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Christian Tondo

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Constructing Synthetic Indicators for Bancarization in Paraguay using PCA

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Abstract

The Covid-19 pandemic affected the relation between financial institutions and their clients highlighting the need for bancarization indicators to interpret specific events. This study presents the construction of aggregate measures that facilitate the analysis and monitoring of bancarization. The synthetic indicators comprise variables in four dimensions of intermediation services provided by banks and financial companies in Paraguay. These are financial depth, infrastructure, coverage, and electronic transactions. All variables are considered in relation to adult population. The methodology employed is Principal Component Analysis (PCA). The results suggest that the methodology is sensitive, and it allows measuring and tracking progress of bancarization over time.

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1 Introduction

To improve bancarization in Paraguay, it is essential to establish a well-defined measurement indicator. This would allow for effective tracking and assessment of progress in access to banking services among the population. The necessity of an indicator became apparent to the Central Bank authorities at the onset of the Covid-19 pandemic, when representatives from the banking association reported a significant decline in several banking activities.

The Covid-19 pandemic affected the life of Paraguayans since March 2020. To prevent contagion, the government organized quarantines. These confined the population in their homes and forced a change in their relation with financial institutions. The first case of Covid-19 detected in Paraguay was on 7 March 2020. The first confining measures oriented to avoid contagion were introduced on 10 March 2020. A total quarantine was implemented by Presidential Decree on 20 March 2020.

The government implemented emergency measures to reduce the economic impact of the pandemic. The package prepared by the Central Bank included monetary and financial policy measures. These altered the relations between users and financial institutions. However, because of the lack of an aggregated indicator, it is not clear how deep the impact of the shock on bancarization was.

Moreover, the information related to bancarization in Paraguay tend to require additional clarification. Newspaper articles and social networks frequently publish headlines based on aspects of bancarization that seem contradictory. Some have a positive view and depict the improvement of bancarization. Other say that bancarization is relatively low in Paraguay. The truth is that all these articles and reports are based in different partial aspects.

To address this need, this work presents the construction of synthetic indicators for bancarization. These allow the analysis and monitoring of the concept of bancarization in Paraguay between December 2018 and June 2024.

Bancarization is an abstract and aggregated concept. In this study bancarization is viewed as:

> "...a process related to the creation of broad and stable relations between financial institutions and its users, with respect to a group of available financial services."[1]

For our purposes, financial services are those activities related to banks and financial companies that are regulated and supervised by the Central Bank of Paraguay. This definition allows the use of all the information that is officially reported to the Superintendency of Banks from financial institutions.

The synthetic indicators for bancarization are a combination of aggregate quantitative measures of access and use of financial services. These are calculated using reported data from intermediation services, payments and transactions performed by banks and financial companies, and indicators of coverage, financial depth, and infrastructure.

The construction of these indicators is a challenging task. Ideally, the information used for the calculation of an indicator should be adequate and frequent and should come from reliable sources with easy accessibility. A broad number of variables can be used for the calculations. Furthermore, the selected methodology should lead to the construction of a robust measure. The sources used for this study are public reports of the Central Bank of Paraguay and the World Population Prospects of the United Nations.

The Principal Components Analysis (PCA) enables the identification of aspects that affect bancarization, while reducing the subjectivity that is frequent in the construction of indices.

The construction of these indicators does not consider information related to the quality of institutions, nor the quality of their services. Neither the business environment, nor the financial education degree or capacities of the population, are considered.

Beside the Covid-19 pandemic, the synthetic indicators reveal the existence of additional shocks to bancarization. The indicators show how the emergency measures implemented by the government and other more recent shocks affected the relations between users and financial institutions.

The document is divided in five sections. After the introduction, the second section presents the stylized facts of the Paraguayan financial system in the period selected for the analysis. The third section describes the data used

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[1]The concept was elaborated by Morales and Yáñez, 2006, in their work about bancarization in Chile and it was used by Capera and González, 2011, in their work about bancarization in Colombia.

for the calculation of the synthetic indicators. The fourth section explains the methodology and results. The fifth section gives the conclusions.

2   Stylized Facts of the Paraguayan Financial Sector

During the Covid-19 pandemic the Central Bank of Paraguay prepared a set of monetary policy and financial measures to reduce the negative effects in the economy. On the monetary policy side, these measures were the reduction of the monetary policy rate, the reduction of the legal reserve for financial institutions, and the reduction of the interest rate of the liquidity window. On the financial side, the Central Bank measures suspended the calculation for credit default (allowing access to credit to those affected by the shock), permitted the deferral of losses due to provisions, allowed rescheduling credits that were larger than PYG[2] one billion, and reduced the risk weighting factor that relaxed the demand of regulatory capital for new credit portfolios. These measures aimed to reduce the deterioration of the credit classification and were intended to promote new credit for micro, small and medium enterprises (MSME).[3]

Despite the government measures to relax credit conditions, the pandemic and weather conditions affected lending. The banks were able to increase the amount of lending, but with the pandemic credit risk increased for many, and this led to a decrease in the number of individuals that received credit until July 2021 when it reached 1,330,074 individuals. In 2022, the impact of the pandemic was intensified by reduced economic activity resulting from a drought associated with the climatic phenomenon known as "La Niña." Therefore, GDP growth increased only 0.1 percent in 2022. This affected the repayment of loans and obliged individuals to reduce savings. The rate of change in deposits in local currency decreased to 2.2 percent in December 2022, the lowest rate in the period of analysis.

Bancarization was also affected by administrative measures before the pandemic. During 2019, two banks decided to close 483 thousand basic savings accounts between April and October. This was because the accounts

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[2]Paraguayan Guaraníes.

[3]Financial measures to support the economy and protect families and businesses, and other credit measures. See (https://www.bcp.gov.py/medidas-crediticias-i960).

were empty, with no transactions, and because there were accounts without the complete information required in the due diligence process. These represented 48 percent of all basic saving accounts opened by banks and financial companies. These accounts were mainly those opened following articles 7, 9, and 23 of the Regulation for Electronic Payments.[4]

This regulation imposed limits to electronic money accounts. It obliged mobile money operators to open a basic savings account for those clients that operated with their wallets for more than PYG 3 million, or those that had not registered transactions in the previous 90 days. As a result, one bank opened 883 thousand basic saving accounts up to March 2019. This represented 87.5 percent of all basic saving accounts of the financial system.[5] At the beginning of the Covid-19 pandemic the Central Bank of Paraguay modified the Regulation for Electronic Payments.[6] The changes increased the size of the wallets, as the transaction limit rose to three minimum wages (at that time approx. USD. 1,000) and the inactivity was declared after 180 days without transactions in the account. These changes stopped the creation of basic savings accounts that had been obliged by the previous regulation. After 2019 the number of basic saving accounts increased again, until 2022 gradually, and in 2023 faster. That is why in June 2024 the number of depositors in the financial system increased to 3.6 million, approx. 700 thousand more than in June 2023.

A structural change is also underway in the financial system, and it accelerated with the pandemic. The number of bank employees decreased 8.5 percent (1052 employees) between December 2018 and June 2024. This is an international phenomenon caused by the change in the needs of financial users and the pressure for cost reduction.[7] Users tend to demand more and better services from their banks. As they try to maintain quality and reduce costs, banks find themselves in the process of digitizing their services. The Covid-19 pandemic accelerated the process (Figure 2) as banks found themselves obliged to adapt their organizations and their working ways to a confined population.

Another observed trend is the expansion of the banking access network caused by the implementation of banking agents. Physical access to the sys-

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[4]BCP, Reglamento de Medios de Pago Electrónicos, Resolución 6, Acta 18, from 13 March 2014. This disposition was modified by Resolución, Acta 25, from 16 April 2020.

[5]Tondo, 2018.

[6]Resolución, Acta 25, from 16 April 2020.

[7]Hu et al. 2021.

tem quadrupled, increasing from 5446 to 21532 transaction points between December 2018 and June 2024. Banking agents are called Non-banking Correspondent (Corresponsales No-Bancarios) in Paraguay. These are the main cause of access expansion. They represent 88.6 percent of total access to the system in June 2024. This change is being driven by a few specific financial institutions; the most aggressive ones are using the network of the main card payment operator to expand its geographical presence. By June 2024, three financial institutions are in possession of 92 percent of the physical access to the financial system in Paraguay.

In the beginning, the Covid-19 pandemic stopped almost all banking activities. This caused a 61.7 percent reduction of credit card transactions in April 2020 with respect to April 2019 and 23.7 percent reduction in transactions with debit cards in the same period. However, financial institutions adapted quickly to the necessity of avoiding contact and complying with the physical restrictions for meeting in person. Users increased their utilization of electronic payments means provided by their financial institutions. Between April 2020 and April 2021, the number of transactions performed with credit cards increased 114.6 percent and with debit cards 87.1 percent. In this period, transactions through the Paraguayan Payments System (SIPAP) increased 137.7 percent. After the suspension of the restrictions implemented during the pandemic, citizens continued paying through electronic means. This change in its behavior was supported by the increase in the system's functionalities. In May 2022 SIPAP started working 24/7 and the implementation of instant payments improved the system's performance. Transactions through SIPAP rose markedly (2792.7 percent) between December 2018 and June 2024 (Figure 4).
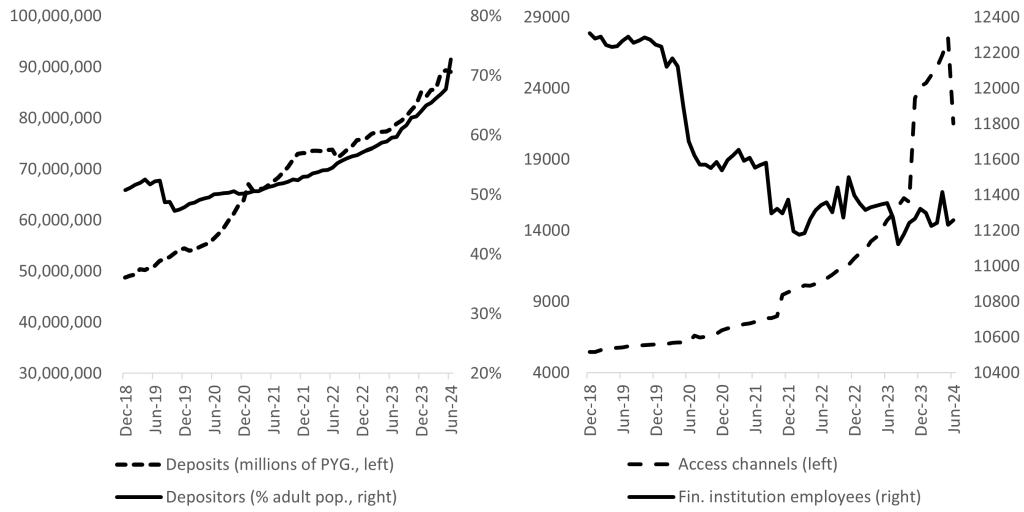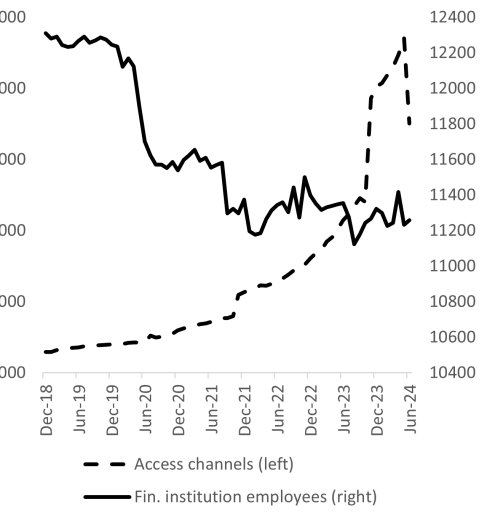
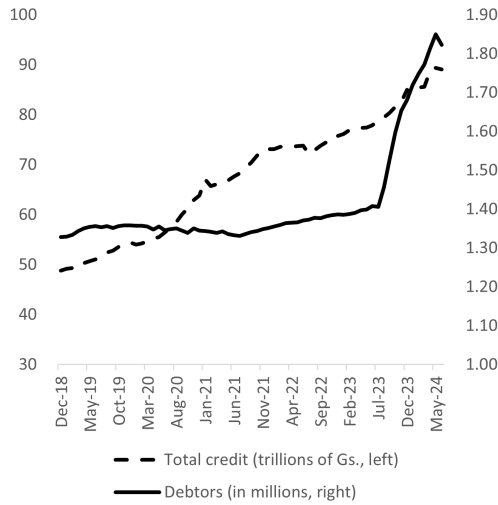Figure 1: Deposits and depositors

Figure 2: Access and employees

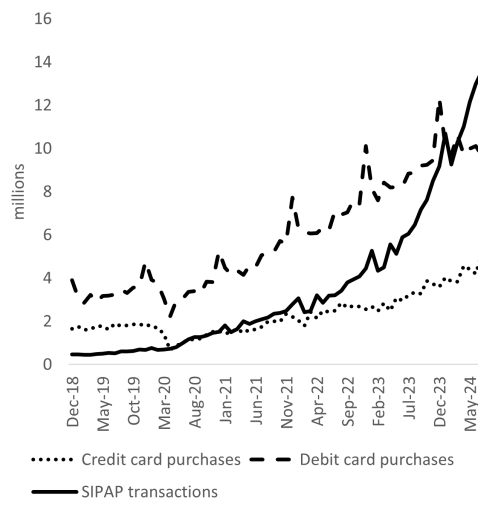

Figure 3: Credit and debtors

Figure 4: Electronic transactions

3   Data

The sources of information used for the calculations come from reports prepared by the Central Bank of Paraguay and the United Nations.

The Statistical Bulletins of the Superintendency of Banks contain monthly data reported by banks and financial companies.[8] The variables extracted from them are the number of debtors, the number of depositors, the number of employees, and the number of access points of the financial system.[9] This includes the main offices, the branches, customer care centers, and agents.[10] These bulletins also provide the number of employees working in the financial system.

The Statistical Annex of the Economic Bulletin publishes monthly information regarding the amount of deposits and loans of the private sectors.[11] The Statistical Annex of Payments publishes monthly data about payments transfers using the payments system, and payments with credit and debit cards.[12]

Population projections are from United Nations' World Population Prospects 2024. These are necessary to put variables in relation to the size of the adult population, i.e. all individuals that are 15 years of age or more.[13]

The period used for analysis is December 2018 - June 2024. This is considered for the construction of indicators and determined by the availability of information. The variables are partial indicators and were selected based on the bancarization definition proposed by Morales and Yáñez (2006).

The indicators are constructed following the example of Capera and González (2011), and were adapted considering data availability for the Paraguayan case. All variables are divided by the adult population. The

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[8]Boletín Estadístico de la Superintendencia de Bancos

(https://www.bcp.gov.py/boletines-estadisticos-i62).

[9]The number of depositors was provided by the Superintendency of Banks for this study. The number of debtors is from the "Indicadores y Datos de Bancarización"

(https://www.bcp.gov.py/indicadores-de-inclusion-financiera-i937).

[10]These are the physical access points to the financial system that are permitted for banks and financial companies in Paraguay.

[11]Anexo   Estadístico   del   Boletín   Económico   del   Banco   Central (https://www.bcp.gov.py/anexo-estadistico-del-informe-economico-i365).

[12]Anexo Estadístico de Pagos del Banco Central

(https://www.bcp.gov.py/anexo-estadistico-de-pagos-i1285).

[13]World Population Prospects 2024

(https://population.un.org/wpp/Download/Standard/MostUsed/).

Table 1: Variables used to calculate the synthetic indicators

Dimension	Objective	Variable
1 Financial depth	Indicate the aggregate relative importance of the banking system for the population.	Credit per capita = Credit in PYG / Adult population
		Savings per capita = Savings in PYG / Adult population
		Electronic transactions per capita = Amount of electronic transactions through national payments system / Population
2 Infrastructure	Indicate the physical access capacity and service capacity of the banking system for the population.	Access per capita = Access points (agents, headquarters, ATM, branches) / Adult population
		Employees per capita = Bank employees / Adult population
3 Coverage	Indicate the share of the population that are users of intermediation services.	Share of debtors = Debtors / Adult population
		Share of depositors (*) = Depositors / Adult population
4 Electronic transactions	Indicate the quantity of banking transactions per person that are performed electronically.	Per capita credit card transactions = Credit card transactions / Adult population
		Per capita debit card transactions = Debit card transactions / Adult population
		Per capita national payments system transactions = SIPAP transactions / Adult population

variables considered to calculate the indicators are presented in Table 1. The last three variables allow the consideration of electronic transactions to capture their contribution in the group of services provided by banks.

To put each variable in relation to the size of the adult population, the population series was converted to a monthly frequency.[14]

All variables were standardized as follows:

$$x^* = ((lnx - lnx_{(t-1)}) - m)/sd$$

x^* = standardized observation
x = observation
m = average of the time series
sd = standard deviation

This step implies subtracting the average of the differences and then dividing the result by the standard deviation. The differences of the logarithms are used to capture the changes in the variables. After this transformation, the averages of the series equal zero, the standard deviations equal 1, and the contributions of all series are comparable.

4   Methodology and Results

The strategy proposed for this study is as follows: first, we selected the definition for bancarization proposed by Morales and Yáñez, 2006. Second, the available information was classified in dimensions of bancarization. Third, the information was divided by the adult population (Table 1). Fourth, the series were standardized to put them in the same scale, and finally, the indicators are calculated using Principal Components Analysis (PCA).

PCA reduces the subjectivity that usually exists while determining the importance of the variables. It prevents the arbitrary selection of weights. The disadvantage of using weights is that those tend to change in the long term and the model ends up not reflecting the behavior of the dependent variable. PCA is used for the construction of indicators in different areas of science (Jolliffe, 1990) and it is frequently used for the construction of indicators with financial variables that tend to be correlated.

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[14]The higher frequency of the population series was computed using the methodology of Denton.

This methodology reduces dimensionality and minimizes the loss of information. It reduces the number of variables to a group of components. These are linear combinations of the selected variables. The principal components do not correlate with each other. The first component represents the combination of observations that capture the larger variance of the data. The variance is represented by the eigenvalue of each component.

The elements of the eigenvectors are the coefficients that are used in the calculation of each principal component, as indicated by Jolliffe (1990). In this case we calculate the principal components for each indicator as follows:

$$z_1 = \alpha_{11}x_1 + \alpha_{12}x_2 + \ldots + \alpha_{1p}x_p,$$

.....

$$z_k = \alpha_{k1}x_1 + \alpha_{k2}x_2 + \ldots + \alpha_{kp}x_p,$$

for k = 1, 2, ..., p.
z_k = principal component
α_{kp} = coefficients
x_p = selected variable

Next, the indicators are the result of the multiplication of the principal components and the proportional variance explained by each of them.

$$I = z_1\beta_1 + z_2\beta_2 + z_3\beta_3 + \ldots + z_k\beta_k$$

I = synthetic indicator
z_k = principal component
β_k = proportional variance

For the calculation of the indicator we use three principal components. To get the first term for the indicator, the first eigenvalue (that equals the variance of the first principal component) is divided by the total explained variance to obtain β_1, which is then multiplied by the first principal component. The second term is calculated with the second eigenvalue (that is the variance explained by the second principal component) that is divided by the

total explained variance and multiplied by the second principal component. With the third eigenvalue we use the same procedure.[15]

In the following sections we propose two versions of the synthetic indicators: a general indicator using all variables from Table 1, and an indicator for access to intermediation and infrastructure using variables related to credits, deposits, and infrastructure, i.e. physical access and employees of financial institutions.

4.1 The General Indicator

This specification allows an overall perspective of bancarization and its performance. The calculation includes all variables presented in Table 1, i.e. financial depth variables, infrastructure and access, the number of credit takers and depositors, and electronic transactions. For the calculation of the general indicator we used the first three principal components that explain 79.89 percent of the total variance as follows:[16]

$I_1 = z_1(0.33080/0.79890) + z_2((0.60140 - 0.33080)/0.79890) + z_3((0.79890 - 0.60140)/0.79890)$

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[15]A similar procedure is presented by Vieira et al. 2022 for the construction of socioeconomic indices.

[16]The model was computed with Stata 14.2.

Table 2: General indicator - Principal components, eigenvalues and variances

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	3.30757	0.60112	0.33080	0.33080
Comp2	2.70646	0.73124	0.27060	0.60140
Comp3	1.97521	1.37450	0.19750	0.79890
Comp4	0.60072	0.11017	0.06010	0.85900
Comp5	0.49055	0.14240	0.04910	0.90810
Comp6	0.34814	0.05141	0.03480	0.94290
Comp7	0.29673	0.16059	0.02970	0.97250
Comp8	0.13614	0.04502	0.01360	0.98620
Comp9	0.09111	0.04374	0.00910	0.99530
Comp10	0.04737	.	0.00470	1.00000

Table 3: General indicator - Eigenvectors

Variable	Comp1	Comp2	Comp3
credit/population	-0.07500	0.43960	0.23720
deposits/population	-0.17160	0.51120	-0.20790
amount SIPAP trans./population	0.22180	0.26500	0.43610
access/population	0.42490	0.10640	-0.32190
employees/population	0.27350	-0.39230	-0.12660
depositors/population	0.39990	0.09270	-0.21900
debtors/population	0.34470	0.11970	-0.47950
credit card trans./population	0.48280	0.00240	0.29560
debit card trans./population	0.37020	-0.03480	0.47010
trans. SIPAP/population	0.10750	0.53460	-0.06660

4.2 Indicator for Access to Intermediation and Infrastructure

This indicator allows for a perspective of the performance related to the main business of financial institutions which is the collection of deposits and granting of credits. We use variables related to: financial depth, coverage, access and employees (Table 1). For the calculation we use the first three principal components. These explain 84.59 percent of the total variance and the indicator is calculated as follows:

$$I_2 = z_1(0.43600/0.84590) + z_2((0.74720-0.43600)/0.84590) + z_3((0.84590-0.74720)/0.84590)$$

Table 4: Access to intermediation and infrastructure - Principal components, eigenvalues and variances

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	2.61612	0.74890	0.43600	0.43600
Comp2	1.86722	1.27513	0.31120	0.74720
Comp3	0.59210	0.09442	0.09870	0.84590
Comp4	0.49768	0.19935	0.08290	0.92890
Comp5	0.29833	0.16977	0.04970	0.97860
Comp6	0.12856	.	0.02140	1.00000

Table 5: Access to intermediation and infrastructure - Eigenvectors

Variable	Comp1	Comp2	Comp3
credit/population	-0.28240	0.49470	0.58950
deposits/population	-0.19210	0.60870	-0.39560
depositors/population	0.45260	0.24100	0.60100
debtors/population	0.50130	0.33840	-0.21590
access/population	0.51410	0.25710	-0.25810
employees/population	0.40370	-0.38210	0.14710

4.3   Graphical Representation of the Indicators

Figure 5 is a graphical representation of the calculated synthetic indicators. These indicators allow us to recognize and measure shocks to different activities performed by banks and financial companies. The general indicator captures the behavior of all variables presented in Table 1. The second indicator is concentrated on intermediation activities and infrastructure of financial institutions. The indicators revealed four shocks to bancarization in the analyzed period (Figure 6).

First, the general indicator and the one for intermediation and infrastructure present a decrease in bancarization starting mid 2019. This results from the closure of 483 thousand basic saving accounts observed in two banks. This decision was related to the identification of empty and inactive accounts, and also because there were accounts with an incomplete due diligence process.

Second, the two proposed indicators show the effect of the Covid-19 pandemic starting March 2020. This shock affected bancarization the rest of the year 2020 and continued in 2021. The pause in financial activities caused by the Covid-19 pandemic led to a stop in economic activity as the people stayed in their homes. This situation generated considerable uncertainty in specific sectors of the economy that faced higher risks. The General Indicator reflects the decline in credit and debit card payments immediately following the onset of the Covid-19 pandemic in March 2020.

Third, electronic transactions increased after the first part of the pandemic, due to a preference for remote transactions and improvements in the payments system. Electronic transactions increased with the confinement

measures and the improvements offered by financial institutions to perform transactions using their web applications. However, deposits and lending, as they are determined mainly by income and solvency of clients, remained affected until the third quarter of 2021.

Fourth, we observe an increase in the number of people with accounts, and with credits, as well as an increase in physical since the fourth quarter of 2023.
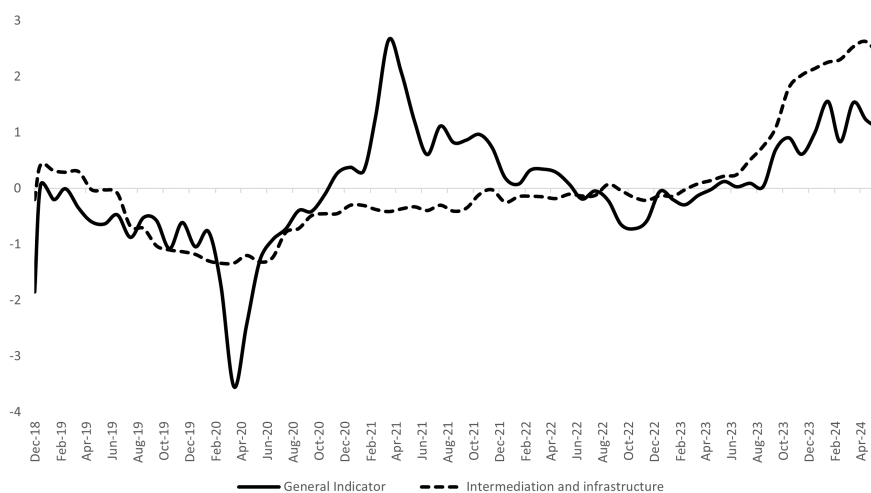
Figure 5: Synthetic indicators for bancarization, December 2018 - June 2024
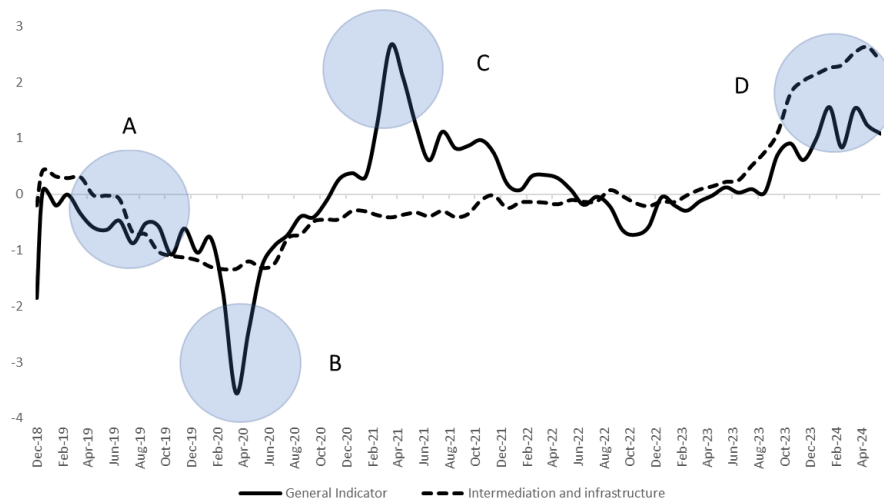
A: Closure of basic saving accounts
B: Covid-19 pandemic
C: Increased preference for electronic trans-
actions during pandemic
D: Increase in the number of people with
credits and deposits, as well as in physical
access

Figure 6: Shocks to bancarization, December 2018 - June 2024

5   Conclusions

This work describes the calculation of synthetic bancarization indicators for
Paraguay using PCA. Based on the definition of bancarization from Morales
and Yáñez (2006) we construct specific variables to calculate bancarization
indicators. All variables are expressed in relation to adult population.

The choice of the methodology is supported by the overall performance
of the calculated indicators. The PCA methodology captures the shocks
observed in the financial sector, avoiding the need of selecting specific weights.
The specification selected for the synthetic indicators allows the analysis of
bancarization in Paraguay.

The results are two basic specifications of the synthetic indicators. First,
a general indicator utilizing all variables considered in the study. These are
variables representing financial depth, infrastructure, coverage, and electronic
transactions. The second indicator concentrates on financial intermediation

variables. The indicators are calculated using available information from reports to the Superintendency of Banks. The two proposed indicators are preferred specifications.

The main contribution of this study is that the indicators permit a numerical expression of the abstract and aggregated concept of bancarization. Before, the idea of bancarization could only be represented partially, which made the analysis and monitoring of related events difficult and incomplete. These indicators can facilitate the formulation of policies to improve bancarization or financial inclusion. However, it is important to note that these indicators primarily reflect deviations around the average value of the series rather than indicating a specific level of bancarization. Thus, while they provide valuable insights, they should be interpreted with caution regarding their implications for policy direction.

A   Statistical Analysis of the Variables

Table 6: Statistical analysis of the variables - December 2018 - June 2024

	Variable	Obs.	Mean	Std. Dev.	Min.	Max.
a	credit/pop	67	-0.0000000176	1	-1.757304	2.387869
b	deposits/pop	67	0.0000000617	1	-1.807082	1.744769
c	amount SIPAP trans./pop	67	-0.0000000328	1	-3.445385	2.537781
d	access/pop	67	-0.00000000222	1	-1.133063	2.514055
e	employees/pop	67	-0.00000000325	1	-2.210208	1.756929
f	depositors/pop	67	0.0000000113	1	-1.990758	2.471207
l	debtors/pop	67	0.0000000161	1	-0.7911965	3.106826
m	credit card trans./pop	67	0.0000000134	1	-3.256429	1.801649
n	debit card trans./pop	67	-0.00000000228	1	-3.339741	2.592095
r	trans. SIPAP/pop	67	-0.0000000182	1	-1.362797	2.787859

B   Correlation Matrix[17]

<div style="text-align: center;">Table 7: Correlation matrix - December 2018 - June 2024</div>

	a	b	c	d	e	f	g	h	i	j
a	1.000									
b	0.976	1.000								
c	0.902	0.936	1.000							
d	-0.976	0.893	0.925	1.000						
e	0.820	-0.963	-0.937	-0.848	1.000					
f	-0.238	0.813	0.861	0.956	-0.766	1.000				
g	0.433	0.486	0.479	0.718	-0.329	0.754	1.000			
h	0.749	0.665	0.827	0.861	-0.663	0.859	0.617	1.000		
i	0.925	0.876	0.961	0.920	-0.881	0.860	0.483	0.886	1.000	
j	0.983	0.971	0.972	0.948	-0.959	0.884	0.524	0.787	0.940	1.000

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[17]a: credit/population, b: deposits/population, c: amount SIPAP transfers/population, d: access to financial system/population, e: financial institution employees/population, f: depositors/population, g: debtors/population, h: credit card transfers/population, i: debit card transfers/population, j: transfers SIPAP/population.

C Scree Plots

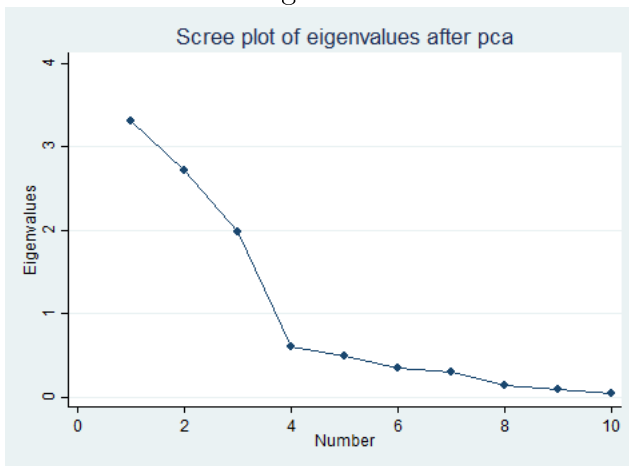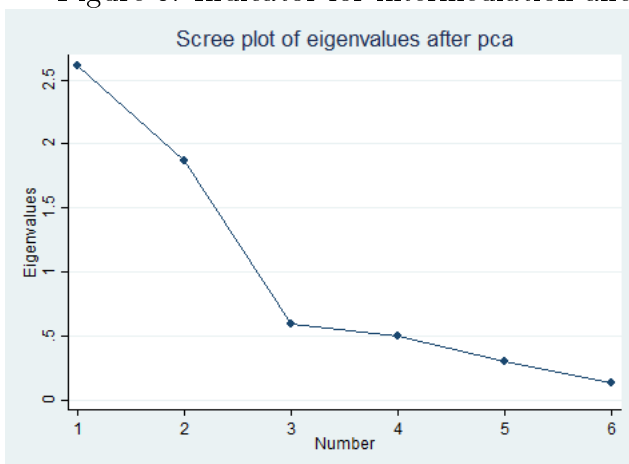Figure 7: General indicator: Scree plot

Figure 8: Indicator for intermediation and infrastructure: Scree plot

D Synthetic Indicators - December 2018 - June 2024

Table 8: Synthetic indicators for bancarization

	General indicator	Intermediation and infrastructure
Dec-18	-1.852423	-0.2003444
Jan-19	0.0591515	0.4204263
Feb-19	-0.2022561	0.3138165
Mar-19	-0.0081975	0.2868477
Apr-19	-0.3578987	0.2966802
May-19	-0.5971182	-0.0233044
Jun-19	-0.6359906	-0.0277939
Jul-19	-0.4733981	-0.0883155
Aug-19	-0.8767919	-0.6811559
Sep-19	-0.5205626	-0.7179287
Oct-19	-0.5724046	-1.025753
Nov-19	-1.079103	-1.100888
Dec-19	-0.6114033	-1.131699
Jan-20	-1.044847	-1.180368
Feb-20	-0.774242	-1.297275
Mar-20	-1.724587	-1.339051
Apr-20	-3.546486	-1.336361
May-20	-2.435044	-1.200005
Jun-20	-1.289929	-1.316088
Jul-20	-0.9207532	-1.239594
Aug-20	-0.7266236	-0.7902442
Sep-20	-0.396751	-0.7169697
Oct-20	-0.4123678	-0.4880979
Nov-20	-0.1137439	-0.4542863
Dec-20	0.2708769	-0.4506592

	General indicator	Intermediation and infrastructure
Jan-21	0.3765854	-0.3014041
Feb-21	0.3106664	-0.3072558
Mar-21	1.274812	-0.3769788
Apr-21	2.655718	-0.4156126
May-21	2.06733	-0.367195
Jun-21	1.197963	-0.3307566
Jul-21	0.6026758	-0.3964442
Aug-21	1.114036	-0.3015819
Sep-21	0.8186082	-0.4081708
Oct-21	0.8621841	-0.3556391
Nov-21	0.9641021	-0.1081276
Dec-21	0.7287261	-0.0265356
Jan-22	0.1840777	-0.2471103
Feb-22	0.0742799	-0.1477861
Mar-22	0.3247845	-0.1406677
Apr-22	0.3425775	-0.1527101
May-22	0.2854306	-0.1819832
Jun-22	0.07439	-0.1047513
Jul-22	-0.1911896	-0.13659
Aug-22	-0.0465995	-0.126234
Sep-22	-0.2201791	0.0714461
Oct-22	-0.6467426	-0.038898
Nov-22	-0.7221711	-0.1627989
Dec-22	-0.5814315	-0.2151679

	General indicator	Intermediation and infrastructure
Jan-23	-0.0521434	-0.1313336
Feb-23	-0.2037737	-0.1403187
Mar-23	-0.2940006	-0.0228854
Apr-23	-0.1274711	0.0830134
May-23	-0.0217063	0.1397806
Jun-23	0.1225208	0.218013
Jul-23	0.0274905	0.2460622
Aug-23	0.0902032	0.5050766
Sep-23	0.0276341	0.7487777
Oct-23	0.696261	1.084859
Nov-23	0.9040509	1.796833
Dec-23	0.6085651	2.021931
Jan-24	0.9913411	2.14107
Feb-24	1.554504	2.253866
Mar-24	0.8325222	2.302504
Apr-24	1.533564	2.53056
May-24	1.223811	2.622243
Jun-24	1.078886	2.367312

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