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Impact of FinTech Adoption on Individual Over-Indebtedness in BLEND Countries

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ARTICLE INFO	ABSTRACT
Keywords: *Individual Over-indebtedness,* *FinTech, Inflation,* *Household Consumption,* *Unemployment,* *Economic Growth,* *Multicollinearity,* *Jorque Bera,* *BLEND,* *IBRD,* *World Bank.*	**Purpose:** The purpose of this research is to identify the impact of FinTech adoption and major macro-economic factors like Household Consumption, Economic Growth, Unemployment Rate, and Inflation Rate on Individual Over-Indebtedness in BLEND countries. How these factors influence the over-indebtedness as it is something very concerning if it is considered in a broader way. As FinTech these BLEND countries are already in an emerging phase, it is important to know how it is affecting by accounting for other macro-economic variables. **Design:** This study adopts a quantitative, deductive and positivist approach by using secondary data of BLEND countries described by Work Bank. The data is collected from the websites of the central banks of these BLEND countries as well as from the websites of World Bank and International Labor Organization (ILO). **Findings:** Preliminary findings from reviewed literature suggest that FinTech has a positive and significant impact on Individual Over-Indebtedness. **Originality and Value:** This study provides timely insights into the impact of FinTech and other macro-economic variables on Individual Over-Indebtedness in BLEND Countries. The findings hold value for government/policy-makers, FinTech and other financial institutions, as well as regulators of financial markets.

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1. Introduction

FinTech has transformed the finance sector by using technology to improve the way they operate. FinTech covers a broad spectrum of functions, such as online banking, crowd funding, artificial intelligence (AI) and blockchain-based systems. Technological advances have improved accessibility, efficiency, and user-friendliness, transforming how people handle their funds. While there are positives of FinTech, there are questions about its possible detrimental impact on human financial behavior too, including over-indebtedness. Over-indebtedness occurs when someone fails to pay their outstanding debts, resulting in financial difficulties and eventual collapse. This is a crucial issue that impacts both individual financial wellness and overall sustainability of the economy. Along with FinTech, major economic factors such as Household Consumption, Economic Growth, Unemployment Rate, and Inflation Rate may also be the reason behind individual over-indebtedness.

1.1 Background of the Study

Over-indebtedness describes borrowing funds without making scheduled repayments for a minimum of 90 days. It is a big issue nowadays (Idris & Saigal, 2018). Excessively numerous loans is being shown to result in negative consequences on people, cultures, organizations, and the economic health of an entire country. This has been proved via numerous studies (Pazarbasioglu, 2019). In simple terms, it refers to a debt which is at risk of default or nearing default. Over-indebtedness arises when financing is readily available, encouraging consumers to incur greater levels of debt than what they actually require. Over-indebtedness is an increasing concern throughout the world at large. For addressing demands imposed by this furious marketplace, technical innovations have recently been built up via financial technology, or FinTech (Saigal, 2019). The amount of individual over-indebtedness in Pakistan has grown during the past ten years. In Pakistan, unregulated marketplaces are the main providers of credit and individual over-indebtedness is mostly determined by expenditure (Muzammil, 2021). Financial technology continues to increase in popularity as a result of the internet's accessibility and simplicity. The adoption of financial technology in BLEND countries, especially in Zimbabwe and PNG, has increased between 2010 and 2020, suggesting that a large number of people are drawn to financial technology programs due to their ease of operation and convenience. Financial services companies have been implementing FinTech innovations as part of an ongoing wave of financial innovations since the 2008 Global Financial Crisis. Examining the possible impact of this financial technology advancement on the rate of excessive borrowing also seems feasible (Acar & Tak, 2019).

1.2 Problem Statement

Consumer behavior has changed due to the increase in FinTech adoption. (Deahandira & Primantari, 2022). FinTech has transformed the financial market sector by making them more accessible and efficient, however, it also generates issues with excessive borrowing, where people find it difficult to pay their debts. Individuals in today's world shows a propensity to overborrow, reaching above their potential to responsibly handle the amount of credit, which ultimately results in over-indebtedness (Acar & Tak, 2019). Individual over-indebtedness is an increasing concern throughout the world as it affects

the whole nation (Saigal, 2019). It is important to concentrate on over-indebtedness and carry out a thorough examination of the ways in which financial technology affects individual over-indebtedness while accounting for macroeconomic variables including Household Consumption, unemployment rate, economic growth and inflation. (Hamit et al., 2024). Therefore, the purpose of this research is to ascertain how FinTech adoption along with major economic factors like Household Consumption, Economic Growth, Unemployment Rate, and Inflation Rate may affect individual over-indebtedness in BLEND countries.

2. Literature Review

2.1 Empirical Reviews

2.1.1 FinTech Adoption

There are a lot of studies done around the globe to assess the impact of FinTech on Individual or Household Over-Indebtedness, whereas, one of those papers looks at how FinTech affects individual over-indebtedness in Asian countries like Malaysia, Indonesia, Thailand, Singapore, and the Philippines. Economic development reduces over-indebtedness by improving people's capacity for repayment loans. Rates of unemployment are negatively correlated with over-indebtedness, illustrating the intricate relationship among employment and lending habits. Over-indebtedness is not significantly affected by inflation, according to data analysis (Hamit et al., 2024).

Financial technology, or new electronic financial technology, are reshaping the general credit market. Two suitable borrowing ecological systems are created: an emerging digital ecology which incorporates fresh digital participants using data analysis, machine learning, and artificial intelligence (AI), and a popular environment centered on conventional ways of operation which incorporate particular procedures that have been in place for ages. Financial scholars are crucial in highlighting the regional forces behind the financial systems that create excessive borrowing in various locations and enable inequalities in debt settlement and control at multiple levels of space (DawnBurton, 2020).

FinTech will influence consumption via internet-based financing. On the contrary side, FinTech has a substantial impact on credit risk. The regulatory mix across connected entities has the potential to boost FinTech's beneficial influence while reducing risk associated with loans (Wardhana & Indriyani, 2024).

In light of rising use of online finance services, the current research looks at the connection among financial literacy and excessive borrowing from a gender viewpoint. The Fintech Access Household Survey 2021 provided data that was both secondary and primary for the purpose of the research. The findings indicate that while gender differences in accessibility and utilization have decreased over the years, there are still variation in debt, financial literacy, and the use of various financial services aspects. In particular, the findings indicate that women favor unauthorized routes for financial offerings, like Chamas, over official routes, which males pick. The findings also demonstrate that basic schooling and understanding of finances both reduce the likelihood of becoming over-

indebted, but that women are more likely than males to be over-indebted because they are less financially educated.

H1: FinTech Adoption has positive & significant impact on Individual Over-Indebtedness in BLEND Countries.

2.1.2 Household Consumption

The ratios of household consumption like household-mortgage debt to household income, credit-card loans to household income and auto-loans to household income, all favorably influence the declaration of individual over-indebtedness. In comparison with the average claiming chances, the likelihood of declaring for over-indebtedness increases by 88.8 percent, and 190 percent for every standard deviation rise across each ratio. In contrast to the alternate theory that unfortunate circumstances are the main reasons of individual over-indebtedness, households deliberately decide to file for over-indebtedness after over exceeding their spending (Zhu, 2011).

One of the Japanese studies evaluated that how household consumption or purchasing patterns are being pushed by the household debt. The survey covers the years from 2005 to 2013, which includes the answers to questions concerning the major income issues that look ahead providing the insight into the reasons behind household saving habits. As per the analysis, it shows that individuals with higher levels of debt have substantially greater Household Marginal Propensities to Consume (MPCs) against the individuals with little to no debt (Nakajima, 2020).

A Korean study raises a question about the durability of an economy because of its quantity and quality. The study found that growth in the consumption may be weakened by the balance sheet positions as measured by the ration of leverage. The study also found that different consumer spending patterns and household variables may have different effect of debt on consumption. Specifically, compared to other areas, the effect of debt has been significantly more pronounced when it comes to spending on durable goods. Furthermore, in low-income categories, debtors in high-income groups have demonstrated downward changes in their consumption. These results suggest that the cautious actions of borrowers could be a significant bridge between debt and consumption (Kim & Hwang, 2016).

H2: Household Consumption have positive & significant impact on Individual Over-Indebtedness in BLEND Countries.

2.1.3 Unemployment Rate

The unemployment rate is positive and strongly correlated with individual debt. Although the unemployment rate is defined as the proportion of the labor force that is jobless, reducing unemployment is crucial to lowering the value of debt. Individuals are forced to take on additional loans in order to support their spending due to the prolonged jobless scenario. On the other hand, another examination reveals a statistically significant negative correlation among debt and unemployment. A European study used the European Household Finance and Consumption Survey (HFCS) in order to examine the relationship between unemployment rate over-indebtedness. The study investigates the connections by

using regressions relevant to each nation as well as at the level of the Euro region. This method accounts for the institutional consequences of each nation with respect to all the various elements that can account for the most extreme forms of household debt.

The study also looks at how each nation's economic and legal structures contribute to the explanation of these variations. The finding of the regressions in every nation demonstrates that the households with a jobless reference individual have significantly higher probability of being over-indebted. Across all metrics and specifications of over-indebtedness, these odd ratios hold steady. It is interesting to note that the findings of the study are comparable for secured debt alone. As far as country-specific findings are concerned, the impact of unemployment differs significantly between the nations. For instance, the odds ratio for the unemployed group is slightly less than 2 in Spain, France or Portugal, but it is greater than 4 in Austria, Belgium or Italy. Secondly, in order to pinpoint individuals and nations that are more prone to negative macroeconomic effects in the labor market, the study place the analysis inside a framework called macro-micro. The percentage of families in European area that suffer more excessive debt rose by over 10 percent, indicating that the financial insolvency of individuals in the European region may be significantly impacted by another unemployment shock. Lastly, family led by a single person are far more affected by this shock than those headed by a couple (Du Caju et al., 2016).

Unwanted, inefficient, careless, and impulsive borrowing and subsequent over-indebtedness of many individuals are primarily caused by unemployment combined with a slump in the economy, an overall shortage of available employment opportunities, lack of schooling, poor qualifications, lacking drive for job, limited mobility, and decreased flexibility of the labor market. Unwanted, inefficient, careless, and impulsive borrowing and excessive debt, when combined with unemployment, have a negative impact on the labor market, result in illegal employment, and have many other adverse impacts on society and those who are illegally employed (differing between business and job conditions, the state's employment policy's inefficiency, noncompliance with the law, the lack of legal protection, criminality, loss of qualifications, loss of work habits, emotional issues, health issues, isolation in society, and others). Individuals have to be made to take ownership for their choices and behaviors, such as taking on debts to raise their living standards as well as seeking employment to support themselves. To acquire and maintain an excellent career or to incur debts sensibly, prudently, and wisely, individuals need to be informed. Therefore, the foundation for preventing and resolving issues with unemployment and excessive debt must be an organized ongoing acquisition of the information, expertise, and further characteristics required for a fulfilling existence and career in the world, notably the financial and employment literacy that is required (Němec & Šikýř, 2009).

H3: Unemployment Rate has positive & significant impact on Individual Over-Indebtedness in BLEND Countries.

2.1.4 Economic Growth

In order to illustrate economic growth and indebtedness similarities and differences, the reasoning they depend on, and their applicability in context with the present financial situation, the study provides a quick overview of the major theories developed throughout history regarding the financial consequences of public debt. Three main points from a standpoint are examined: the conventional viewpoint, the Keynesian perspective, and the perspective of neoliberal analysts, who are monetarists and members of the school of rationalism. By comparing the various points of opinion, we were able to develop some decision-making parameters that could help the government create public debt measures that support economic expansion: Public debt shouldn't turn into the norm but should instead be saved for times when the financial system is experiencing unusual events, like recessions; borrowed funds should be utilized primarily for projects that add value to the economy, like public investments; and public debt ought not to increase rapidly and ought to remain inside acceptable ranges to prevent potential negative effects on economic expansion (Bilan, 2016).

H4: Economic Growth has positive & significant impact on Individual Over-Indebtedness in BLEND Countries.

2.1.5 Inflation

Throughout the years, inflation, or the steady increase in the general level of prices for products and services, reduces the buying power of currency. One of the types of research which studied the impact of inflation on individual indebtedness in Croatia states that Croatians' borrowing habits are impacted by inflation in a number of ways. It benefits consumers with fixed-rate financing by lowering the actual worth of outstanding debts. On the other hand, inflation usually raises nominal interest rates, which raises the expense of taking out new loans. Individuals may have to take out more loans in order to keep buying power in the face of growing costs, which can put a burden on their financial status. In order to take advantage of present cost savings, borrowing might get encouraged by expected inflation. Because they are concerned about how inflation will affect repaying loans, institutions might increase their lending standards, making it more difficult to obtain credit. Furthermore, because inflation reduces the monetary worth of savings, it prohibits saving and may lead to greater expenditure or asset investments. In general, the impact of inflation on Croatian individual borrowing is complex, influencing economic security, investment choices, and accessibility (Filipović, 2024).

H5: Inflation has positive & significant impact on Individual Over-Indebtedness in BLEND Countries.

2.3 Conceptual Framework
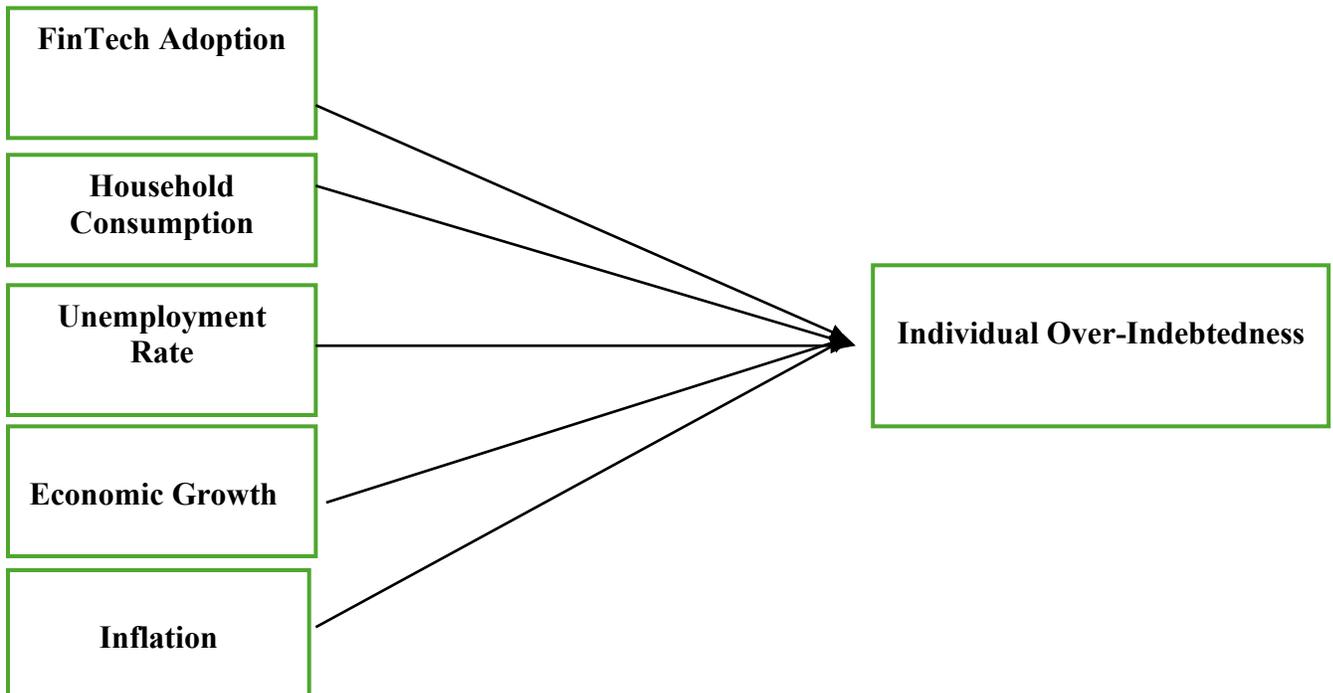
3. Methodology

3.1 Research Approach

Using a quantitative technique with an exploratory approach, this study analyzes how financial technology (FinTech) influences individual over-indebtedness in the 14 BLEND countries. A quantitative method involves the use of post-positivist arguments for knowledge as well as methods of investigation like experiments and surveys and data collection on predefined tools that produce statistical results (Creswell & Creswell, 2003).

Secondary data was used with this approach, so it becomes easy to see patterns, trends and relationships among major economic indicators which are Household Consumption, Economic Growth, Unemployment Rate, and Inflation Rate. Secondary data is data which has been already generated by someone else and is used in research rather than being collected by the researchers themselves (Vartanian, 2010).

To analyze fluctuations across time and across countries, a panel data analysis for the years 2001 to 2024 was performed to look at how FinTech and macroeconomic factors impact individual over-indebtedness. Panel data or longitudinal data are those that include time series observations (Hsiao, 2007).

3.2 Sampling Design

3.2.1 Target Population

For this research, the target population are all countries that the World Bank includes in the BLEND (IDA/IBRD blend) group which can receive both concessional and non-concessional loans. Especially, this study examines the following 14 BLEND countries, Pakistan, Fiji, St. Lucia, Belize, Kenya, Grenada, St. Vincent and the Grenadines, Cameroon, Congo (Republic), Nigeria, Uzbekistan, Dominica, Eswatini and Papua New Guinea. They are chosen because their development is changing, financial technology is becoming more popular and more households have debt.

3.2.2 Sample Size

The quantity of units in a sample that is used to show a population is known as the sample size (Saunders et al., 2019). We included 14 BLEND countries over 24 years (2001 to 2024), leading to 336 observations per country. These years also include the phase of COVID in which the FinTech's demand was too high.

3.2.3 Sampling Techniques

The process of choosing a subset or sample from a larger population in order to draw statistical conclusions about the population is referred to as sampling techniques (WG, 1977). In this research we are using a purposive technique to carry out the sampling. We used World Bank definitions for BLEND economies and required that secondary data for each variable were available from 2001 to 2024. This sampling method fits well when we are targeting only certain groups—this case, emerging markets in FinTech and how they receive development financing.

4. Result And Discussion

4.1 Descriptive Statistics

Table 1

Variable	Obs	Mean	Std. Dev.	Min	Max
Over-indebtedness	188	8.609	5.992	.71	37.25
FinTech Adoption	323	26.764	23.105	.03	89.01
Household Consumption	327	55.99	30.948	.09	105.49
Economic Growth	336	3.279	4.5	-24.36	20.39
Unemployment	336	9.446	8.156	.4	35.36
Inflation	247	4.819	5.062	-3.08	33.24

4.1.1 Interpretation

Significant differences in Over-Indebtedness exist among the sample, which may be a reflection of past trends or countries' economic diversity. FinTech Adoption seems to be inconsistent, perhaps growing with time and varying country to country. A wide range of Household Consumption levels is probably a reflection of differences in financial access, income and development. Both economic booms and crises are included in the Economic Growth sample, indicating a changing economic landscape over time. The Unemployment sample demonstrates that labor market conditions differ greatly, with significant unemployment issues in certain time periods and countries. Both periods of high Inflation and deflation are included in the inflation data, indicating periodic economic instability.

4.2 Tabulation of Countries

Table 2

Country	Freq.	Percent	Cum.
Belize	24	7.14	7.14
Cameroon	24	7.14	14.29
Congo Republic	24	7.14	21.43
Dominica	24	7.14	28.57
Eswatini	24	7.14	35.71
Fiji	24	7.14	42.86
Grenada	24	7.14	50.00
Kenya	24	7.14	57.14
Nigeria	24	7.14	64.29
Pakistan	24	7.14	71.43
Papua New Guinea	24	7.14	78.57
St. Lucia	24	7.14	85.71
St.Vincent and the Grenadines	24	7.14	92.86
Uzbekistan	24	7.14	100.00
Total	336	100.00	

There are 17 countries that comes under BLEND category, whereas, only 14 countries' data was available and remaining 3 were eliminated due to no data availability.

4.3 Outliers:
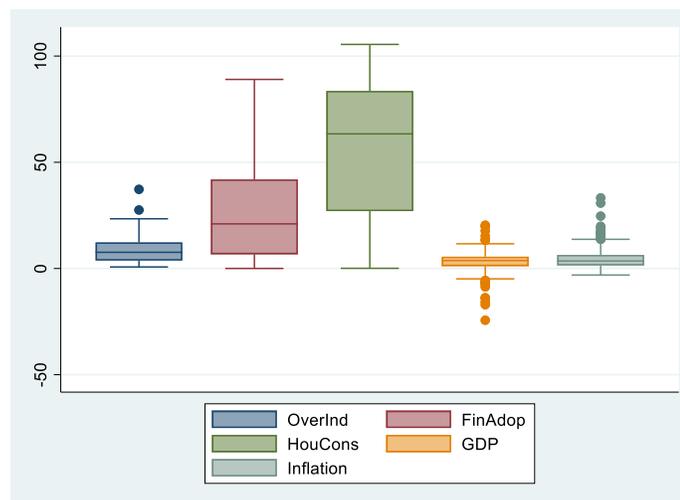
4.3.1 Interpretation:

The boxplot analysis shows that there are outliers in a number of variables, most notably Economic Growth (GDP) and inflation, which point to irregular dramatic economic events. The most variable category is household consumption, which reflects shifts in consumer behaviors. On the other hand, the distributions of inflation and over-indebtedness are comparatively steady, indicating stability in both industrial output and price levels. Economic Growth (GDP) and FinTech Adoption are two examples of outliers that highlight how crucial it is to account for data set volatility during Analysis of regression.

4.4 Matrix of Correlations

Table 3

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) Over-Ind	1.000					
(2) FinTechAd	0.074	1.000				
(3) H-Consum	0.129	0.316	1.000			
(4) EconomicG	-0.151	-0.142	-0.052	1.000		
(5) Unemp	0.120	0.151	-0.269	-0.178	1.000	
(6) Inflation	-0.193	-0.266	-0.074	0.258	-0.285	1.000

4.4.1Interpretation:

The correlation between Over-Indebtedness and FinTech Adoption is very weak; there is a minor but negligible correlation between Over-Indebtedness and FinTech Adoption. There is a weakly positive correlation between Household Consumption and Over-Indebtedness. Over-Indebtedness somewhat grows with Household Consumption, possibly due to increased borrowing to fund spending. Economic Growth and Over-Indebtedness have a weakly negative correlation. Stronger Economic Growth is typically associated with slightly lower levels of debt. Unemployment and Over-Indebtedness have a weakly positive correlation. Due to financial strain, there is a slight correlation between increased Unemployment and higher levels of debt. There is a weak negative correlation between Inflation and Over-Indebtedness. Perhaps because Inflation erodes the real worth of debt, higher Inflation somewhat lowers Indebtedness.

4.5.1 Interpretation:

As per Table 4 below, there is a slight, statistically negligible drop in over-indebtedness for every unit increase in FinTech adoption. No proof of a significant impact. Over-Indebtedness rises by 0.034 for every unit increase in household consumption. Implies that debt levels tend to rise in line with increased expenditure. Perhaps as a result of increased borrowing for spending. Over-Indebtedness is somewhat decreased by economic growth; however, this effect is not statistically significant. Higher debt is linked to higher unemployment, although this relationship is not statistically significant. It's possible that higher inflation lowers over-indebtedness since it devalues debt. With a p-value of 0.107 near 0.10, the effect is weak.

4.5 Linear Regression

Table 4

Over-Ind	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
FintechAd	-.011	.022	-0.50	.62	-.054	.033	
H-Consump	.034	.019	1.82	.07	-.003	.071	*
EconomicG	-.107	.092	-1.16	.247	-.289	.075	
Unemp	.079	.06	1.31	.191	-.04	.198	
Inflation	-.162	.1	-1.62	.107	-.36	.036	
Constant	7.417	1.713	4.33	0	4.034	10.8	***

Mean dependent var	8.683	SD dependent var	6.004
R-squared	0.071	Number of obs	164
F-test	2.416	Prob > F	0.038
Akaike crit. (AIC)	1052.269	Bayesian crit. (BIC)	1070.868

*** $p<.01$, ** $p<.05$, * $p<.1$

4.6 Variance Inflation Factor (VIF) For Multicollinearity:

Table 5

Variable	VIF	1/VIF
household_~n	1.27	0.790004
unemployment	1.26	0.792162
fintech_ad~n	1.24	0.807823
inflation	1.21	0.829423
economic_g~h	1.09	0.914557
Mean VIF	1.21	

4.6.1 Interpretation:

The VIF was used to evaluate multicollinearity among the independent variables, and the VIFs for each explanatory variable are as follows: FinTech Adoption = 1.24, Household Consumption = 1.27, Unemployment = 1.26, Inflation = 1.21, and Economic Growth = 1.09. All variables have a mean VIF of

1.21. There is no indication of multicollinearity in the model because all VIF values are much below the traditional cutoff of 10. As a result, the standard errors are not inflated by correlations between the independent variables, and the predicted regression coefficients are trustworthy. As a result, statistical conclusions derived from the model are reliable and valid.

4.7 Normality (Jarque-Bera) Test:

Jarque-Bera Normality Test: 234.5 Chi(2) 1.2e-51

4.7.1 Interpretation:

The regression residuals from the model were tested for normality using the Jarque-Bera Normality Test. The test produced a p-value of **1.2e-51** and a JB statistic of 234.5, both of which are significantly below the standard significance limit of 0.05. The null hypothesis of normality is rejected as a result of this incredibly low p-value, which shows that the residuals are not normally distributed. Although the precision of standard errors in small samples may be impacted by the non-normality of residuals, this problem is mitigated in panel data models by the use of robust estimation approaches like Panel-Corrected Standard errors (PCSE). As a result, even when normalcy is rejected, the coefficient estimate is still objective and consistent, and robust methods can be used to conduct inference with reliability.

4.8 Panel Corrected Standard Errors – PCSE Regression:

Table 6

Over-Indebtedness	Panel-Corrected					
	Coef.	St.Err.	z	p>| z		[95% Conf.	Interval]
Fintech Adoption	-0.67563	0.066259	-10.2	0.000	-0.8055	-0.54577
Household Consumption	-0.26196	0.183022	-1.43	0.152	-0.62068	0.096754
Economic Growth	-0.01503	0.133689	-0.11	0.911	-0.27705	0.247
Unemployment	0.461217	0.266742	1.73	0.084	-0.06159	0.984022
Inflation	0.241885	0.052901	4.57	0	0.138201	0.345569
Constant	40.5446	15.88485	2.55	0.011	9.410875	71.67833

4.8.1 Interpretation:

To investigate the effects of FinTech Adoption, Household Consumption, Economic Growth, Unemployment, and Inflation on Individual Over-indebtedness, the PCSE regression was calculated. Pairwise selection is used to calculate panel-corrected standard errors for the model's 14 imbalanced panels over time. An R^2 of 0.9376 shows that the model accounts for a significant amount of the variation in individual over-indebtedness, and the model as a whole is statistically significant. R^2 is equal to 0.9376. Roughly 94% of the variation in individual over-indebtedness can be explained by the model. Wald $\chi^2 = 281.83$, $p < 0.001$: At least one of the explanatory variables has a meaningful impact because the model is statistically significant overall.

5. Conclusion

The primary objective of this research was to examine at how FinTech adoption affects individual over-indebtedness in BLEND countries. It also looked into the impact of other economic indicators, such as household consumption, economic growth, unemployment, and inflation. To ensure the results were robust, this study used panel data from 14 BLEND countries between 2001 and 2024 and used both OLS and PCSE models.

FinTech adoption and individual over-indebtedness in BLEND countries were found to be statistically significantly correlated negatively (PCSE Coefficient = -0.676, $p < 0.001$). This suggests that by offering digital tools for financial management, expanding access to adequate financing, and raising financial literacy, higher FinTech use lessens personal debt burden. This demonstrates how important FinTech is for boosting personal financial resilience, especially in BLEND countries.

Individual over-indebtedness was negatively impacted by household consumption, whereas the effect was statistically insignificant. (PCSE Coefficient = -0.262, $p = 0.152$). This implies that individual over-indebtedness is not just determined by consumption, and the availability of FinTech tools may help households better control their expenditure.

The impact of economic growth was modest and insignificant (PCSE Coefficient = -0.015, $p = 0.911$). This suggests that without complementary actions to enhance household or individual financial management and access to FinTech services, GDP growth by itself does not automatically lower over-indebtedness. Individual over-indebtedness was positively but marginally significantly impacted by unemployment (PCSE Coefficient = 0.461, $p = 0.084$), indicating that job instability moderately raises the probability of over-indebtedness. Individual over-indebtedness was significantly positively impacted by inflation (PCSE Coefficient = 0.242, $p < 0.001$), underlining macroeconomic vulnerabilities and showing how rising living expenses can push people into greater debt.

In conclusion, the study offers empirical proof that the use of FinTech can reduce excessive debt, enhancing people's financial stability, security, and quality of life in BLEND nations.
The results demonstrate how technology might lessen economic risk and advance our understanding of digital financial inclusion.

5.1 Limitations:

5.1.1Data Limitations: Applicability to fully commercial or concessional loan countries is limited because only BLEND countries were included.

5.5.2 Unbalanced Panel:
The accuracy of estimations was lowered in some years due to missing observations.

5.5.3 Variable Limitations:
Intra-country variance may be obscured because FinTech adoption was measured at the national level rather than the household level.

5.5.4 Causal Inference:

Although the study finds connections, it is unable to conclusively show causation.

5.2 Recommendations:

5.2.1 Recommendation for Policy Makers:

Policy makers are advised to enact laws encouraging the adoption of FinTech, especially in underprivileged areas. Reduce personal vulnerability by stabilizing inflation and establishing social safety nets.

5.2.2 Recommendation for Financial Institutions:

Financial institutions are advised to provide digital financial tools for responsible lending and debt tracking. Organize financial literacy initiatives to teach people how to handle their debt.

5.2.3 Recommendation for Future Research:

Increase the sample size to include nations with commercial and concessional loans. To identify micro-level effects, gather data on FinTech uptake at the household level. To support the body of evidence, investigate causal techniques like dynamic panel models. Overall, the study demonstrates that FinTech adoption is an important policy instrument for enhancing household financial well-being and mitigating the adverse effects of too much debt.

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