.01	13.00	30.69
Loxer Saxony				
03101	Brunswick	4.79	9.12	47.48
03102	Salzgitter	2.66	5.88	54.76
03103	Wolfsburg	4.21	9.32	54.83
03151	Gifhorn (dist.)	3.36	9.39	64.22
03153	Goslar (dist.)	2.04	7.86	74.05
03154	Helmstedt (dist.)	2.53	7.06	64.16
03155	Northeim (dist.)	2.06	7.05	70.78
03157	Peine (dist.)	2.99	8.87	66.29
03158	Wolfenbüttel (dist.)	3.08	8.40	63.33
03159	Göttingen (dist.)	3.60	10.89	66.94
03241	Hannover (dist.)	4.54	8.83	48.58
03251	Diepholz (dist.)	3..07	8.11	62.15
03252	Hameln-Pyrmont (dist.)	2.41	6.57	63.32
03254	Hildesheim (dist.)	2.92	7.12	58.99
03255	Holzminden (dist.)	1.60	5.98	73.24
03256	Nienburg (Weser) (dist.)	2.36	6.91	65.85
03257	Schaumburg (dist.)	2.51	6.73	62.70
03351	Celle (dist.)	2.82	7.70	63.38
03352	Cuxhaven (dist.)	3.65	9.59	61.94
03353	Harburg (dist.)	4.79	10.72	55.32
03354	Lüchow-Dannenberg (dist.)	1.97	6.07	67.55
03355	Lüneburg (dist.)	4.43	8.63	48.67
03356	Osterholz (dist.)	3.38	8.63	60.83
03357	Rotenburg (Wümme) (dist.)	2.76	9.73	71.63
03358	Heidekreis (dist.)	2.63	7.43	64.60
03359	Stade (dist.)	3.77	10.03	62.41
03360	Uelzen (dist.)	2.67	8.52	68.66
03361	Verden (dist.)	3.39	9.02	62.42
03401	Delmenhorst	3.31	8.20	59.63
03402	Emden	2.70	9.12	70.39

03403	Oldenburg	4.77	10.33	53.82
03404	Osnabrück	4.41	9.58	53.97
03405	Wilhelmshaven	2.78	6.28	55.73
03451	Ammerland (dist.)	3.63	8.68	58.18
03452	Aurich (dist.)	4.58	7.77	41.06
03453	Cloppenburg (dist.)	2.81	9.44	70.23
03454	Emsland (dist.)	2.69	9.37	71.29
03455	Friesland (dist.)	3.32	7.36	54.89
03456	Bentheim (dist.)	2.88	8.10	64.44
03457	Leer (dist.)	3.52	8.55	58.83
03458	Oldenburg (dist.)	3.38	8.73	61.28
03459	Osnabrück (dist.)	3.06	9.37	67.34
03460	Vechta (dist.)	3.34	7.88	57.61
03461	Wesermarsch (dist.)	2.52	8.02	68.58
03462	Wittmund (dist.)	4.09	7.28	43.82
Bremen				
04011	Bremen	4.62	10.35	55.36
04012	Bremerhaven	2.77	6.74	58.90
North Rhine-Westphalia				
05111	Düsseldorf	7.91	11.21	29.44
05112	Duisburg	3.39	7.15	52.59
05113	Essen	4.90	8.86	44.70
05114	Krefeld	4.22	8.08	47.77
05116	Mönchengladbach	3.62	7.62	52.49
05117	Mülheim on the Ruhr	4.42	8.64	48.84
05119	Oberhausen	3.39	7.02	51.71
05120	Remscheid	3.47	6.67	47.98
05122	Solingen	4.16	7.50	44.53
05124	Wuppertal	3.67	7.36	50.14
05154	Kleve (dist.)	3.30	8.13	59.41
05158	Mettmann (dist.)	5.07	10.46	51.53
05162	Rhein-Kreis Neuss (dist.)	5.12	12.48	58.97
05166	Viersen (dist.)	3.89	9.34	58.35
05170	Wesel (dist.)	3.71	7.14	48.04
05314	Bonn	6.15	12.76	51.80
05315	Cologne	7.76	13.56	42.77

05316	Leverkusen	5.04	10.06	49.90
05334	Aachen city region (dist.)	4.27	9.99	57.26
05358	Düren (dist.)	3.27	8.30	60.60
05362	Rhein-Erft (dist.)	4.85	10.84	55.26
05366	Euskirchen (dist.)	3.30	9.49	65.23
05370	Heinsberg (dist.)	3.15	9.98	68.44
05374	Oberberg (dist.)	3.03	6.92	56.21
05378	Rheinisch- Bergischer Kreis (dist.)	4.90	9.39	47.82
05382	Rhein-Sieg (dist.)	4.76	9.89	51.87
05512	Bottrop	3.72	7.76	52.06
05513	Gelsenkirchen	2.92	10.62	72.50
05515	Münster	6.68	13.27	49.66
05554	Borken (dist.)	3.44	9.47	63.67
05558	Coesfeld (dist.)	3.88	8.93	56.55
05562	Recklinghausen (dist.)	3.41	7.30	53.29
05566	Steinfurt (dist.)	3.39	8.71	61.08
05570	Warendorf (dist.)	3.54	8.71	59.36
05711	Bielefeld	4.18	9.02	53.66
05754	Gütersloh (dist.)	3.93	8.79	55.29
05758	Herford (dist.)	2.92	7.73	62.23
05762	Höxter (dist.)	2.17	6.68	67.51
05766	Lippe (dist.)	2.94	7.20	59.17
05770	Minden- Lübbecke (dist.)	2.66	7.68	65.36
05774	Paderborn (dist.)	3.87	8.51	54.52
05911	Bochum	4.08	7.74	47.29
05913	Dortmund	4.51	8.92	49.44
05914	Hagen	3.22	5.70	43.51
05915	Hamm	3.30	8.73	62.20
05916	Herne	3.31	6.90	52.03
05954	Ennepe-Ruhr (dist.)	3.81	7.36	48.23
05958	Hochsauerlandkreis (dist.)	2.42	7.33	66.98
05962	Märkischer Kreis (dist.)	2.79	6.30	55.71
05966	Olpe (dist.)	2.86	8.03	64.38
05970	Siegen- Wittgenstein (dist.)	3.09	7.02	55.98

05974	Soest (dist.)	3.19	8.57	62.78
05978	Unna (dist.)	3.45	8.03	57.04
Hesse				
06411	Darmstadt	6.89	13.78	50.00
06412	Frankfurt am Main	9.57	16.43	41.75
06413	Offenbach am Main	6.42	16.19	60.35
06414	Wiesbaden	7.57	11.63	34.91
06431	Bergstrasse (dist.)	4.48	9.30	51.83
06432	Darmstadt-Dieburg (dist.)	5.20	10.95	52.51
06433	Groß-Gerau (dist.)	5.66	11.49	50.74
06434	Hochtaunus (dist.)	7.09	10.96	35.31
06435	Main-Kinzig-Kreis (dist.)	4.53	9.92	54.33
06436	Main-Taunus (dist.)	7.00	11.47	38.97
06437	Odenwald (dist.)	3.24	8.29	60.92
06438	Offenbach (dist.)	5.96	10.49	43.18
06439	Rheingau-Taunus (dist.)	4.88	9.39	48.03
06440	Wetterau (dist.)	4.84	9.84	50.81
06531	Gießen (dist.)	4.03	10.71	62.37
06532	Lahn-Dill (dist.)	3.05	7.30	58.22
06533	Limburg-Weilburg (dist.)	3.14	10.35	69.66
06534	Marburg-Biedenkopf (dist.)	3.47	10.56	67.14
06535	Vogelsbergkreis (dist.)	2.19	6.57	66.67
06611	Kassel	4.36	9.17	52.45
06631	Fulda (dist.)	3.66	7.73	52.65
06632	Hersfeld-Rotenburg (dist.)	2.30	7.75	70.32
06633	Kassel (dist.)	3.03	8.45	64.14
06634	Schwalm-Eder (dist.)	2.42	7.02	65.53
06635	Waldeck-Frankenberg (dist.)	2.43	7.61	68.07
06636	Werra-Meißner (dist.)	2.14	6.48	66.98

Rhineland-Palatinate				
07111	Koblenz	4.77	9.88	51.72
07131	Ahrweiler (dist.)	3.54	8.57	58.69
07132	Altenkirchen (Westerwald) (dist.)	2.32	6.78	65.78
07133	Bad Kreuznach (dist.)	3.21	10.09	68.19
07134	Birkenfeld (dist.)	2.00	8.53	76.55
07135	Cochem-Zell (dist.)	2.43	8.40	71.07
07137	Mayen-Koblenz (dist.)	3.30	8.37	60.57
07138	Neuwied (dist.)	3.20	7.90	59.49
07140	Rhine-Hunsrück (dist.)	2.68	6.32	57.59
07141	Rhine-Lahn (dist.)	2.83	7.96	64.45
07143	Westerwald (dist.)	2.57	7.48	65.64
07211	Trier	4.75	11.57	58.95
07231	Bernkastel-Wittlich	2.76	9.07	69.57
07232	Eifel Bitburg-Prüm (dist.)	2.95	8.89	66.82
07233	Vulkaneifel (dist.)	2.34	6.64	64.76
07235	Trier-Saarburg (dist.)	3.59	8.29	56.69
07311	Frankenthal (Palatinate)	4.42	9.94	55.53
07312	Kaiserslautern	3.27	8.30	60.60
07313	Landau in the Palatinate	4.94	10.24	51.76
07314	Ludwigshafen on the Rhine	4.57	9.73	53.03
07315	Mainz	6.57	14.31	54.09
07316	Neustadt a.d. Weinstrasse	4.73	8.79	46.19
07317	Pirmasens	1.97	6.35	68.98
07318	Speyer	5.82	11.27	48.36
07319	Worms	4.20	10.21	58.86
07320	Zweibrücken	2.65	6.40	58.59
07331	Alzey-Worms (dist.)	3.61	7.96	54.65
07332	Bad Dürkheim (dist.)	4.00	10.29	61.13

07333	Donnersbergkreis (dist.)	2.76	7.09	61.07
07334	Germersheim (dist.)	4.44	8.87	49.94
07335	Kaiserslautern (dist.)	2.69	7.94	66.12
07336	Kusel (dist.)	2.13	6.73	68.35
07337	Südliche Weinstrasse (dist.)	3.90	11.57	66.29
07338	Rhein-Pfalz (dist.)	4.55	8.54	46.72
07339	Mainz-Bingen (dist.)	4.63	10.14	54.34
07340	Southwest Palatinate (dist.)	2.28	6.75	66.22
Baden-Württemberg				
08111	Stuttgart	9.05	16.64	45.61
08115	Böblingen (dist.)	6.64	12.65	47.51
08116	Esslingen (dist.)	6.52	12.81	49.10
08117	Göppingen (dist.)	4.80	9.77	50.87
08118	Ludwigsburg (dist.)	6.68	12.87	48.10
08119	Rems-Murr (dist.)	6.10	11.16	45.34
08121	Heilbronn	5.91	12.23	51.68
08125	Heilbronn (dist.)	5.06	10.92	53.66
08126	Hohenlohe (dist.)	4.13	9.52	56.62
08127	Schwäbisch Hall (dist.)	3.98	11.30	64.78
08128	Main-Tauber (dist.)	3.38	9.34	63.81
08135	Heidenheim (dist.)	3.86	9.64	59.96
08136	Ostalbkreis (dist.)	4.36	13.51	67.73
08211	Baden-Baden	6.33	9.59	33.99
08212	Karlsruhe	6.93	14.11	50.89
08215	Karlsruhe (dist.)	5.09	9.33	45.44
08216	Rastatt (dist.)	4.72	9.61	50.88
08221	Heidelberg	8.06	15.32	47.39
08222	Mannheim	5.89	12.61	53.29
08225	Neckar-Odenwald (dist.)	3.25	9.20	64.67
08226	Rhine-Neckar (dist.)	5.11	10.13	49.56

08231	Pforzheim	5.05	10.48	51.81
08235	Calw (dist.)	4.21	9.59	56.10
08236	Enzkreis (dist.)	4.70	9.93	52.67
08237	Freudenstadt (dist.)	3.37	9.08	62.89
08311	Freiburg im Breisgau	8.19	14.70	44.29
08315	Breisgau-Hochschwarzwald (dist.)	5.76	10.49	45.09
08316	Emmendingen (dist.)	5.55	10.34	46.32
08317	Ortenaukreis (dist.)	4.49	10.11	55.59
08325	Rottweil (dist.)	3.48	8.75	60.23
08326	Schwarzwald-Baar (dist.)	3.87	11.70	66.92
08327	Tuttlingen (dist.)	3.93	8.94	56.04
08335	Constance (dist.)	6.69	11.30	40.80
08336	Lörrach (dist.)	5.58	12.81	56.44
08337	Waldshut (dist.)	4.30	9.29	53.71
08415	Reutlingen (dist.)	5.39	10.59	49.10
08416	Tübingen (dist.)	6.09	11.24	45.82
08417	Zollernalbkreis (dist.)	3.53	9.68	63.53
08421	Ulm	6.67	10.73	37.84
08425	Alb-Donau (dist.)	4.55	9.44	51.80
08426	Biberach (dist.)	4.24	11.30	62.48
08435	Bodensee (dist.)	6.79	12.00	43.42
08436	Ravensburg (dist.)	5.45	10.45	47.85
08437	Sigmaringen (dist.)	3.51	8.62	59.28
Bavaria				
09161	Ingolstadt	7.29	13.66	46.63
09162	Munich	14.57	21.41	31.95
09163	Rosenheim	8.25	11.93	30.85
09171	Altötting (dist.)	4.55	8.77	48.12
09172	Berchtesgadener Land (dist.)	6.52	11.13	41.42
09173	Bad Tölz-Wolfratshausen (dist.)	8.94	11.17	19.96
09174	Dachau (dist.)	9.19	13.18	30.27

09175	Ebersberg (dist.)	9.53	14.30	33.36
09176	Eichstätt (dist.)	5.51	9.76	43.55
09177	Erding (dist.)	7.63	11.69	34.73
09178	Freising (dist.)	8.19	12.11	32.37
09179	Fürstenfeldbruck (dist.)	9.73	13.37	27.23
09180	Garmisch-Partenkirchen (dist.)	8.85	11.81	25.06
09181	Landsberg a. Lech (dist.)	7.33	11.77	37.72
09182	Miesbach (dist.)	10.99	14.28	23.04
09183	Mühldorf a. Inn (dist.)	5.05	9.43	46.45
09184	Munich (dist.)	11.83	17.11	30.86
09185	Neuburg-Schrobenhausen (dist.)	5.33	11.12	52.07
09186	Pfaffenhofen a.d. Ilm (dist.)	6.23	11.45	45.59
09187	Rosenheim (dist.)	7.59	10.96	30.75
09188	Starnberg (dist.)	11.43	15.43	25.92
09189	Traunstein (dist.)	6.16	11.40	45.96
09190	Weilheim-Schongau (dist.)	6.99	9.75	28.31
09261	Landshut	7.32	11.18	34.53
09262	Passau	4.74	10.14	53.25
09263	Straubing	4.86	9.56	49.16
09271	Deggendorf (dist.)	4.10	7.76	47.16
09272	Freyung-Grafenau (dist.)	2.56	6.91	62.95
09273	Kelheim (dist.)	4.55	9.32	51.18
09274	Landshut (dist.)	5.18	8.93	41.99
09275	Passau (dist.)	3.33	7.99	58.32
09276	Regen (dist.)	2.79	6.88	59.45
09277	Rottal-Inn (dist.)	3.57	8.30	56.99
09278	Straubing-Bogen (dist.)	3.74	8.68	56.91
09279	Dingolfing-Landau (dist.)	4.13	9.42	56.16
09361	Amberg	4.42	9.61	54.01
09362	Regensburg	7.62	12.99	41.34

09363	Weiden i.d.OPf.	3.73	8.68	57.03
09371	Amberg-Sulzbach (dist.)	3.20	7.52	57.45
09372	Cham (dist.)	2.79	7.94	64.86
09373	Neumarkt i.d.OPf. (dist.)	4.33	9.98	56.61
09374	Neustadt a.d. Waldnaab (dist.)	2.80	8.46	66.90
09375	Regensburg (dist.)	5.09	9.35	45.56
09376	Schwandorf (dist.)	3.47	7.90	56.08
09377	Tirschenreuth (dist.)	2.44	6.19	60.58
09461	Bamberg	5.84	10.93	46.57
09462	Bayreuth	4.94	11.16	55.73
09463	Coburg	3.94	9.00	56.22
09464	Hof	2.45	7.20	65.97
09471	Bamberg (dist.)	4.00	8.38	52.27
09472	Bayreuth (dist.)	3.03	7.79	61.10
09473	Coburg (dist.)	2.91	7.50	61.20
09474	Forchheim (dist.)	4.64	8.93	48.04
09475	Hof (dist.)	1.91	6.37	70.02
09476	Kronach (dist.)	2.44	8.77	72.18
09477	Kulmbach (dist.)	2.71	7.42	63.48
09478	Lichtenfels (dist.)	2.97	8.67	65.74
09479	Wunsiedel i. Fichtelgebirge (dist.)	1.99	7.37	73.00
09561	Ansbach	4.19	11.64	64.00
09562	Erlangen	7.15	13.36	46.48
09563	Fürth	6.18	12.99	52.42
09564	Nuremberg	6.49	13.07	50.34
09565	Schwabach	5.54	10.91	49.22
09571	Ansbach (dist.)	3.54	8.70	59.31
09572	Erlangen-Höchstadt (dist.)	5.50	10.30	46.60
09573	Fürth (dist.)	5.51	10.00	44.90
09574	Nuremberg (dist.)	4.88	8.89	45.11
09575	Neustadt a.d. Aisch-Bad Windsheim (dist.)	3.51	8.19	57.14
09576	Roth (dist.)	4.58	9.70	52.78

09577	Weissenburg-Gunzenhausen (dist.)	3.70	9.20	59.78
09661	Aschaffenburg	5.97	13.06	54.29
09662	Schweinfurt	4.24	9.11	53.46
09663	Würzburg	6.10	13.63	55.25
09671	Aschaffenburg (dist.)	4.54	9.15	50.38
09672	Bad Kissingen (dist.)	2.82	8.38	66.35
09673	Rhön-Grabfeld (dist.)	2.77	6.40	56.72
09674	Haßberge (dist.)	2.82	7.73	63.52
09675	Kitzingen (dist.)	3.63	8.01	54.68
09676	Miltenberg (dist.)	3.71	8.42	55.94
09677	Main-Spessart (dist.)	3.22	7.23	55.46
09678	Schweinfurt (dist.)	3.28	8.21	60.05
09679	Würzburg (dist.)	4.33	8.74	50.46
09761	Augsburg	7.24	13.57	46.65
09762	Kaufbeuren	5.28	10.23	48.39
09763	Kempten (Allgäu)	6.06	9.78	38.04
09764	Memmingen	5.32	11.01	51.68
09771	Aichach-Friedberg (dist.)	6.36	10.85	41.38
09772	Augsburg (dist.)	5.99	11.30	46.99
09773	Dillingen a.d. Donau (dist.)	3.93	10.95	64.11
09774	Günzburg (dist.)	4.09	8.95	54.30
09775	Neu-Ulm (dist.)	5.28	10.16	48.03
09776	Lindau (Lake Constance) (dist.)	6.60	10.16	35.04
09777	East Allgaeu (dist.)	5.40	10.60	49.06
09778	Unterallgäu (dist.)	4.75	11.48	58.62
09779	Donau-Ries (dist.)	3.97	9.90	59.90
09780	Oberallgäu (dist.)	6.12	10.59	42.21
Saarland				
10041	Saarbrücken city association (dist.)	2.87	10.36	72.30
10042	Merzig-Wadern (dist.)	2.88	9.17	68.59
10043	Neunkirchen (dist.)	2.31	7.90	70.76

10044	Saarlouis (dist.)	2.74	8.92	69.28
10045	Saarpfalz (dist.)	2.80	8.02	65.09
10046	Sankt Wendel (dist.)	2.65	8.66	69.40
Berlin				
11000	Berlin	7.69	13.51	43.08
Brandenburg				
12051	Brandenburg on the Havel	3.56	7.48	52.41
12052	Cottbus	3.09	8.07	61.71
12053	Frankfurt (Oder)	3.02	6.23	51.52
12054	Potsdam	7.71	10.83	28.81
12060	Barnim (dist.)	4.04	10.83	62.70
12061	Dahme-Spreewald (dist.)	4.31	12.15	64.53
12062	Elbe-Elster (dist.)	1.76	6.08	71.05
12063	Havelland (dist.)	4.15	8.93	53.53
12064	Märkisch-Oderland (dist.)	3.75	9.28	59.59
12065	Oberhavel (dist.)	4.73	10.46	54.78
12066	Oberspreewald-Lausitz (dist.)	2.07	6.84	69.74
12067	Oder-Spree (dist.)	3.32	8.82	62.36
12068	Ostprignitz-Ruppin (dist.)	2.91	7.58	61.61
12069	Potsdam-Mittelmark (dist.)	4.83	10.38	53.47
12070	Prignitz (dist.)	2.00	6.62	69.79
12071	Spree-Neisse (dist.)	2.12	6.82	68.91
12072	Teltow-Fläming (dist.)	3.97	10.80	63.24
12073	Uckermark (dist.)	2.46	7.02	64.96
Mecklenburg-Western Pomerania				
13003	Rostock	5.49	10.08	45.54
13004	Schwerin	3.57	8.34	57.19
13071	Mecklenburg Lake (dist.)	2.31	6.26	63.10
13072	Rostock (dist.)	3.17	9.58	66.91
13073	Vorpommern-Rügen (dist.)	3.41	7.70	55.71

13074	Northwest Mecklenburg (dist.)	3.19	7.35	56.60
13075	Vorpommern-Greifswald (dist.)	2.74	7.59	63.90
13076	Ludwigslust-Parchim (dist.)	2.20	6.82	67.74
Saxony				
14511	Chemnitz	2.71	6.00	54.83
14521	Erzgebirgskreis (dist.)	1.60	4.88	67.21
14522	Central Saxony (dist.)	1.68	5.78	70.93
14523	Vogtlandkreis (dist.)	1.42	5.42	73.80
14524	Zwickau (dist.)	1.79	5.80	69.14
14612	Dresden	4.72	10.16	53.54
14625	Bautzen (dist.)	2.01	5.73	64.92
14626	Görlitz (dist.)	1.45	5.49	73.59
14627	Meißen (dist.)	2.65	6.60	59.85
14628	Saxon Switzerland-Osterzgebirge (dist.)	2.68	6.23	56.98
14713	Leipzig	4.05	9.26	56.26
14729	Leipzig (dist.)	2.73	6.66	59.01
14730	North Saxony (dist.)	2.19	6.68	67.22
Saxony-Anhalt				
15001	Dessau-Roßlau	1.99	6.50	69.38
15002	Halle/Saale	3.63	7.84	53.70
15003	Magdeburg	3.22	7.10	54.65
15081	Altmarkkreis Salzwedel (dist.)	1.70	5.88	71.09
15082	Anhalt-Bitterfeld (dist.)	1.71	6.37	73.16
15083	Börde (dist.)	1.91	5.92	67.74
15084	Burgenlandkreis (dist.)	1.70	5.75	70.43
15085	Harz (dist.)	1.89	6.23	69.66
15086	Jerichower Land (dist.)	1.84	5.90	68.81
15087	Mansfeld-South Harz (dist.)	1.34	6.14	78.18

15088	Saalekreis (dist.)	1.99	6.50	69.38
15089	Salzlandkreis (dist.)	1.54	5.74	73.17
15090	Stendal (dist.)	1.83	6.27	70.81
15091	Wittenberg (dist.)	1.71	5.70	70.00
Thuringia				
16051	Erfurt	4.33	8.73	50.40
16052	Gera	2.01	7.22	72.16
16053	Jena	5.03	12.83	60.80
16054	Suhl	2.17	7.05	69.22
16055	Weimar	3.88	9.07	57.22
16056	Eisenach	2.38	6.70	64.48
16061	Eichsfeld (dist.)	2.22	6.51	65.90
16062	Nordhausen (dist.)	1.91	5.91	67.68
16063	Wartburgkreis (dist.)	1.83	5.98	69.40
16064	Unstrut-Hainich (dist.)	1.73	5.74	69.86
16065	Kyffhäuserkreis (dist.)	1.46	5.92	75.34
16066	Schmalkalden-Meiningen (dist.)	1.82	6.75	73.04
16067	Gotha (dist.)	2.20	6.92	68.21
16068	Sömmerda (dist.)	2.10	6.58	68.09
16069	Hildburghausen (dist.)	1.78	6.59	72.99
16070	Ilm (dist.)	2.15	7.66	71.93
16071	Weimarer Land (dist.)	2.45	7.00	65.00
16072	Sonneberg (dist.)	1.76	5.62	68.68
16073	Saalfeld-Rudolstadt (dist.)	1.84	7.05	73.90
16074	Saale-Holzland (dist.)	2.12	8.50	75.06
16075	Saale-Orla (dist.)	1.62	5.65	71.33
16076	Greiz (dist.)	1.50	5.95	74.79
16077	Altenburger Land (dist.)	1.55	5.64	72.52

* The figures in the table are each rounded to two decimal places.

Sources: Based on own calculation and own presentation. Rental prices data from: Immobilien Scout GmbH (2023); Immowelt (2023b); SmartMiete GmbH (2023); SP Software GmbH (2023); Zarenga GmbH (2023).

Factors Influencing Customers' Bank Selection Decision in Azerbaijan

TEYMUR AKHUNDOV

Abstract

Background: This research investigates the determinants of bank selection criteria and their linkage to the common satisfaction level of the banks in Azerbaijan.

Aim: The study is motivated to investigate the current situation, find critical points and main related factors, inform bank executives and appropriate staff about real tendencies during the crisis and pandemic period.

Methods: It is based on 2 surveys of 162 and 352 respondents respectively of different private and state-owned commercial banks. 13 main different factors for bank selection and 16 factors for credit cards usage were selected for better and proper analysis.

Results: The findings of the study reveal that speed and quality of service, proven and strong shareholders, innovativeness and variety of services (credit cards), ATM network and accessibility, respect and friendliness staff, brand name at the market, and low interest rate on loans are the most important influencing factors for customers during the bank selection decision, while the other factors received the less rating, however, this does not mean that they are not important at all. The research found some similarities with the other research in different countries. The study could be used by banks and as the starting point for the next similar studies in the country. The findings of the second survey reveal that Risk and Security group has significant impact to the usage of credit cards while the other parameters don't have such evidence.

Keywords

Azerbaijan, banks, selection, usage, importance, customer's decision, credit cards

JEL Codes

G10, G21, E40

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1 Introduction

There are a lot of theses, research and works of the foreign authors regarding to the main influencing factors which are described in the literature review section and were used during this research paper. The set of determinant factors in one region and country could somehow or totally be different or insignificant than in another region or country (Almossawi, 2001).

This research analyses the key factors and parameters of customers' behavior, their impact to the customer's attitude to the banks' selection, understands and describes some barriers, forecasts and trends of the development, and shows the direction of this activity in context of common development in Azerbaijan. As credit card is one of the key products provided by banks to the clients, after the selection factors the research also covers the behavior and preferences of credit cardholders in the market in different directions.

As banking and economic environment is changing very fast and the clients are becoming more demanding, it has become important for financial and non-financial organizations, including banks and non-bank companies, to determine the factors which influence the client's selection (Boyd et al. 1994). This research determines the basis of the factors and circumstances in Azerbaijan under which customers depending on age group, gender, type of account and etc. make their decision regarding to their financial matters.

1.1 Research Questions

Research paper is composed in such manner where the major and minor research questions are dedicated and could be analyzed in accordance with the importance of the research and levels of structured hierarchy (Zikmund et al. 2013). Major and minor research questions were determined appropriately.

1.2 Major Research Question

In accordance with the problem statement and objectives this research paper attempts to answer to the following major research question:

Which key customers' preferences, including demographic and socio-economic factors influence banks' selection process in Azerbaijan?

1.3 Minor Research Questions

By answering the major research question the following minor research questions were determined:

- a) As revealed from the literature review, do any of demographic factors have significant impact to the bank selection and credit cards usage in local environment?
- b) Do any of the parameters of customers' preferences have significant negative impact to the importance and credit cards usage of credit cardholders?
- c) Do the socio-economic factors which revealed from the literature review have significant influence on the credit cards usage?

2 Literature review

Unfortunately, there are no any global and fundamental research of the customers' preferences during the bank selection process in Azerbaijan. Thus, the foreign literature, investigations, research and analyses of the country economies that are similar or close to Azerbaijan Republic were studied in this research paper.

Many foreign authors, economists and research dedicated their works to analyzing the preferences and customer behavior during the bank selection process and card transactions.

Rehman and Ahmed (2008) provided the analysis of customers' major determinants of a bank selection in the city of Lahore (Pakistan). The research paper was based on survey of 358 customers of private, privatized and nationalized banks which was conducted during the period. The authors found that the main determinants for the customers in bank selection process are customer services, convenience, online banking facilities and overall bank environment. The similar survey was done by Chen (1999) which involved the analysis 336 domestic-owned and 39 foreign owned banks in Taiwan in 1997 to identify the key factors and parameters adopting the different business strategies in the banking sector. Four main factors were found by using of the factor analyzing technique: managing the operations, marketing, bank trademarks, and financial management.

Ahmed continued his work with the colleagues (Ahmed et al. 2009) and found that there is a positive relationship between income level of consumer and his attitude towards credit card usage. Moreover, the study reveals that convenience and security matters are critically important especially for female credit card users.

Zineldin (1996) analyzed the bank selection process in Sweden and found that the main influencing factors are recommendations, reputation, advertisements, and locations of the bank's branches, opening hours and technology. The most important factors of the customers' bank selection process: friendliness and helpfulness of personnel, accuracy in transaction management, availability of loans, and provision of services. Katircioglu et al. (2011) investigated the bank selection criteria among the undergraduate students in North Cyprus and found that there was not a big difference between selection preferences of local and international students in State University. The most important factors were availability and accessibility of ATMs, and speed and quality of services at places.

Md. Nur-E-Alam Siddique (2012), conducted a big survey of 600 customers of private and nationalized banks in Bangladesh for analyzing of factors influencing the bank selection process in Rajshahi City. The key influencing factors were the customer service; speed and quality of service; image of the bank; online banking; and well management. In case of nationalized banks, the key selection factors were the low interest rate on loan; branch location; safe investment; wide list of services; and the low fees for e-service. Tehulu and Wondmagegn (2014) used the multinomial regression approach and found the different key significant factors like friendly and pleasing manner of staff; ATM service; bank speed; service quality; external view and internal sitting arrangements; long operating hours; and etc., while number of counter windows; safety of funds; good reception at the bank; and low service charge evaluated as insignificant factors.

Marketing strategy and the correct selection of the distribution channel by any particular bank in the country could affect the consumer's selection of the payment mechanism. This was observed in another survey which was undertaken by Thornton and White (2001). If the banks mainly focus on service-oriented customers, they should pay the attention more to the extending of branches and sections and increase face to face transactions. If the banks focus on technological customers they should use electronic distribution channels more often. This could stimulate or, otherwise, reduce (depending on undesirable info) the consumer's willing to choose the modern tools of payments without human participation.

Msweli and Naude (2015) and Chigamba (2011) investigated the key bank selection criteria and the best recommendations to the customers and commercial banks in South Africa as well as Kumar and Singh (2006) found that the four components of bank competitiveness on the example of the nationalized banks are: quality efficiency and governance, economic efficiency, social responsibility, and performance stability.

Zuroni and Lim (2010) via the survey analysis showed the direct relationship between the demographic parameters like age, gender, financial knowledge and card transactions in Malaysia. The education level is the most significant factor among respondents. Based on that the education level (secondary school and university degree) and some other demographic parameters (age, gender, marital status) were included to the Survey 1 of this thesis.

Suhana et al. (2016) analyzed the factors which are influencing the credit cards users in Malaysia, specific factors that create the level of impact to consumers' behavior and stimulate them to use credit cards more widely. The study used convenience sampling and therefore the appropriate survey was conducted among 120 credit cardholders in KLM private hospital staff. Authors made breakdown of influencing factors in five groups: a) easy access to credit; b) aggressive promotion by credit card provider; c) low minimum payment requirement; d) attitude towards credit usage; e) credit card related knowledge. Within this specific analysis it was found that only credit card related knowledge is significant and at the same time has positive influence on the usage of the credit cards and covering the credit cards debts.

Age, income level, education level, occupation, even gender and marital status as well as the other demographic factors which are also used in this research paper have a vital role in making choice of credit cards usage. The mentioned different studies revealed that there is a positive correlation between demographic factors and credit cards usage. More than 40 years ago Jean Kinsey (1981) concluded that the probability of credit cards usage is highly correlated to the age and place of work. However, the study reveals that the attitude to credit cards has the strong relationship with place of residence and saving accounts.

Ming-Yen Theo Wendy et al. (2013) selected variables like demographic factors, banks' policies, and attitudes of the credit cardholders by conducting of structured survey between 150 respondents based on the area sampling. The authors found that age, income and marital status have significant correlation with credit cardholders spending behavior. The bonuses and benefits provided by banks also have positive effect to the attitude, while the occupation, management of profit and loss (income and expenses)

are not such significant to the credit cardholders' behavior. Ismail (2014) found that perception, family influence, and knowledge are the key factors with the tangible impact to the credit cards usage.

China is one of the biggest credit cards conglomerate in Asia and the researchers have always been interested in understanding of credit cards consumers' needs and preferences, which factors influence the customer behavior in different situations (Wang, 2016). Credit cards are widely spread all around the world, but in China they face with some problems, such as per capita spending is low, people do not use the cards, thus there are a lot of cards without any activity.

Rustu and Suleyman (2011) revealed that gender, education level, age, marital status, employment and payment the debts on time have positive and significant effect to the decision-making process. Mallika Sriyalatha (2016) found that the main factors which influence the attitude towards credit card usage are: availability of information, perceived usefulness, characteristics of card issuers and general satisfaction. Taking into consideration this fact obtaining of necessary information about card usage and bank services, including banking commissions, credit lines and additional bonuses were included to the survey #2 of this thesis investigated within the local circumstances.

3 Conceptual framework

Taking into account the literature review and the research questions this research was structured to analyze the following:

- a) main factors and preferences of the customers influence the banks' selection in Azerbaijan;
- b) behavior and preferences of banks' customers and their impact to the usage of credit cards as the key tool of the bank products.

For better representation of the results appropriate two surveys were conducted during this research:

Survey #1: In accordance with the conducted survey with 162 respondents (bank customers) the investigation of significant factors of bank selection process and correlation to the common satisfaction level among demographic and socio-economic parameters.

The level of government digitization is measured through the E-Government Development Index (EGDI). The e-Government Development Index (EGDI) looks at the level of e-Government in the countries of the United Nations. It is an indicator that consists

Table 1: Definition of the variables (Survey 1)

#	Definition
<i>Dependent variable (y)</i>	
var1	Satisfaction level
<i>Independent variables (x) – demographic and other parameters</i>	
var2	Gender (male/female)
var3	Age groups
var4	Type of account (current)
var5	Type of account (deposit)
var6	Type of account (credit)
var7	Type of account (card)
var8	Type of account (other)
var9	Official monthly income
var10	Current employment (governmental work)
var11	Current employment (company)
var12	Current employment (own or family business)
var13	Current employment (I don't work)
var14	Affiliation with the current bank
<i>Independent variables (x) – factors influencing the bank selection</i>	
var15	Closeness to the office/home
var16	Higher interest rate on savings (deposits)
var17	Proven and strong shareholders
var18	Mass media and street advertisement (TV, radio, billboard and etc.)
var19	Low interest rate on loans
var20	Brand name at the market
var21	Innovativeness, variety of services, plastic cards, e-services
var22	Connection with bank via friends/relatives
var23	Receiving salary from the employer via the bank
var24	Respect and friendliness of the staff in the bank
var25	Speed and quality of service
var26	Parking opportunity
var27	ATM network and accessibility

Source: own research

Survey #2: In accordance with the conducted survey with 352 respondents (credit cardholders) the significant factors were found among demographic and socio-economic parameters which influence the customer behavior and usage of credit cards.

Table 2: Definition of the variables (Survey 2)

#	Definition
<i>Dependent variable (y)</i>	
var1	Credit card as effective and important payment tool
<i>Demographic parameters</i>	
var2	Gender (male/female)
var3	Age groups
var4	Marital status
var5	Official monthly income
var6	Education (Secondary school)
var7	Education (University and upper)
<i>Independent variables (x) – factors influencing the credit card non-cash payment</i>	
var8	Credit card allows to pay even if I don't have enough money
var9	Card allows me to make shopping online via the internet
var10	It is much safer to have credit card than the cash in my pocket
var11	While using the credit card my income (salary) does not cover my expenses
var12	I have the problem with my credit card when I need urgent cash
var13	I use/don't use the credit card, because all around use/don't use credit cards as well
var14	The usage of credit card increases desire about new living standards
var15	Credit card is the modern payment tool which is in trend all around the world
var16	Knowledge about new card products and services in my bank
var17	The price for credit card support (bank's commission fee, including loan %)
var18	Information availability about card usage
var19	I can make the purchase which I cannot postpone
var20	Bonuses to the credit card
var21	The trust to the bank
var22	I think about how I will pay for my shopping
var23	Usage of 3D Secure service via online shopping

Source: own research

Variables of research analysis were collected accordingly, and appropriate regression models were used. Taking into account the findings indicated in Literature review all the variables were organized in the following manner:

- a) All independent variables were divided to two parts: Socio-economic and Demographic.
- b) There is 1 dependent variable in survey #1 which linked to the satisfaction (usage) level from the bank services and products.
- c) Socio-economic variables in survey #2 were divided to four groups: Convenience, Finance, Information, Risk and Security.
- d) Four variables in survey #2 were included to each of the socio-demographic group, so the total number of socio-economic variables is equal to 16.
- e) Demographic variables in survey #2 include 6 components.
- f) There is 1 dependent variable in survey #2 which linked to the effectiveness (usage) of the payment tool among credit cardholders.

The factors for survey #2 based on literature review and objectives of this research looks like the following:

- Demographic factors: Gender; Age; Marital Status; Official income; Education (Secondary); Education (University).
- Socio-economic factors (Convenience): Shopping online; Do not postpone the purchase; Increasing of living standards; Attractive world trend.
- Socio-economic factors (Finance): Payment by using credit line; Bank's commissions; Bonuses to credit cards; Income doesn't cover expenses.
- Socio-economic factors (Information): Knowledge about the cards; Info about card usage; Choice of the payment; Card usage by familiar people.
- Socio-economic factors (Risk and Security): Problems when need urgent cash; Card is safer than cash; Trust to the bank; Usage of 3D Secure (online).

The research was structured and composed in accordance with the deductive and quantitative methods to find the mathematical dependence of factors between each other according to the best practice methodology (Clough and Nutbrown, 2012).

3.1 Hypothesis of survey #1

Hypothesis 1: There is no any significant impact of the factors to the customers' bank selection process and common satisfaction level.

3.2 Hypotheses of survey #2

Hypothesis 2: Parameters and factors related to risk and security do not have significant impact to the customer behavior of credit cardholders.

Hypothesis 3: Parameters and factors related to finance do not have significant impact to the customer behavior of credit cardholders.

Hypothesis 4: Parameters and factors related to convenience do not have significant impact to the customer behavior of credit cardholders.

Hypothesis 5: Ranking importance of the credit card usage factors and parameters is different according to the demographic factors and parameters of cardholders.

Hypothesis 6: Cardholder's availability of information does not have significant impact to the customer behavior of credit cardholders.

4 Data and methodology

Survey #1 (questionnaire) was created and distributed among the current customers of different major commercial banks in Azerbaijan. Survey #2 also was done in the form of questionnaire among credit cardholders randomly selected during research. People conducted the survey in front of the biggest and most popular shopping centers in Baku City. In both surveys the randomly selected customers answered the questions in specially designed questionnaire based on the findings indicated in Literature review. All questions in all survey papers were totally answered, because they were indicated as mandatory fields, so there were 100% of the answered questionnaires. Any unanswered question automatically cancelled the questionnaire and this customer was not counted at the sample base. The technique of non-probability was used while the customers were not selected by any criteria.

For the measuring of key factors the Likert Scale and arithmetic mean (Joshi et al. 2015) type were used (1 = Not important and 10 = Very important). The "STATA" software was used for finding the correlation and impact of the factors between each other (Ordered Logit Test).

All surveys were conducted anonymously without keeping of the names, addresses, telephone numbers or other private information in accordance with the ethical obligations.

The Survey consists of data received from respondents in accordance with the Likert Scale from "1" to "5". There are multi-categorized independent variables "x" and one dependent variable "y" which should be taken into consideration. Ordered Logit Regression model is usually estimating the probability of dependent variable to be equal to 1 ($y=1$). This is the probability that any of the event happens (Stock and Watson, 2007).

The significance of the parameters during the Ordered Logit Regression analysis is calculated by analysis of 'p-value' from the regression table. P-value or probability value is used for statistical hypothesis testing and shows the probability for a given statistical model under the null Hypothesis (H) of obtaining result which is extremely more or equal to just what was actually observed (Clough and Cathy, 2012). The p-value definition can be shown in the following equation:

$$\Pr(\text{Reject } H|H) = \Pr(p \leq \alpha|H) = \alpha \quad (1)$$

Where α is a level of error (Type 1 error). The error α was taken as equal to 5%. Thus if p-value is lower than 5% or 0.05 then the null hypothesis is rejected. Ordered Logit Regression test helps (Zkmund et al. 2013) to:

- Analyze the correlation between the parameters.
- Determine and interpret the coefficients.
- Find positive or negative relationship.
- Find the significance of parameters' impact to the dependent variable.

4.1 Ethical issues

By this research paper the author totally understands the ethical responsibility which researcher should take on his side and show during the representation of the survey details. Ethical responsibility during of any activity not depending on if this activity is the working place or just the conversation between the colleagues. In the daily life you might feel the greatest level of ethical obligations to your family members, friends, relatives or just to your neighbors, but other parts of the real life, including business, corporate entities, customers and service companies with whom you have business activity also need ethical responsibilities (Sims, 2003).

Ethical issues are also very important in all types of research methods. Ethical issues are critical while determining the standards and norms between right and wrong. Ethical issues help to understand the difference between acceptable and wrong behavior of researcher. Why it is so important? One of the main purposes to follow ethical obligations during research is that the readers, respondents and all other participants of the research should clearly understand and believe that the researcher followed all ethical obligations, human rights, compliance with law, health standards and even safety (Kelly et al. 2003).

There is the number of literature dedicated to the importance of ethical obligations and these are some key elements which should be taken into consideration (Sims, 2003):

- Respect the persons and personality;
- Minimize the risk and maximize the benefit for respondents;
- Keep the justice on a high level;
- Avoid unethical behavior during the interview or surveys;
- Be clear and honest in front of potential respondents and give necessary information about the project;
- Accept cultural differences of respondents and show respect to all of them.

The author declares that he and his assistants who participated in surveys showed the respect and ethical behavior towards all respondents, participants and all other people who participated in this conducting of this research paper. All respondents were asked about their consents to answer the questions and participate in long time experiments.

Ethical standard should also protect anonymity of respondents which is one of the primary tasks in ethical obligation issues (Kelly et al. 2003). All surveys in this research were done on anonymous basis without collecting of any names, addresses, telephone numbers or other related private information. Only me and my supervisor had access to the data base with the answers.

The author confirms that during experiments and conducted survey there were not any inconvenience from the respondents' side and all agreements were accepted from all sides. The respondents were not asked about the survey in case of negative answer in advance.

All people who took part in research and assisted the author in conducting of surveys were trained and informed accordingly about ethical issues before the survey started.

5 Findings

In survey #1 the respondents (162 people) answered the questions in the questionnaire about the key factors affecting the bank selection and demographic parameters. Out of the sample size of 162 respondents, 120 (74.1%) are males and 42 (25.9%) are females. The age of 5 (3.1%) respondents is below 25 years, 80 respondents (49.4%) are from 26 till 35 years, 71 respondents (43.8%) are from 36 till 50 years and 6 (3.7%) respondents are more than 50 years old. The ages of the major part of respondents (96.9%) are more than 26 years old, their opinions could be considered as the significant index for determining of the common picture of the influencing factors and satisfaction level.

91 (56.2%) respondents have current account, 54 (33.3%) respondents have deposit account, 57 (35.2%) respondents have credit account, 131 (80.1%) respondents have card account and 9 (5.6%) respondents have also other account in commercial bank. On the average level each respondent has 2.1 accounts. 30 (18.5%) respondents receive monthly salary from AZN 0 to 1000, 47 (29.0%) respondents receive from AZN 1001 to 2000, 65 (40.1%) respondents receive from AZN 2001 to 5000 and 20 (12.3%) respondents receive more than AZN 5000.

A major part of respondents (114, 70.4%) work in private companies and only 3.1% (5 people) are unemployed. 97 (59.9%) respondents are the stable customers of their banks, they have not changed the bank during last 5 years (and more) and this figure is also could be related to the common satisfaction level.

Table 3: Demographic breakdown of respondents (Survey #1)

Parameter	Frequency	%
<i>Gender</i>		
Male	120	74,1%
Female	42	25,9%
Total	162	100,0%
<i>Age</i>		
Up to 25	5	3,1%
26-35	80	49,4%
36-50	71	43,8%
more than 50	6	3,7%
Total	162	100,0%
<i>Accounts</i>		
1 account	62	38,3%
2 accounts	40	24,7%
3 accounts	42	25,9%
4 accounts	16	9,9%
5 accounts	2	1,2%
Total	162	100,0%
<i>Salary</i>		
0-1000 AZN	30	18,5%
1001-2000 AZN	47	29,0%
2001-5000 AZN	65	40,1%
more than 5000 AZN	20	12,3%
Total	162	100,0%
<i>Employment</i>		
Governmental work	22	13,6%
Company	114	70,4%
Own (family) business	17	10,5%
I don't work	4	2,5%
2 jobs	5	3,1%
Total	162	100,0%
<i>Affiliation to the bank</i>		
1 year	11	6,8%
2 years	20	12,3%
3 years	19	11,7%
4 years	15	9,3%
5 years and more	97	59,9%
Total	162	100,0%

Source: own research

The mean score of the common satisfaction level among all 162 respondents is 7.3951 (Table 2), which shows the significant high figure despite the deep crisis in Azerbaijan after the year 2014 according to Moody's Annual Report (https://www.moody.com/research/Moodys-maintains-negative-outlook-on-Azerbaijans-banking-system-amid-low-PR_349939). It also shows that despite the fact that a lot of people lost their money during devaluation process of the national currency starting in 2014 the trust and confidence in local banks from the customers side are still on a quite high level which could be recognized as a good sign for the future. Moreover, 16% of respondents evaluated the satisfaction at the highest level 10.

Table 4: Satisfaction level (Survey #1)

#	Parameter	Score
1	Number of respondents	162
2	Common satisfaction level (mean score)	7.3951
3	The highest grade	10 (16.0%)
4	The lowest grade	1 (1.2%)
5	The most frequent grade	8 (26.5%)

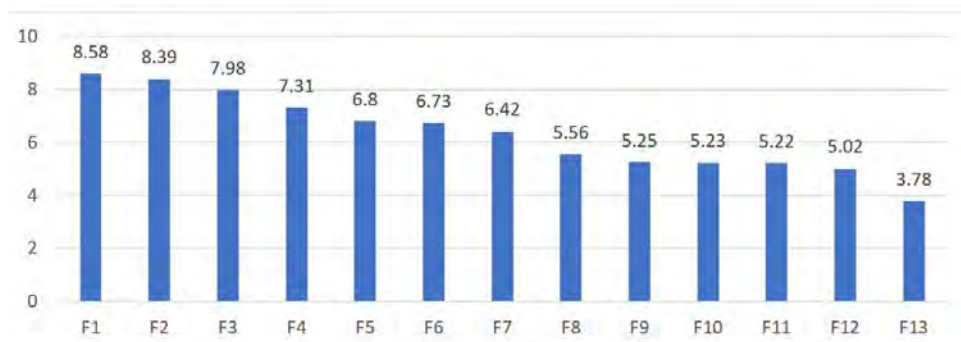
Source: own research

Table 5: Importance of the bank selection factors (Survey #1)

#	Factors for bank selection	Mean score
1	Speed and quality of service	8.5802
2	Proven and strong shareholders	8.3889
3	Innovativeness, variety of services, plastic cards, e-services	7.9753
4	ATM network and accessibility	7.3086
5	Respect and friendliness of the staff in the bank	6.7963
6	Brand name at the market	6.7346
7	Low interest rate on loans	6.4198
8	Connection with bank via friends/relatives	5.5617
9	Higher interest rate on savings (deposits)	5.2469
10	Receiving salary from the employer via the bank	5.2284
11	Closeness to the office/home	5.2222
12	Parking opportunity	5.0247
13	Mass media and street advertisement	3.7778

Source: own research

Figure 1: Importance of the bank selection factors (Survey #1)



Source: United Nation (2023)

There are the findings (Table 3) which are matching the key findings of different foreign authors in the similar studies mentioned in the literature review. The key factors which influence the bank selection process of the customers are:

- Speed and quality of service;
- Proven and strong shareholders;
- Innovativeness, variety of services, plastic cards (credit cards), e-services.

From the opposite side, the less important factor for the clients are:

- Closeness to the office/home;
- Parking opportunity;
- Mass media and street advertisements.

Innovativeness, different products and services provided by the bank, including credit cards as one of the main tools for manipulation – these are the reasons which were explained and confirmed by different research in different foreign countries.

For checking the error probability from the 'null' hypothesis ('p-value') and find the significance of each factor and demographic parameter the Ordered Logit Test ('ologit') of all variables was executed via 'Stata' software and the significant variables with p-value less than 0.05 were found appropriately (Table 4).

Table 6: Significant variables of Survey #1

Variable	Parameter	P-value
Var8	Type of account (other)	0.002
Var15	Closeness to the office/home	0.001
Var17	Proven and strong shareholders	0.005

Source: own research

Table 7: Ordered Logit Test (Survey #1)

Iteration 0:	log pseudolikelihood	= -311.65004
Iteration 1:	log pseudolikelihood	= -282.05162
Iteration 2:	log pseudolikelihood	= -279.06894
Iteration 3:	log pseudolikelihood	= -279.05262
Iteration 4:	log pseudolikelihood	= -279.05262
Ordered logistic regression		
		Number of obs 162
		Wald chi2(26) = 63.81
		Prob > chi2 = 0.0001
Log pseudolikelihood = -279.05262		Pseudo R2 = 0.1046
		Wald chi2(26) = 63.81
		Prob > chi2 = 0.0001
Log pseudolikelihood = -279.05262		Pseudo R2 = 0.1046

var1	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
var2	-.4540815	.3932289	-1.15	0.248	-1.224796	.3166329
var3	.1984531	.2541188	0.78	0.435	-.2996105	.6965167
var4	.1239805	.3941491	0.31	0.753	-.6485375	.8964986
var5	-.037569	.3663077	-0.10	0.918	-.7555189	.6803808
var6	-.105114	.3661058	-0.29	0.774	-.8226682	.6124403
var7	-.3784474	.4599356	-0.82	0.411	-1.279905	.5230098
var8	1.951229	.6385533	3.06	0.002	.6996874	3.20277
var9	-.3215798	.1959736	-1.64	0.101	-.705681	.0625213
var10	.044737	.961922	0.05	0.963	-1.840596	1.930069
var11	-.5089433	.8903687	-0.57	0.568	-2.254034	1.236147
var12	-1.118548	.5847189	-1.91	0.056	-2.264576	.0274802
var13	-1.284994	.9642203	-1.33	0.183	-3.174831	.6048431
var14	.1067463	.123972	0.86	0.389	-.1362343	.3497269
var15	.2080739	.0646715	3.22	0.001	.0813201	.3348277
var16	-.0433671	.0793953	-0.55	0.585	-.1989792	.1122449
var17	.2392676	.0845689	2.83	0.005	.0735156	.4050196
var18	.0387942	.0847607	0.46	0.647	-.1273336	.2049221
var19	.1479122	.0779749	1.90	0.058	-.0049158	.3007402
var20	.101315	.0664476	1.52	0.127	-.0289199	.2315499
var21	.1618528	.0914488	1.77	0.077	-.0173835	.3410892
var22	-.0120817	.0786356	-0.15	0.878	-.1662047	.1420412
var23	.0397658	.0722726	0.55	0.582	-.1018859	.1814174
var24	-.0779789	.0733974	-1.06	0.288	-.2218351	.0658773
var25	.043231	.1409169	0.31	0.759	-.232961	.3194231
var26	-.1193786	.0761413	-1.57	0.117	-.2686128	.0298555
var27	-.1317856	.0904108	-1.46	0.145	-.3089875	.0454163
/cut1	-2.028573	1.682102			-5.325432	1.268286
/cut2	-1.494022	1.679172			-4.785139	1.797095
/cut3	-.380333	1.762297			-3.834371	3.073705
/cut4	.2780761	1.790652			-3.231537	3.787689
/cut5	1.12615	1.758655			-2.32075	4.57305
/cut6	2.077173	1.730797			-1.315127	5.469474
/cut7	3.353485	1.728987			-.0352677	6.742238
/cut8	4.813011	1.766573			1.350592	8.275431
/cut9	5.553093	1.794326			2.036279	9.069907

Source: own research

Despite the fact that the closeness to the bank from office/home is not so important for the clients from the mean score analysis, this variable has significant impact from the calculations ($p=0.001$). At the same time the factor from top 3 of customer's bank selection, proven and strong shareholders' is also significant ($p=0.005$). The low correlation coefficients (statistical index of two random variables) of the correlation test between all parameters and factors used during research showed that the parameters and factors have low dependence on each other and could be used for the analysis.

The 352 respondents participated in survey #2. Out of the sample size of 352 respondents, 209 (59.4%) are males and 143 (40.6%) are females. 97 (27.6%) respondents are under 24 years old; while 127 (36.1%) respondents by completing the majority are between 25 and 35 years old; 74 (21.0%) respondents are between 36 and 50 years old; and 54 (15.3%) respondents are elder than 50 years. Majority of cardholders randomly included to the survey are elder than 25 years (72.4%), their opinions could be considered as the significant index for the determining of the common picture of the influencing key factors and satisfaction level.

116 (33.0%) respondents are single, while the rest 236 (67.0%) are married. 132 (37.5%) people receive salary (income) below AZN 1,000; 135 (38.4%) respondents get the monthly income between AZN 1,001 and 3,000; 55 (15.6%) get the salary more than AZN 3,001, but less than AZN 5,000; and finally 30 (8.5%) respondents get the salary more than AZN 5,001 per month. Only 41 (11.6%) persons out of 352 do not have any current job while the others (88.4%) have the full-time job, including the majority of 209 (59.4%) people who work in private companies. 39 (11.1%) cardholders have the secondary school education, while 303 (86.1%) respondents have bachelor of master's degrees. Only 10 (2.8%) persons have doctorate (PhD) degree.

First of all, respondents were asked to describe the importance of usage of their credit cards and their intention to the proceeding of the non-cash transactions. The mean score of the common satisfaction level which describes the importance and effectiveness of the credit card as the payment tool in online and retail merchants is 4.09 (maximum score is 5.00, Table 6), which is pretty high, taking into account the development process of payment industry in Azerbaijan and quite low index of the ratio between Purchasing Volume and Total Volume with plastic cards in the country (CBAR report, 2021, <https://cbar.az/page-40/statistical-bulletin>). The interesting fact that the mean score of the main parameter indicated by males (4.28) is sensitively higher than the mean score mentioned by females (3.82).

Table 8: Mean score of the main parameter (Survey #2)

#	Parameter	Score
1	Number of respondents	352
2	Importance level of usage the credit card as non-cash payment tool (mean score)	4,09
3	The highest grade	5 (40.3%)
4	The lowest grade	1 (1.4%)
5	The most frequent grade	5 (40.3%)

Source: own research

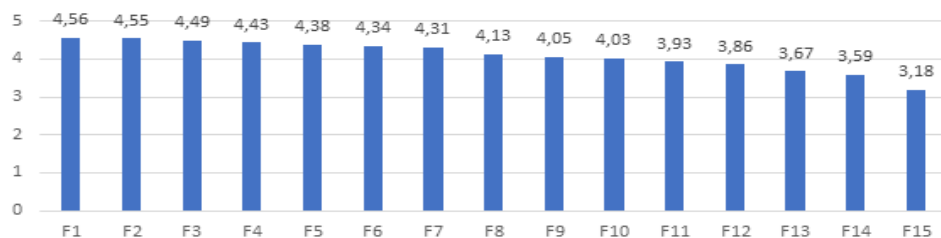
By comparing of all 16 factors and parameters which directly related to the common satisfaction level of the credit card as a non-cash payment tool, the initial ranking of the mean scores was determined as the following (Table 7).

Table 9: Factors influencing credit card usage (total by mean scores)

#	Factors influencing credit card usage	Mean score
1	Bonuses to my credit card	4.56
2	The trust to the bank	4.55
3	The price for credit card support (bank's commission fee, including loan %)	4.49
4	My credit card allows me to pay even if I don't have enough money	4.43
5	I can make the purchase which I cannot postpone	4.38
6	Usage of 3D Secure service via online shopping	4.34
7	I think about how I will pay for my shopping	4.31
8	The card allows me to make shopping online via the internet	4.13
9	While using the credit card my income (salary) does not cover my expenses	4.05
10	I have the problem with my credit card when I need urgent cash	4.03
11	It is much more safe to have credit card than the cash in my pocket	3.93
12	I need knowledge about new card products and services in my bank	3.86
13	The usage of credit card increases desire about new living standards	3.67
14	Credit card is the modern payment tool which is in trend all around the world	3.59
15	I use (do not use) the credit card, because people around me use (do not use) credit cards as well	3.18
16	Information availability about card usage	2.98

Source: own research

Figure 2: Factors influencing credit card usage (total by mean scores)



Source: own processing

The overwhelming majority of cardholders evaluated the parameter “bonuses to my credit card” with the highest score 4.56 (Table 7). Cardholders are looking for the bonus and loyalty programs provided by the banks. They are able to change the bank easily if the competitor will offer better terms and conditions.

“The trust to the bank” ranked at second place with the score 4.55 which is also easy to explain. In 2015 Azerbaijan faced with the biggest crisis period since the signing of the “Contract of the Century” (State Oil Fund, 2016). Two sensitive stages of the devaluation of the national currency AZN led to such consequences that the national currency has fallen in price to more than 115% and the banking system faced with the liquidity and funding problems. More than 16 banks out of 46 were closed and people’s trust to the banking system itself decreased. Thus “the trust to the bank” remains one of the important parameters for bank and credit card selection. “The price for credit card support” including internal commission fee and percentage for lending is at third place with the mean score 4.49. The next most important factors are “opportunity to pay by credit card even in case of unavailability of cash” (4.43) and “making the purchases which cannot be postponed” (4.38).

According to findings, credit cardholders do not pay attention to such factors as “brand name of the card”; “purchasing the international currency and securities”; “usage of credit card by purchasing via mobile phone”; “information availability” and etc. It does not mean that these factors are unimportant, but within this particular research they will not be taken in consideration.

In case of separate considering of males’ behavior and their reactions to the different circumstances the picture is quite different, while the weight and the ranking of the factors were changed significantly. It is clearly observed that instead of bonuses systems, credit limits males much more care about the price of bank services, commission fee, risk actions and matters. It could be the reason because of males are mainly the basis of the family earnings in Azerbaijan and they care about expenses and their optimization.

The preferences of females and the key factors related to non-cash payments are different. By comparing the mean scores it is clear that the females’ scores had huge impact to the total final ranking. The first six out of seven key factors of their payment behavior for females are related to speed, comfort, bonuses, earnings and smooth passing of the non-cash transactions. Convenience of credit cardholders as one of the key parameters influencing the cards usage was mentioned by many researchers (Rehman and Ahmed, 2008; Hoang, 2013; Nguyen and Quan, 2013). Females follow the trends, fashion and convenience during the shopping and credit cards are considered to be just as the convenient payment tool for their daily needs and consumption. It does not mean that the other factors are unimportant

and females do not care about risks, trust or the bank fees. They are also important, but positioned differently in the chain of factors.

If the company, bank or service organization by this kind of research is able to analyze and understand the key factors which related to the common satisfaction level, it could create and design the product or service which will be maximally suited to the requirements of the customers at the certain market (Ahmed et al. 2009).

There are several parameters which have significant impact to the credit card usage importance (Table 10). The appropriate calculation and p-value test determine the followings: Gender with the p-value 0.012, Age (0.000) and Education (0.022) from demographic parameters have significantly impact to the credit card usage and non-cash payments transactions. The Gender parameter has positive impact with coefficient (0.77) while Age (-0.70) and Education (-0.58) have negative impact. These findings are coincided with the similar research that also partially shown in Literature review. For example, Zuroni and Lim (2010) and Devlin et al. (2007) found that probability of usage of credit cards in non-cash payments is highly correlated with the demographic parameters like age, education or income level.

Table 10: Ordered Logit Test (Survey #2)

var1	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
var2	-.4540815	.3932289	-1.15	0.248	-1.224796	.3166329
var3	.1984531	.2541188	0.78	0.435	-.2996105	.6965167
var4	.1239805	.3941491	0.31	0.753	-.6485375	.8964986
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var11	-.5089433	.8903687	-0.57	0.568	-2.254034	1.236147
var12	-1.118548	.5847189	-1.91	0.056	-2.264576	.0274802
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var18	.0387942	.0847607	0.46	0.647	-.1273336	.2049221
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var23	.0397658	.0722726	0.55	0.582	-.1018859	.1814174
var24	-.0779789	.0733974	-1.06	0.288	-.2218351	.0658773
var25	.043231	.1409169	0.31	0.759	-.232961	.3194231
var26	-.1193786	.0761413	-1.57	0.117	-.2686128	.0298555
var27	-.1317856	.0904108	-1.46	0.145	-.3089875	.0454163
/cut1	-2.028573	1.682102			-5.325432	1.268286
/cut2	-1.494022	1.679172			-4.785139	1.797095
/cut3	-.380333	1.762297			-3.834371	3.073705
/cut4	.2780761	1.790652			-3.231537	3.787689
/cut5	1.12615	1.758655			-2.32075	4.57305
/cut6	2.077173	1.730797			-1.315127	5.469474
/cut7	3.353485	1.728987			-.0352677	6.742238
/cut8	4.813011	1.766573			1.350592	8.275431
/cut9	5.553093	1.794326			2.036279	9.069907

Source: own research

According to findings the following socio-economic parameters are significant and should be taken into consideration:

Table 11: Significant socio-economic variables of Survey #2

Variable	Parameter	Group	P-value
Var23	Usage of 3D Secure (online)	Risk and Security	0.014

Source: own research

Only one parameter (Table 8) from Risk & Security group has the significant impact to the cardholders' behavior within the study. This doesn't confirm some findings of such previous researchers as Devlin et al. (2007), who found the impact of financial parameters to the cardholder's behavior and significant dependence on debt issues, however, confirms some other research like Ahmed et al. (2009) who found that the risk parameters are important, especially during the on-line payments. Moreover, 'payment by using of credit line' (coefficient 0.18), 'card is more safe than cash' (0.16), 'the trust to the bank' (0.25) and the 'usage of 3D Secure' (1.27) parameters have positive impact, while 'income does not cover expenses' (-0.16) parameter has negative impact with the appropriate coefficients.

6 Conclusion

No bank can exist without its customers. Peppers and Rogers (2005) summed up the importance of customers: "The only value your company will ever create is the value that comes from customers – the ones you have now and the ones you will have in the future".

The purpose of the survey #1 study was the analysis of the factors which influence and more important during the bank selection process in Azerbaijan. The findings of study reveal that speed and quality of service; proven and strong shareholders; innovativeness and variety of services (including credit cards); ATM network and accessibility; respect and friendliness of the staff; brand name at the market; and low interest rate on loans are the most important factors for the bank selection decision of the customers.

The significant relationship between some dependent and independent variables was found. The key target group which was attracted to the survey is linked to the people with the medium or high salary, stable work and age group more than 25 years. Some significant differences were observed in mean scores of several demographic variables like high income, males/females and the different employers.

The hypotheses of the research could be summarized the following:

Table 12: Analysis of hypotheses of the study

#	Hypothesis	Final result
Hypothesis 1 (survey 1)	There is no any significant impact of the factors to the customers' bank selection process and common satisfaction level.	Rejected
Hypothesis 2 (survey 2)	Parameters and factors related to risk and security do not have significant impact to the customer behavior of credit cardholders.	Rejected (at least 1 of 4 Risk and Security group parameters have significant impact to the customer behavior)
Hypothesis 3 (survey 2)	Parameters and factors related to finance do not have significant impact to the customer behavior of credit cardholders.	Confirmed (there were not enough evidence to reject the hypothesis)
Hypothesis 4 (survey 2)	Parameters and factors related to convenience do not have significant impact to the customer behavior of credit cardholders.	Confirmed (there were not enough evidence to reject the hypothesis)
Hypothesis 5 (survey 2)	Ranking importance of the credit card usage factors and parameters is different according to the demographic factors and parameters of cardholders.	Confirmed
Hypothesis 6 (survey 2)	Cardholder's availability of information does not have significant impact to the customer behavior of credit cardholders.	Confirmed (there were not enough evidences to reject the hypothesis)

Source: own research

It is revealing that the common satisfaction level of the customers is quite high despite of the deep crisis in banking industry which has been observed in the country starting from 2014. It is recommended that the banks should take proper measures in designing of their strategies based on understanding the analysis and main conclusions of the research.

The purpose of survey #2 was the analysis of the cardholders' behavior, importance of non-cash payment transactions with credit cards and the critical factors which influence the attitude to credit cards usage for private and state-owned commercial banks in Azerbaijan. The findings of study revealed that security and risk, financial knowledge are the most significant group of factors for attitude of credit card usage. The study

also revealed that demographic factors significantly influence to the credit cardholders' behavior.

It is revealing that the attitude to non-cash payments among credit cardholders is quite high despite the crisis in banking industry which has been observed in the country starting from 2014. It is recommended for the banks to take proper measures in designing of their strategies of credit cards based on the analysis.

However, the set of determinant factors of the bank selection criteria in one region and country can be different or insignificant than in another region or country (Almossawi, 2001).

As for the major question of this research, according to findings the „speed and quality of service“, „proven and strong shareholders“, and „Innovativeness, variety of services, plastic cards, e-services“ are among the key customers' preferences influencing bank selection process in Azerbaijan.

As for the minor questions of this research, „gender“, „age“, and „education“ from demographic parameters have significantly impact to the credit card usage and non-cash payments transactions. In addition, according to findings „gender“ has positive impact with coefficient (0.77) while „age“ (-0.70) and „education“ (-0.58) have negative impact. Being the part of socio-economic factors, „usage of 3D secure“ has the significant influence on the credit cards usage.

The study can play significant role in determining the key factors in Azerbaijan and can be the starting point for the further analyzes and marketing decisions for the local banks.

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