BANKING CREDIT DYNAMICS: DRIVING ECONOMIC GROWTH IN SPAIN, FRANCE, AND ROMANIA – A PANEL DATA ANALYSIS, 2000,2020

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Abstract:

This study examines the impact of banking credit on economic growth by analyzing panel data from Spain, France, and Romania from 2000 to 2020. The analysis includes variables that are negatively correlated with economic growth, such as bank deposits, net interest margin, public consumption, domestic credit, non-performing loans, and the ratio of domestic investment to GDP. However, negative coefficients do not necessarily indicate a negative effect, as other factors like omitted variables or multicollinearity may play a role. The study also finds that household debt and foreign direct investment are positively correlated with economic growth, although household debt is often a consequence of development rather than a direct cause. Additionally, the study highlights the role of non-performing loans in shaping credit availability based on their volume, emphasizing their importance in economic dynamics.

Keywords: banking credit, economic growth, household debt, foreign direct investment, non-performing loans

JEL Codes: C23, E44, G21

1. Introduction

The financial system's role in economic development has garnered significant attention from financial circles, academia, and policymakers Puatwoe & Piabuo (2017). This attention has sparked considerable debate regarding the significance of the financial sector in enhancing economic growth Akpansung & Babalola (2011). It is recognized that financial development can serve as a catalyst for economic growth, but it can also contribute to financial crises, with long-term negative impacts on economic growth Valickova, Havranek & Horvath (2015). Consequently, maintaining stability in the financial sector is deemed crucial for the economic development of any country (Duican & Pop, 2015).

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The role of the banking sector in facilitating the mobilization of international capital, alongside the advancement of financial systems, is widely acknowledged as a critical factor influencing economic growth trajectories (Tongurai & Vithessonthi, 2018).

The progression of the financial system encompasses fortifying investment through funding, facilitating trade, and enabling the exchange of goods and services. These elements jointly foster a more efficient allocation of resources, swift accumulation of physical and human capital, and expedited technological advancement, all of which are instrumental in driving economic growth (Adekunle, Salami & Oluseyi, 2013).

Financial development can bolster economic growth by increasing savings, enhancing the efficiency of lending capital allocation, and fostering capital accumulation. It is recognized that advanced financial markets are essential for the comprehensive economic progress of low-growth economies and emerging economies. Financial intermediation by the banking sector is deemed crucial and a fundamental factor for economic growth, or conversely.

This depends on the quantity and manner of credit issuance, as well as the extent of the rise in non-performing loans. Decreased expansion in credit issuance is considered a major cause of economic growth deterioration, while a rise in non-performing loans also adversely affects economic development (Akpansung & Babalola, 2011).

Here lies the importance of banks granting credit as financial intermediaries. They can transfer surplus funds from certain units to those facing financial deficits through credit issuance. Many individuals, sectors, and organizations require financing for various purposes. Rational financing will ultimately aid in boosting economic growth. (Ananzeh, 2016).

In the financial landscape, banks serve as crucial intermediaries, facilitating the flow of funds from depositors to investors seeking capital for promising ventures. This role not only ensures banks' profitability by generating income but also underscores their integral position within the broader financial system (Alam, Rabbani, Tausif & Abey, 2021).

However, the provision of bank credit introduces inherent risks, such as credit risks, where borrowers default on their obligations, leading to reduced bank profits, compromised credit quality, and an uptick in non-performing loans (Harun, 2016).

Eastern European countries have faced obstacles in achieving genuine convergence in GDP growth compared to their counterparts in the European Union (Caporale, Rault, Sova. A, & Sova. R, 2015). This challenge motivates our study, which aims to examine the impact of banking sector evolution on economic growth and the significance of credit provision in the context of Eastern Europe, juxtaposed with the experiences of France and Spain.

2. Literature Review

The relationship between the financial sector and economic growth has been studied extensively, with theoretical and empirical research providing arguments both for and against its impact. Overall, evidence suggests that financial development promotes

economic growth and can help predict future growth rates or technological advancements. Moreover, the quality of the financial system is influenced by economic activity.

Effective banking supervision, as highlighted by Neanidis (2019), is vital for fostering economic growth. Meanwhile, Majeed and Iftikhar (2020) explored the impact of the banking industry on Pakistan's economic growth over the period 1982 to 2017. Their findings suggest that while private sector credit theoretically has a positive association with economic growth, this relationship lacks statistical significance. Additionally, credit provision to the agriculture and services sectors showed no significant contribution to their growth. However, the study underscored the industrial sector's heavy reliance on banking sector financing for long-term projects, emphasizing the banking industry's pivotal role in facilitating industrial growth.

Recent research by Tongurai & Vithessonthi (2018) challenges conventional beliefs by revealing a negative correlation between banking sector growth and agricultural development, with limited impact on industrial growth. Surprisingly, countries with well-established banking sectors tend to experience a more pronounced adverse effect on agricultural progress.

On a similar note, Cave, Chaudhuri & Kumbhakar (2020) shed light on a robust negative relationship between banking sector development and overall economic growth. Interestingly, they also note a positive influence of stock market development on economic growth up to a certain threshold, beyond which it becomes negative. This nuanced perspective enriches our understanding of the intricate dynamics between financial development and economic growth.

Mhadhbi, Terzi, and Bouchrika (2020) found that the relationship between banking sector advancement and economic growth is not uniform across countries, with over half of the nations studied showing no significant impact of the banking sector on economic growth. Conversely, Salami and Oluseyi (2013) stress the vital role of an efficient financial system in fostering sustained economic growth. They emphasize the importance of prioritizing long-term investments in the financial sector over short-term gains, as the latter may impede overall economic productivity.

In Ananzeh's study (2016), the focus was on investigating the relationship between bank credit across various sectors and economic growth in Jordan. Utilizing sophisticated methodologies like Vector Error Correction Model (VECM) and Granger Causality Test, the study analyzed quarterly data spanning from 1993 to 2014.

The key findings revealed significant causality running from economic development, particularly measured through bank credit allocated to the agriculture and construction sectors, to overall economic growth in Jordan. Moreover, bidirectional causality was observed between economic development and bank credit to the construction sector. The study underscored the pivotal role of the banking sector in driving economic growth in Jordan, despite challenges posed by the underdevelopment of credit and stock markets, which lacked financial depth.

Haralayya and Aithal (2021) discovered that increasing the broad money to reserve ratio and domestic credit to the private sector positively influence per capita GDP.

Conversely, higher real interest rates and consumer price inflation were found to have detrimental effects on GDP. Their study suggests that regulating these factors could enhance domestic market demand, thereby improving employment opportunities and per capita GDP.

In their study focusing on Romania's economic landscape, Duican and Pop (2015) found a significant relationship between credit provision and GDP development. Their analysis revealed that for every one-unit increase in credit, there was a substantial 1.47-unit increase in GDP, underscoring the pivotal role of credit in driving economic expansion. Additionally, they emphasized the necessity of a robust legal framework to guide credit allocation towards innovative and profitable investments. Moreover, Duican and Pop highlighted the importance of increasing public awareness about the benefits and risks associated with credit activities.

Akpansung and Babalola (2011) examined the association between banking sector credit and economic growth in Nigeria from 1970 to 2008. Employing Granger causality tests and a Two-Stage Least Squares (TSLS) estimation technique, they established causal links between the variables of interest. Their analysis revealed a positive impact of private sector credit on economic growth throughout the study period. However, lending rates were found to hinder growth. The study underscores the importance of further financial market development to facilitate increased credit allocation to the private sector, thereby fostering economic growth.

Guisan (2024a) explores the causal relationships between economic development and financial indicators, focusing on the evolution of industrial production and economic development in Spain from 1960 to 2021. The study compares Spain's performance with other OECD countries, especially Germany and the United States, with a particular emphasis on the decline and stagnation of real Value-Added per capita in the industrial sector after 2008.

The research applies two versions of Granger's causality test to Spanish economic data. The modified version, proposed by Guisan (2003), yields better results due to reduced multicollinearity. This version demonstrates that economic development is the primary driver of changes in financial indicators. The study confirms that development leads financial indicators, but also shows a two-way relationship when bank credit helps increase investment, industrial production, or other variables that positively impact economic growth. Regarding Spain's housing bubble, Guisan notes:

"During the financial bubble, Spain experienced an influx of foreign bank resources, which should have been directed toward sustainable investments in industry and other key sectors for development. Unfortunately, this opportunity was lost due to insufficient support from economic policies."

Guisan (2024a) investigates the causal relationships between key variables of the Spanish economy, including real Gross Domestic Product per capita (PH), real Bank Deposits per capita (DH), real Bank Credit per capita (BH), and the ratio of Bank Deposits to GDP (BR), with the following findings:

- A1. Causality between PH and DH: PH causes DH, confirmed by the modified test.
- A2. Causality between PH and BH: PH causes BH, confirmed by both tests.
- A3. Causality between DH and BH: DH causes BH, confirmed by the modified test.
- A4. Causality between PH and BR: The tests with the ratio of bank credit to GDP (BR), rather than per capita values (BH), show poor results, with no significant evidence of unilateral or bilateral relationships.

Additionally, Guisan (2024a) examines development and financial indicators across 164 countries in 2021, revealing a strong positive correlation between economic development and financial indicators. This is largely due to development's positive impact on per capita savings, bank deposits, credit demand, and a reduction in non-performing loans (NPL), an indicator of risk.

3. Economic growth in Spain, France and Romania in the period 2000-2020

This paper explores the relationship between the banking sector and GDP in Spain, France, and Romania, delving particularly into the role of credit and its impact on GDP growth, through panel data modeling (Kinda, Mlachila & Ouedraogo, 2018). The focus is on key variables that link banking activities to economic growth, using annual data sourced from the World Bank and Trading Economics.com.

The study relied on a panel data model, and after using the Hausman test to determine the estimation method, fixed effects analysis was adopted. However, we will not rely solely on the statistical aspect of the Hausman test; we will also take the economic perspective into account (Torres-Reyna, 2007).

France, Spain, and Romania were selected to study the banking sector's impact on economic growth and commodity prices, ensuring the study is not one-sided. These countries are characterized by geographic and economic diversity, representing different economic categories. Additionally, they are significant economies within the European Union undergoing economic transitions and continuous developments in the banking sector.

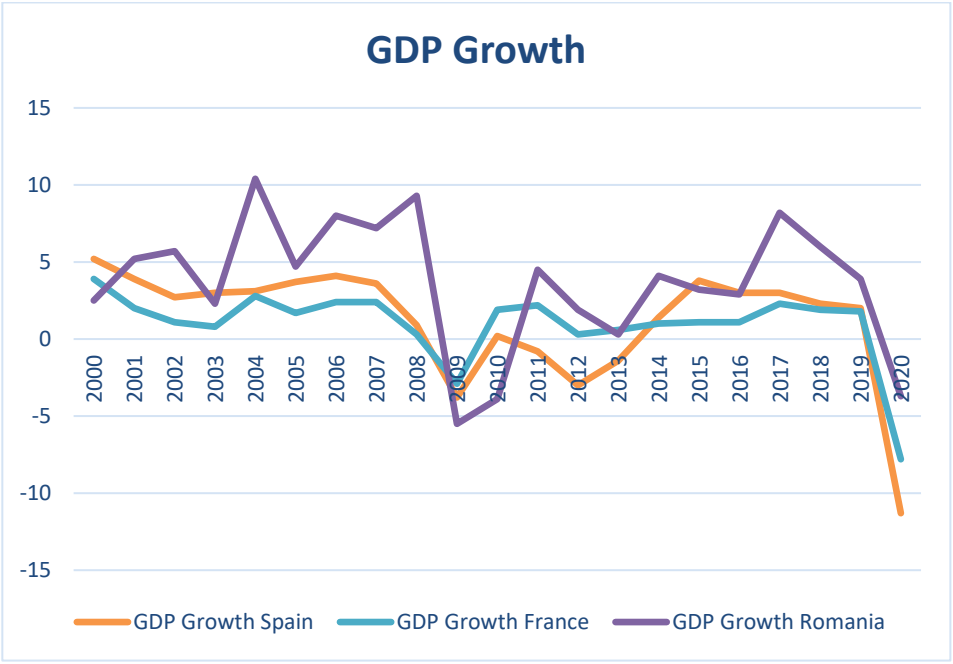
The study aims to analyze the impact of bank credit on economic growth, exploring how the mechanism of this influence works and identifying the periods when increasing or reducing credit is used to affect economic growth.

The studied model relies on GDP Growth as the dependent variable, while the remaining financial and credit variables represent the independent variables (Duican, & Pop 2015), as illustrated in the following table 1.

To gain a deeper understanding of the economies of the studied countries (Spain, France, and Romania), as well as the levels of non-performing loans and granted credit, the following charts will present the evolution of key variables used in the economic models for Spain, France, and Romania during the period 2000-2020.

In the first graph, we observe that over the past two decades, Spain and France experienced stable growth in Gross Domestic Product (GDP). However, both countries faced some setbacks due to the mortgage crisis and the repercussions of the COVID-19 pandemic. On the other hand, Romania witnessed rapid economic growth during the mentioned period, but it also recorded a significant downturn during the mentioned financial crises.

Graph 1: GDP growth during the period 2000-2020 in Spain, France, and Romania.

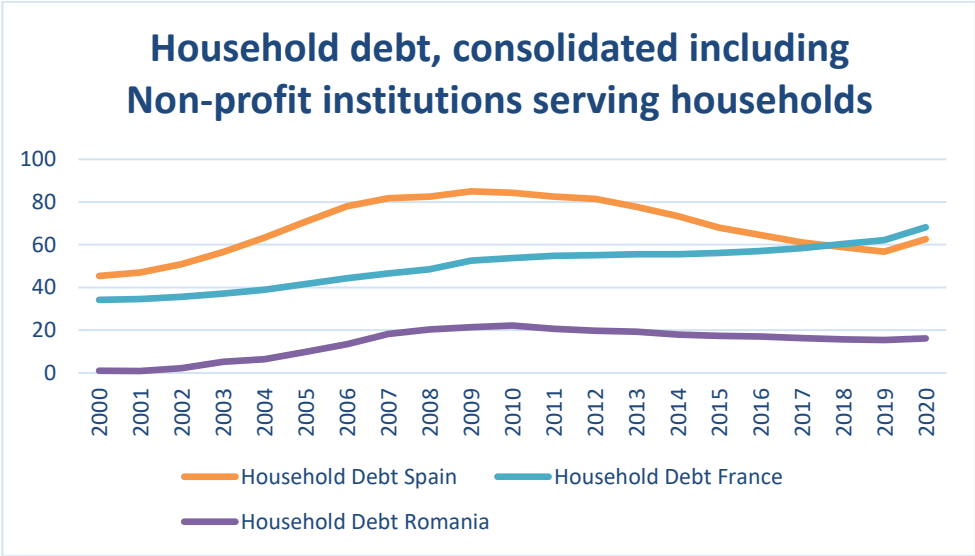


Source: World Bank.

In graph 2, we observe that during the period 2000-2020, household debt in Spain surged, driven by a housing market boom and increased mortgage lending, peaking before the 2008 financial crisis.

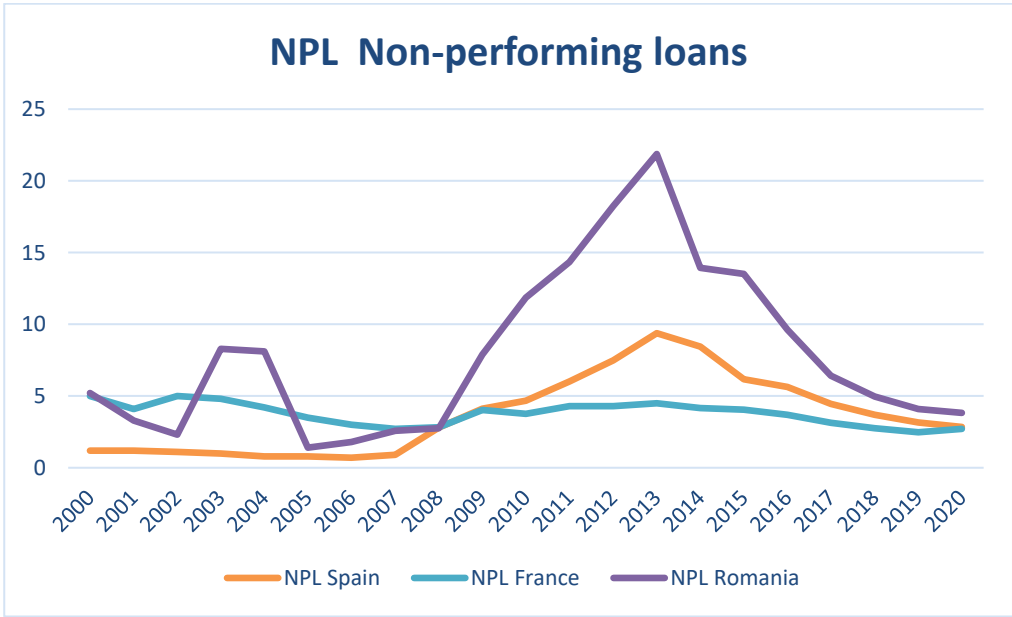
Subsequently, a deleveraging process ensued as households repaid debts in the post-crisis period. France saw a gradual rise in household debt, contrasting with Spain's sharp increase. Romania experienced a rapid growth in household debt pre-crisis, fueled by consumer credit expansion and mortgage lending. However, Romanian household debt levels remained below pre-crisis highs due to cautious borrowing and stricter lending practices.

Graph 2: Household debt during the period 2000-2020 in Spain, France, and Romania.



Source: Trading Economics.

Graph 3: Non-performing loans during the period 2000-2020 in Spain, France, and Romania.



Source: Trading Economics.

During the period from 2000 to 2020, non-performing loans (NPLs) in Spain fluctuated significantly, especially after the 2008 global financial crisis.

The crisis caused a sharp increase in NPLs as borrowers struggled to repay debts amid economic downturns and property market crashes. Subsequent regulatory reforms and bank restructuring efforts led to a gradual decline in NPLs in the post-crisis years.

In France, NPLs remained relatively low and stable compared to Spain, reflecting the country's robust banking system and prudent lending practices. However, there were slight increases in NPLs during economic turbulence, such as after the 2008 financial crisis and the COVID-19 pandemic.

In Romania, NPLs surged in the years leading up to the 2008 financial crisis due to rapid credit expansion and lenient lending standards. The crisis exacerbated the situation, causing a significant rise in NPLs as borrowers faced financial challenges. Subsequent measures, including banking sector reforms and debt restructuring initiatives, gradually reduced NPL ratios over time.

4. Econometric Model

The study model is represented as follows:

$$\textbf{GDP GROWTH}_{i,t} = \alpha_i + \Sigma\, \beta_i[\text{ Banking Credit and other regressors }]_{i,t} + u_i + \varepsilon_{i,t}$$

In this equation, y represents GDP Growth, while FINANCE Development refers to the Independents Variables, μi and εi,t error terms, i (where i=1,2…,.N) the observational unit (country) and t (where t=1,2,…,T) the time period. here, ε represents a white noise error with a zero mean, and μ denotes a country-specific component of the error term, which may not necessarily have a zero mean. The parameter αi represents the country-specific intercept, which could vary across different countries.

In this analysis, GDP growth (Ghosh, 2017) serves as the dependent variable, while several important independent variables are considered, including household debt (Onogbosele & Ben, 2016), the credit-to-GDP ratio (Adekunle, Salami & Oluseyi, 2013), and bank deposits as a percentage of GDP (Cave, Chaudhuri & Kumbhakar, 2020), which act as indicators of financial depth and banking sector development. These variables reflect the amount of credit extended by banks.

Non-performing loans (Erdoğdu, 2016) are also included, representing credit risk within the banking system.

Table 1: Dependent and Independent Variables for Analyzing the Impact of Banking Credit on Economic Growth

Dependent Variable		
GDPG	GDP Growth	World Bank
Independent Variables		
BD	Bank Deposits to GDP (%).	tradingeconomics.com
BNIM	Bank Net Interest Margin (% of GDP).	World Bank
HD	Household debt to GDP (%).	tradingeconomics.com
GVE	General Government Final Consumption Expenditure (% of GDP).	tradingeconomics.com
DCRP	Domestic Credit to Private Sector by Banks (% of GDP).	World Bank
NPL	Bank Non-performing loans to total gross loans (% of GDP)	World Bank
DINVS	Domestic Investment (% of GDP).	World Bank
FINVS	Foreign direct investment (% of GDP)	tradingeconomics.com

Additionally, financial system efficiency and competitiveness are measured through the net interest margin (Alam, Rabbani, Tausif & Abey, 2021). Investment indicators, both domestic (Shabbir, Bashir, Abbasi, Yahya & Abbasi, 2020) and foreign (Cave, Chaudhuri & Kumbhakar, 2020), are critical components.

Furthermore, general government consumption and expenditure (Hassan, Sanchez & Yu, 2011) measure government spending as a share of GDP. The model developed in this study aims to quantify the influence of banking credit on economic growth, as expressed below:

$$\mathrm{GDPG}_{i,t} = \alpha_i + \beta_1 \mathrm{BD}_{i,t} + \beta_2 \mathrm{BNIM}_{i,t} + \beta_3 \mathrm{HD}_{i,t} + \beta_4 \mathrm{GVE}_{i,t}$$
$$\vdots$$
$$+ \beta_5 \mathrm{DCRP}_{i,t} + \beta_6 \mathrm{NPL}_{i,t} + \beta_7 \mathrm{DINVES}_{i,t} + \beta_8 \mathrm{FINV}_{i,t} + u_i + \varepsilon_{i,t}$$

The Hausman test result indicates that the random effects model is not suitable for this dataset. Therefore, the fixed effects model was chosen as the more accurate approach. Since the results were both statistically and economically sound, the analysis relied on the fixed effects model.

Table 2: Key Descriptive Statistics of the Variables in Spain, France, and Romania (2000-2020)

	GDPG %	BD (%)	BNIM %	HD %	NPL %	DINVES %	FINVS %	GVE %
Mean	1.96	65.31	2.61	44.14	5.11	23.84	2.92	19.21
Median	2.30	76.15	1.60	48.60	4.09	23.30	2.57	18.82
Maximum	10.40	121.66	9.49	85.00	21.87	33.09	9.02	24.93
Minimum	-1130	19.48	0.39	0.90	0.70	17.21	0.20	13.47
Std. Dev.	3.69	28.58	2.34	24.77	4.17	3.34	1.78	3.46
Skewness	-0.87	-0.22	1.35	-0.11	1.98	0.51	1.48	0.08
Kurtosis	5.32	1.74	3.98	1.83	7.26	3.15	5.39	1.59
Jarque-Bera	22.10	4.65	21.74	3.69	88.75	2.797050	37.97	5.26
Probability	0.000016	0.097723	0.000019	0.158002	0.000000	0.246961	0.000000	0.072082
Sum	123.70	4114	164.71	2781	321.77	1502	184.24	1210
Sum Sq. Dev.	844.7	50657	339.6	38052	1075	691.0	196.3	742.7

Source: Authors' Calculation with EViews9. Note: Definions of variables in table 1.

The relationship between household credit and economic growth is complex, influenced by many factors. Credit can drive consumption and investment, which in turn supports economic growth, but in the long run, accumulating debt can increase financial risks and hold back investment. Domestic and foreign investments are key contributors to growth, as they boost productivity and create jobs.

However, an increase in non-performing loans undermines trust of the banking system (domestic and foreing) and may negatively impact the increase of credit. Government spending can promote growth, especially when invested in infrastructure projects. At the same time, higher bank deposits and wider net interest margins can provide funding for growth, but they may also raise the cost of credit, making it harder for businesses to invest. To understand these relationships better, detailed statistical analysis is needed that considers both time and country-specific differences. The study suggests that policymakers should strike a balance between encouraging credit to fuel growth and managing the risks of rising debt, while also improving banking oversight and diversifying funding sources to create more resilient economies capable of weathering external shocks.

Table 3: Panel Data Results on the Influence of Banking Credit on Economic Growth

Dependent Variable: GDP Growth	Fixed		Random	
Explanatory Variable	Coeff.	p-val.	Coeff.	p-val.
BD - Bank Deposits To GDP	-0.191654	0.0006	-0.188601	0.0000
BNIM - Bank Net Interest Margin	-0.748695	0.0141	-1.013127	0.0002
HD - Household debt	0.300566	0.0009	0.206153	0.0093
GVE - General Government Final Consumption Expenditure	-2.026856	0.0001	-0.568661	0.0005
DCRP - Domestic credit to private sector by banks (% of GDP)	-0.069860	*0.063	-0.053036	0.0754
NPL - Non-performing loans	-0.498618	0.0003	-0.365614	0.0002
DINVS - Domestic investment of gdp	-0.590104	0.0009	-0.274452	0.0193
FINVS - Foreign direct investment	0.752194	0.0012	0.750409	0.0003
C	62.33710	0.0000	29.38026	0.0000
R-squared		0.685514		0.551856
Adjusted R-squared		0.625036		0.485464
Durbin-Watson stat		1.887692		1.639193
Hausman Test				0.0000

*** The coefficients at 10 percent level are significant; ** The coefficients at 5 percent level are significant; * The coefficients at 1 percent level are significant.

Source: Authors' Calculation with EViews9.

The results of the analysis using the fixed effects model revealed significant impacts of various banking and credit-related variables on economic growth in Spain, France, and Romania between 2000 and 2020.

The ratio of bank deposits to GDP showed a negative effect on economic growth, with a coefficient of -0.19, indicating that an increase in bank deposits is associated with a decline in the growth rate. Similarly, the net interest margin had a substantial negative impact, with a coefficient of -0.748, meaning that higher interest rates tend to reduce growth.

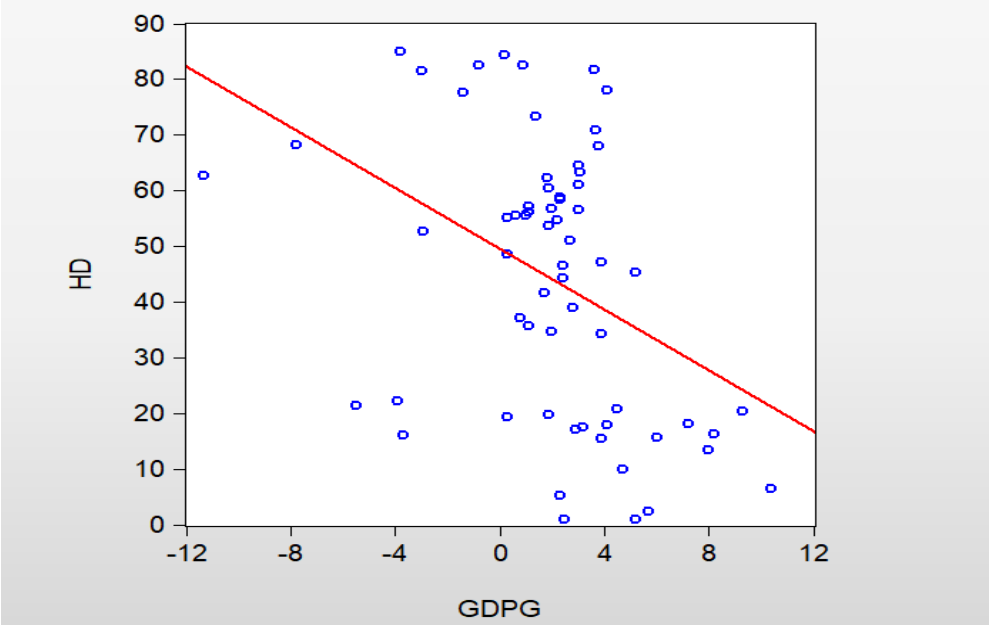
Regarding household debt, the analysis demonstrated a positive effect of 0.300 on economic growth, reflecting the role of credit in supporting consumer spending and boosting growth. However, this effect may vary depending on the economic conditions of different countries. On the other hand, final government expenditure had a clear

negative impact, with a coefficient of -2.02, suggesting that an increase in government size could hinder growth.

Non-performing loans had a significant negative impact on economic growth, as an increase in these loans leads to a deterioration in economic performance.

In contrast, foreign direct investment showed a strong positive effect on growth, highlighting the importance of foreign investment flows in enhancing productivity and supporting the economy, whereas domestic investment exhibited a negative effect. Based on these findings, it can be concluded that increased reliance on loans and bank deposits slows down growth, while foreign investment and household debt plays a crucial roles in supporting and fostering economic growth in these countries.

Graph 4: The Relationship Between Economic Growth and Bank Credit.



Source: Authors' Calculation with EViews9.

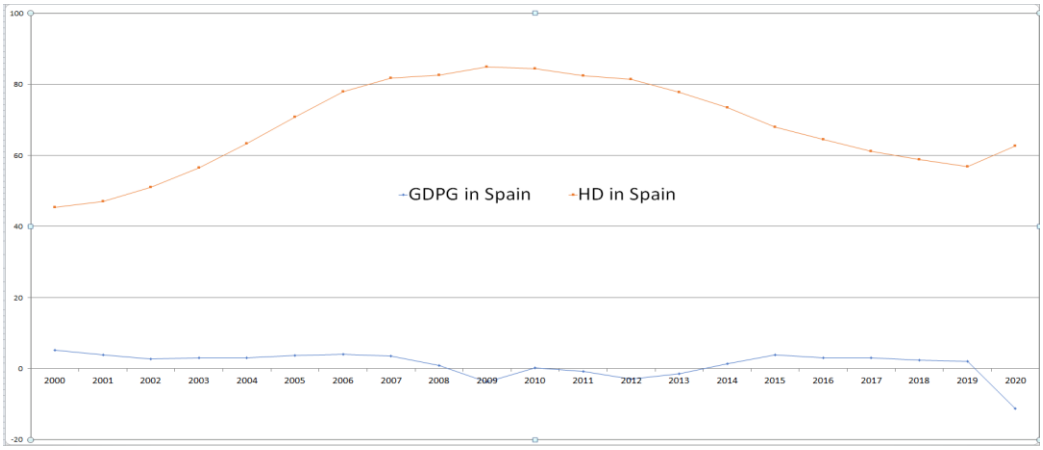
The graph illustrates the relationship between economic growth (GDPG) on the horizontal axis and one of the most important variables that represent bank credit (Household Debt) on the vertical axis, with a red trend line clearly showing a negative correlation.

This implies that as economic growth increases, reliance on bank credit decreases. In other words, when the economy is performing well, there is less need for borrowing from banks. Conversely, during periods of declining or negative growth, dependence on bank credit tends to rise.

The blue data points, representing actual observations, show a concentration around moderate growth levels (0 to 4 on the GDPG axis), with considerable variation in credit

levels. This suggests that factors other than economic growth may influence credit usage. On the left side, where growth is negative, the data points show higher levels of bank credit, reinforcing the idea that economic downturns lead to increased borrowing. Overall, the graph highlights that during prosperous times, companies and individuals borrow less due to higher profits and income, while in challenging economic periods, the demand for credit rises to address liquidity shortages and financial difficulties.

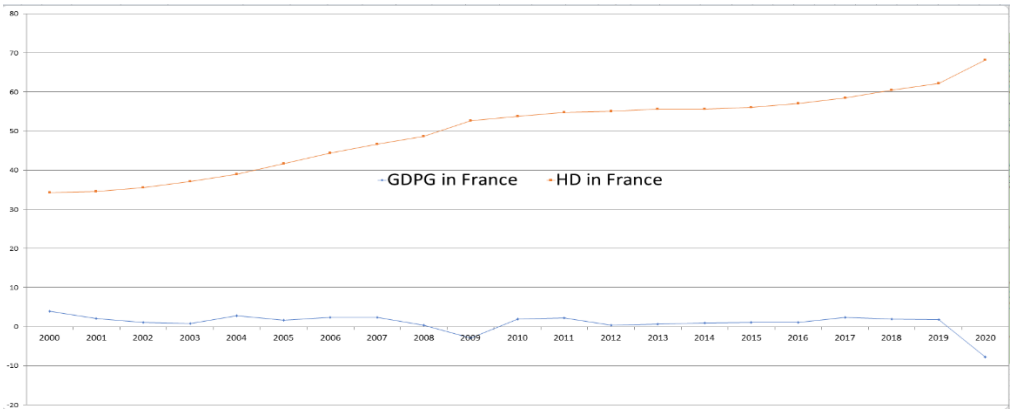
Graph 5: Impact of Household Debt (HD) on GDP Growth in Spain (2000-2020)



Source: Trading Economics and world bank.

The curves highlight clear variations in the relationship between household credit and economic growth, depending on each country's economic environment. In Spain, for instance, the connection between credit and growth was robust and positive before the 2008 financial crisis. However, this relationship weakened dramatically in the aftermath, as the economy faltered and debt levels surged. These patterns became even more pronounced in 2020 with the COVID-19 pandemic, when the economy saw a steep decline in growth alongside a significant rise in household debt, as many people turned to loans to navigate financial challenges.

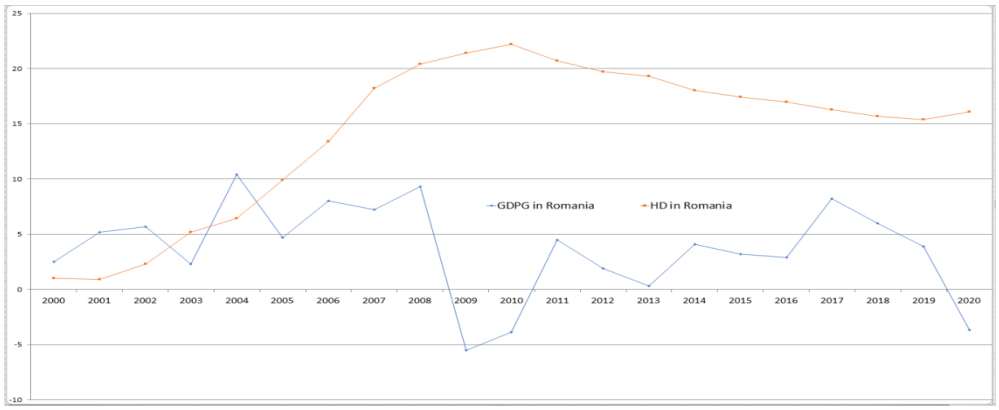
Graph 6: Impact of Household Debt (HD) on GDP Growth in France (2000-2020)



Source: Trading Economics and world bank.

In France, the relationship between credit and growth was more consistent, showing gradual increases over time. This reflected the overall resilience of the French economy, even in the face of global crises. Yet, in 2020, France also experienced slower growth due to the pandemic. However, the rise in household debt was less pronounced compared to Spain, likely due to stronger social safety nets and government support that helped buffer the financial strain on households.

Graph 7: Impact of Household Debt (HD) on GDP Growth in Romania (2000-2020)



Source: Trading Economics and world bank.

In Romania, the relationship between credit and growth was much more unpredictable, with periods where both rose together and others where they dropped simultaneously. This volatility reflected the influence of external economic crises and the impact of domestic reforms. The COVID-19 crisis in 2020 only intensified these fluctuations, leading to a sharp drop in growth and an increasing reliance on credit as households sought financial relief during the economic slump.

Overall, the relationship between household credit and economic growth seems closely tied to economic stability. In stable times, credit can help fuel growth, but as seen during the COVID-19 pandemic in 2020, credit use often surges during periods of economic downturn, as households turn to borrowing to compensate for lost income, which in turn complicates the recovery process.

5. Conclusions

This comprehensive analysis delves into the intricate relationship between bank credit and economic growth in Spain, France, and Romania from 2000 to 2020. It reveals just how complex this relationship is, demonstrating that its impact extends well beyond the sheer volume of credit. The findings underscore that economic crises, such as the global financial crisis and the COVID-19 pandemic, have profoundly influenced this relationship, prompting policymakers to adopt flexible strategies that can adapt to shifting economic conditions.

The results of this study reveal several important insights when compared to previous research. Bank deposits to GDP showed a negative impact on economic growth due to reduced investments. This finding contrasts with the study by (Kachula, Zhytar, Sidelnykova, Perchuk, & Novosolova, 2022), which concluded that an increase in the ratio of deposits to GDP could actually promote economic growth. Similarly, an increase in the net interest margin of banks was found to have a significant negative impact on growth, as it potentially limits investments and slows economic expansion.

This observation disagrees with the findings of (Yuksel & Zengin, 2017), who argued that higher borrowing costs can stimulate economic growth. On the other hand, household debt demonstrated a positive impact on economic growth in the fixed effects model, a result that aligns with the work of (Samad, Daud, & Rusmita, 2022), where they noted that increased consumption driven by household loans contributes to growth, particularly during periods of economic prosperity.

It is important to consider the key conclusions from Guisan's (2024) analysis of causality, which highlights the positive relationship between GDP per capita and bank deposits per capita. Additionally, it points out that while bank deposits positively influence bank credit, the impact of bank credit on economic development is not always beneficial. This effect varies depending on whether the credit contributes to the production of goods and services and promotes sustainable development.

The study also showed that non-performing loans had a strongly negative impact on growth, consistent with the findings of (Alshebmi, Adam, Mustafa, & Abdelmaksoud, 2020), who emphasized that a high level of non-performing loans places financial strain on the banking sector and hampers economic performance.

Foreign investment was observed to have a strong positive influence on growth, which is in line with (Koojaroenprasit, 2012), who concluded that foreign investments enhance productivity and job creation, boosting economic development. Interestingly, domestic investment had a negative impact on growth, which suggests the need for further analysis to understand the declining returns from local investments. This result diverges from (Bakari, 2017), who suggested that a weak business environment might lead to positive returns on investments. Finally, government spending was found to have a clear negative impact on growth, supporting the conclusions of (Kutasi & Marton, 2020), who pointed out that excessive government spending could increase public debt, thereby negatively affecting economic growth.

The results indicate that when economic performance is strong, the need for bank borrowing diminishes. Conversely, during periods of economic decline or negative growth, reliance on credit tends to increase, suggesting that other factors also play a significant role in driving economic growth. During recessions, we see a rise in borrowing due to liquidity challenges, while in times of prosperity, demand for credit typically falls as income and profits rise.

Furthermore, the analysis demonstrates that the connection between credit and growth is not static; it changes over time influenced by various interrelated factors. The research highlights how economic downturns can lead to significant declines in both credit and growth, pointing to the crucial role that monetary and fiscal policies play in guiding this

relationship. While measures such as quantitative easing can stimulate credit and promote short-term growth, they may also lead to increased debt levels and financial risks in the long run.

Additionally, structural factors like institutional quality, education levels, and infrastructure significantly shape how credit impacts economic growth. This reality necessitates that policymakers find a delicate balance between encouraging credit to foster growth and minimizing the risks associated with excessive debt accumulation. It's equally important to strengthen oversight of the banking system to ensure its stability and safety, as well as to diversify funding sources through direct investment to lessen dependency on bank credit.

In summary, this analysis points to the pressing need for further research to deepen our understanding of the relationship between credit and growth, especially by examining the unique factors affecting each country and the changing economic landscape. The interplay between credit and economic growth is dynamic and multifaceted, influenced by a variety of factors. While credit plays a critical role in stimulating growth, it's essential to use it judiciously to avoid the risks linked to rising debt levels. Ultimately, gaining a clearer understanding of this relationship is vital for developing more effective and sustainable economic policies.

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