



## Data Article

# FinTech and macroeconomics: Dataset from the US peer-to-peer lending platform



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## ABSTRACT

We aggregate the United States (US) state-level data with LendingClub's loan book covering the period from 2008 to 2019. LendingClub is a FinTech lending company that provides loans through a technology-driven platform. It was one of the pioneering and leading US peer-to-peer (P2P) lending platforms. Our dataset consists of over two million observations (N=2,703,430) with diverse loan, borrowers and state-specific features. We provide the description of variables, descriptive statistics, and STATA code with the full dataset. The US possesses significant cross-state variation in terms of economic and demographic characteristics while having risk-sharing policies at the federal level to protect states' creditworthiness. This unique feature of our combined database creates an ideal opportunity to explore the P2P lending market within the context of macroeconomic variables. As the dataset covers a 12-year period for all US states, it enables further cross-sectional and longitudinal analyses of the FinTech lending market.

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## Specifications Table

Subject	Economics, Econometrics and Finance
Specific subject area	Cryptocurrency and Fintech, Macroeconomics
Type of data	Secondary data. Table (Zipped CSV file, STATA dataset with STATA do file including variable labels)
How the data were acquired	Data combines publicly available raw data from the LendingClub and matches with state-specific variables obtained from other sources. State-specific variables are aggregated from the data sourced from the US Bureau of Labour Statistics, US Census Bureau, Religious Landscape Study, David Leip [1], Bloomberg terminal and World Development Indicators. Variable descriptions and data sources are specified in this document and Nigmonov et al. [2].
Data format	Hardware: data analysis was performed in a standard notebook with an Intel(R) Core (TM) i5-8265U CPU 1.80 GHz processor with 8.0 GB of RAM. Software: Stata IC-16 (version 16.1). Raw data (see P2P_Macro_Data.dta and P2P_Macro_Data.csv for the dataset) and analysed (see P2P_Macro_Codes.do for STATA code).
Description of data collection	Data formats are the raw loan book dataset of the LendingClub, selecting loan specific, loan type and borrower specific variables from the pool of variables. We match additional variables representing the state-specific economic and demographic characteristics by the state of loan origination and last payment date. We transform certain variables to logarithmic values for the normalisation of the values. For example, we transform inflation and interest rate to six months lagged values for reflecting the delayed response of loan defaults and delinquencies to external shocks.
Data source location	<ul style="list-style-type: none"> <li>- LendingClub,</li> <li>- US Bureau of Labour Statistics (BLS) <a href="http://www.bls.gov">www.bls.gov</a>,</li> <li>- Bloomberg terminal, function key BVAL and MUNIC,</li> <li>- Bureau of Economic Analysis (BEA) <a href="http://www.bea.gov">www.bea.gov</a>,</li> <li>- US Census Bureau</li> <li>- David Leip [1] <a href="https://uselectionatlas.org">https://uselectionatlas.org</a>,</li> <li>- Religious Landscape Study by Pew Research Centre,</li> <li>- World Development Indicators <a href="https://databank.worldbank.org">https://databank.worldbank.org</a></li> </ul>
Data accessibility	Repository name: Mendeley Data Dataset Identification number (DOI): 10.17632/wb3ndt69gf.3 Direct link to the dataset: <a href="https://doi.org/10.17632/wb3ndt69gf.3">https://doi.org/10.17632/wb3ndt69gf.3</a>
Related research article	Nigmonov A., Shams, S.M.M., Alam, K. 2021. Macroeconomic Determinants of Loan Delinquencies: Evidence from US Peer-to-Peer Lending Market. <i>Research in International Business and Finance</i> 59 (2022) 101516 doi: <a href="https://doi.org/10.1016/j.ribaf.2021.101516">https://doi.org/10.1016/j.ribaf.2021.101516</a>

## Value of the Data

- The dataset is useful for revealing the degree of individual specificity and heterogeneity of each US state under consideration, with these factors possibly having a substantial impact on their competitiveness. This level of heterogeneity with its own specificity could be further considered in a policy setting.
- The dataset provides a unique opportunity for researchers to conduct multi-dimensional big data analysis as it incorporates over 2.7 million observations spanning 12 years. The dataset can be used to study how default risk changes due to the macroeconomic environment, such as economic growth, inflation, and interest rate. Evidence of the relationship between macroeconomic variables and P2P lending is expected to be vital for this industry's further development.
- The dataset can be used by researchers interested in the default risk of P2P loans and how these relate to demographics such as age, party affiliation and religiosity of borrowers? The dataset also includes variables representing borrowed loan amount, derogatory public records, number of open credit lines and past-due amount owed. These variables might serve

as a dependent variable in future studies and reveal important tendencies in borrowing patterns based on state-level demography.

## 1. Data Description

We include the STATA data file P2P\_Macro\_Data.dta in this article. This file can be opened in STATA or be easily imported to other statistical software packages. We also provide the data in widely accessible CSV format. However, because of the sheer scale of the dataset, we reduced the file size in a compressed (zipped) folder. The 'zip' folder can be opened in widely accessible operating softwares such as Microsoft Windows. The dataset consists of balanced panel data sorted by year and state with over 2.7 million observations ( $N=2,703,430$ ).

The following variables are included in the database:

**BADLOAN**- Current status of individual loan. Dummy variable equal to 1 if the loans is overdue, defaulted or charged-off and 0 otherwise (current or repaid); **INFLATION** - Monthly change in seasonally adjusted consumer price index (CPI) for all goods by state (percentage points, proxied by urban centres and U.S. regions); **MUNIRATE** - One-year municipal bond yields for each state (monthly average of daily yield rates); **AMOUNT** - The total amount committed to that loan at that point in time; **INTRATE** - Interest Rate on the loan; **INQLAST** - The number of inquiries in past 6 months (excluding auto and mortgage inquiries); **OPENACC** - The number of open credit lines in the borrower's credit file; **PUBREC** - Number of derogatory public records; **DESLENGTH** - The past-due amount owed for the accounts on which the borrower is now delinquent; **PCTTL** - Percent of trades never delinquent; **TOTHI** - Total high credit/credit limit; **RATING** - LendingClub assigned loan grade, ranges from A (highest grade) to G; **SUBGRADE** - LendingClub assigned loan sub-grade, ranges from A1 (highest grade) to G5; **TERM** - The number of payments on the loan. Values are in months and can be either 36 or 60; **PYMNTPLAN** - Indicates if a payment plan has been put in place for the loan; **PURPOSE** - A category provided by the borrower for the loan request; **TYPE** - Indicates whether the loan is an individual application or a joint application with two co-borrowers; **INITIAL** - The initial listing status of the loan. Possible values are - W, F; **INCOME** - The self-reported annual income provided by the borrower during registration; **DTI** - Average debt-to-income (DTI) score of borrower; **DELINQ** - The number of 30+ days past-due incidences of delinquency in the borrower's credit file for the past 2 years; **TAXLIENS** - Number of tax liens; **EMPLENGTH** - Employment length in years. Possible values are between 0 and 10 where 0 means less than one year and 10 means ten or more years; **HOMEOWNER** - The home ownership status provided by the borrower during registration or obtained from the credit report. Our values are: RENT, OWN, MORTGAGE, OTHER; **VERIFYTYPE** - Indicates if income was verified by LendingClub, not verified, or if the income source was verified; **EARNINGS** - Average weekly earnings of all employees in each state (logarithm of values, monthly, in U.S. dollars); **UNEMP**-Unemployment rate for each state (monthly, seasonally adjusted, percentage points); **NEWBUS** - Share of established new businesses in total number of businesses in each state (monthly); **GDPCONTRIB** - Contributions to percentage change in real GDP (quarterly, percentage points); **POPUL** - Estimated population for each state (logarithm of population estimates reported for 2018); **INTUSER** - Number of internet users at any location by state for each year from 2008–2016 (logarithm of values, yearly); **REP** - Percentage of voters who voted for Republican candidate for each state (based on U.S. Presidential election results 2008, 2012 and 2016); **RELIGIOUS** - Percentage of adults who say they believe in God by state (time-invariant); **INFLUSA** - Monthly change in USA seasonally adjusted CPI for all goods (percentage points); **RISKPREM** - Risk premium on lending for banks in the USA (lending rate minus treasury bill rate, %); **LOANVOL** - Total volume of outstanding listed loans issued by LendingClub at state  $i$  at time  $t$  (logarithm of values, monthly).

**Table 1** provides a breakdown, based on years, of the distribution of loans in our sample database. We find that a very small share of loans was issued between 2008 and 2011, with less than 1% of loans each year. Loan distribution is concentrated in the last five years (2015–2019) of the sample. As P2P lending became popular, loan numbers increased, with LendingClub issuing

**Table 1**

Loan volume and number of loans by year issued by LendingClub.

Year	Loan volume		Number of loans	
	US\$ millions	%	N	%
2008	20	0.05%	2,393	0.09%
2009	52	0.12%	5,281	0.20%
2010	126	0.30%	12,537	0.46%
2011	257	0.62%	21,721	0.80%
2012	718	1.73%	53,367	1.97%
2013	1,980	4.76%	134,814	4.99%
2014	3,500	8.41%	235,629	8.72%
2015	6,420	15.43%	421,095	15.58%
2016	6,400	15.38%	434,407	16.07%
2017	6,570	15.79%	442,790	16.38%
2018	6,654	15.99%	448,754	16.60%
2019	8,923	21.44%	490,642	18.15%
<b>Total</b>	41,620	100.00%	2,703,430	100.00%

Note: Table 1 reports the yearly distribution of loan volumes and number of loans.

more than 400,000 loans each year after 2015. This shows a clear upward trend in our sample in terms of the volume of issued loans.

Table 2 presents the descriptive statistics for variables in our database. We can highlight several important points with regard to variables. The mean value of the loan amount issued by LendingClub is 9424. The mean value for the average interest rate for loans in our sample is 13.06%, which is close to the advertised average interest rate by the LendingClub for all loans.<sup>1</sup> A correlation matrix for dependent, explanatory and control variables is reported in Table 3. As indicated in the table, low levels of Pearson correlation coefficients are found for most variable pairs. STATA do file attached to this article provides STATA codes for obtaining descriptive statistics from the database.

## 2. Experimental Design, Materials and Methods

STATA do file attached to this article provides the STATA codes for the transformation of variables. This section describes several variables included in the database that we consider important for future studies.

**BADLOAN:** Following Kim et al. [3]; Wadud et al. [4], we define delinquent loans as those in grace period with 30+ or more days due and still incurring interest. Default loans are the combination of loans with the status in default and all the charged-off loans. Default loans if combined with delinquent loans, provide a broader definition of bad loans that better characterise financial distress than defaults. This approach follows the treatment of financial distress and insolvency of borrowers among traditional financial institutions via non-performing loans (Ghosh, [5]).

LendingClub classifies loans into the categories of current, fully paid, default, in grace period, overdue 16–30 days, overdue 31–120 days, and charged-off. Accordingly, we classify bad loans for borrower  $i$  at time  $t$  as per the following specification. Accordingly, BADLOAN is the current status of individual loan equal to 1 if the loan is overdue for more than 30 days, defaulted or charged-off and 0 otherwise (current or repaid).

**INFLATION** and **MUNIRATE:** The main emphasis of the database is on the state-specific macroeconomic factors such as proxies for inflation and interest rate. We use the municipal-bond yields (MUNIRATE) to reflect the state-level interest rates. Existing studies documented

<sup>1</sup> LendingClub's average interest rate for all terms is 13.00% (<https://www.lendingclub.com/info/demand-and-credit-profile.action>).

**Table 2**

Descriptive statistics for variables included in the regression analysis.

Variable	N	Mean	Std. Dev.	Min	Max
BADLOAN	2,703,430	0.0801	0.2715	0.0000	1.0000
INFLATION (%)	2,703,430	0.0677	0.5501	-0.6218	1.6758
MUNIRATE (%)	2,703,430	2.4223	0.2323	1.4478	3.5073
AMOUNT (,000)	2,703,430	9.4242	0.7124	6.9078	10.5966
INTRATE	2,703,430	0.1306	0.0488	0.0531	0.3099
INQLAST	2,703,430	0.5456	0.8446	0.0000	8.0000
OPENACC	2,703,430	11.7032	5.7314	1.0000	104.0000
PUBREC	2,703,430	0.1844	0.5390	0.0000	86.0000
DESLENGTH	2,703,430	5.0512	35.7018	0.0000	3737.0000
PCTTL	2,703,430	4.5403	0.1121	1.6094	4.6052
TOTHI	2,703,430	11.6270	1.0547	4.7791	16.1181
RATING					
B	2,703,430	0.2929	0.4551	0.0000	1.0000
C	2,703,430	0.2798	0.4489	0.0000	1.0000
D	2,703,430	0.1440	0.3510	0.0000	1.0000
E	2,703,430	0.0495	0.2169	0.0000	1.0000
F	2,703,430	0.0147	0.1205	0.0000	1.0000
G	2,703,430	0.0042	0.0650	0.0000	1.0000
TERM	2,703,430	0.2965	0.4567	0.0000	1.0000
PYMNTPLAN	2,703,430	0.0001	0.0110	0.0000	1.0000
PURPOSE					
Credit card	2,703,430	0.2385	0.4262	0.0000	1.0000
Debt consolidation	2,703,430	0.5631	0.4960	0.0000	1.0000
Home improvement	2,703,430	0.0655	0.2474	0.0000	1.0000
House	2,703,430	0.0066	0.0810	0.0000	1.0000
Major purpose	2,703,430	0.0208	0.1428	0.0000	1.0000
Medical	2,703,430	0.0119	0.1086	0.0000	1.0000
Moving	2,703,430	0.0064	0.0797	0.0000	1.0000
Renewable	2,703,430	0.0006	0.0240	0.0000	1.0000
Small business	2,703,430	0.0095	0.0971	0.0000	1.0000
Vacation	2,703,430	0.0069	0.0828	0.0000	1.0000
Wedding	2,703,430	0.0003	0.0181	0.0000	1.0000
Other	2,703,430	0.0600	0.2376	0.0000	1.0000
TYPE					
Individual	2,703,430	0.4645	0.4594	0.0000	1.0000
Joint	2,703,430	0.0032	0.0567	0.0000	1.0000
INITIAL	2,703,430	0.7412	0.4380	0.0000	1.0000
INCOME	2,703,430	11.1140	0.5647	0.0000	18.5160
DTI	2,703,430	2.7901	0.6392	-4.6052	9.2102
DELINQ	2,703,430	0.2973	0.8560	0.0000	58.0000
PUBREC	2,703,430	0.1267	0.3590	0.0000	12.0000
TAXLIENS	2,703,430	0.0391	0.3456	0.0000	85.0000
EMPLENGTH					
< 1 year	2,703,430	0.0914	0.2882	0.0000	1.0000
2 years	2,703,430	0.0892	0.2850	0.0000	1.0000
3 years	2,703,430	0.0793	0.2702	0.0000	1.0000
4 years	2,703,430	0.0597	0.2369	0.0000	1.0000
5 years	2,703,430	0.0616	0.2405	0.0000	1.0000
6 years	2,703,430	0.0443	0.2058	0.0000	1.0000
7 years	2,703,430	0.0397	0.1952	0.0000	1.0000
8 years	2,703,430	0.0389	0.1933	0.0000	1.0000
9 years	2,703,430	0.0331	0.1789	0.0000	1.0000
10+ years	2,703,430	0.3274	0.4693	0.0000	1.0000
n/a	2,703,430	0.0696	0.2544	0.0000	1.0000
HOMEOWNER					
Mortgage	2,703,430	0.4925	0.4999	0.0000	1.0000
Own	2,703,430	0.1140	0.3178	0.0000	1.0000

(continued on next page)

**Table 2** (continued)

Variable	N	Mean	Std. Dev.	Min	Max
Rent	2,703,430	0.3923	0.4883	0.0000	1.0000
None	2,703,430	0.0000	0.0042	0.0000	1.0000
Other	2,703,430	0.0000	0.0041	0.0000	1.0000
VERIFYTYPE					
Source verified	2,703,430	0.3914	0.4881	0.0000	1.0000
Verified	2,703,430	0.2473	0.4314	0.0000	1.0000
EARNINGS	2,703,430	6.7505	0.2847	5.5291	7.5937
UNEMP	2,703,430	12.3496	0.9543	9.1682	14.4242
POPUL	2,703,430	15.5008	0.8946	12.5703	16.7804
NEWBUS	2,703,430	8.9930	1.0506	5.8944	10.8154
GDPCONTRIB	2,703,430	0.0201	0.0196	-0.1270	0.2760
INTUSER	2,703,430	15.0275	0.5075	12.9435	17.1690
REP	2,703,430	0.5124	0.1233	0.0430	0.7571
RELIGIOUS	2,703,430	0.5365	0.0887	0.3300	0.7700

Note: Table 2 reports the descriptive statistics for variables included in the regression analysis. The variables comprise of platform-specific, economic, demographic, technological and political characteristics.

that state-specific bond yields are more important than sovereign bond yields and represent the distress related to state policies and regulations (Ang and Longstaff [6], Ang et al. [7]; Gao et al. [8]) The inflation rate is used as a proxy for seasonally adjusted consumer price index for each period and state under consideration. State-level inflation data for the USA are not available, and we use the percentage change of the Consumer Price Index (CPI) of the largest urban centre in the state. If the data are not available for the closest urban centre, we use regional CPI data as a proxy. As the last payment date and issue date of the loan are different, loans are matched based on the last payment date of each loan.

**LOANVOLUME:** We calculate monthly loans issued at each state as one of the platform-specific variables. We also transform loan volumes to logarithmic values and calculate the median for perusal in future studies.

**DTI:** The debt-to-income score of the borrower (DTI) is an important indicator used in lending for signalling borrower solvency. This ratio is defined as the monthly debt payments on total debt obligations, excluding mortgage and the loan currently requested via P2P lending platform, divided by self-reported monthly income. The low-risk DTI ratio falls in the range between 0 and 0.4 (DTI ratio  $\in [0, 0.4)$ ), where the upper bound is a healthy level of leverage recommended by the LendingClub. The existing leverage of the borrower is considered to be high risk between 0.4 and 1 (DTI ratio  $\in [0.4, 1.0]$ ). A borrower with a ratio higher than one is considered to be insolvent (DTI ratio  $\in (1.0, \infty)$ ).

**GDP\_CONTR:** Economic development and wellbeing are best associated with gross domestic product (GDP) in empirical studies. Existing studies on crowdfunding platforms highlighted GDP growth as an important factor in the industry's development (Mollick [9]; Dushnitsky et al. [10]). This study uses each state's contribution to the percentage quarterly real GDP growth (GDP\_CONTR) as a proxy for economic development.

This dataset includes a broad array of control variables to account for economic, demographic and technology-specific characteristics of each state. Readers can refer to Nigmonov et al. [2] for the specification of other variables in the database. We also derive lagged values of several macroeconomic variables. These variables are lagged by six periods to reflect the delayed response of loan defaults and delinquencies to external shocks.

**Table 3**

Correlation matrix.

	BADLOAN	INFLATION	MUNIRATE	AMOUNT	INTRATE	INQLAST	OPENACC	DESLENGTH	PCTTL
BADLOAN	1.0000								
INFLATION	0.0585***	1.0000							
MUNIRATE	-0.1644***	-0.3685**	1.0000						
AMOUNT	0.0236***	0.0021***	0.0054***	1.0000					
INTRATE	0.1680***	0.0254***	-0.0349***	0.0562***	1.0000				
INQLAST	0.0799***	0.0414***	-0.0572***	-0.0266**	0.1776***	1.0000			
OPENACC	0.0107***	-0.0053***	-0.0037***	0.1780***	-0.0121***	0.1543***	1.0000		
PUBREC	0.0281***	0.0276***	-0.0358***	-0.0517***	0.0499***	0.0721***	-0.0139***		
DESLENGTH	0.0340***	0.0861***	-0.0679***	0.0087***	0.0219***	0.0448**	-0.0094***	1.0000	
PCTTL	-0.0041***	-0.0007	0.0012	0.0869***	-0.0804***	-0.0217***	0.1105***	0.0190***	1.0000
TOTHI	-0.0527***	-0.0135***	0.0096**	0.3450***	-0.1348**	0.0408**	0.4003***	-0.0083**	0.0421***
RATING	0.0643***	-0.0269**	0.0288**	0.4140***	0.3441**	-0.0042**	0.0725***	-0.0213**	0.0461***
TERM	0.0364***	-0.0035***	0.0050***	0.0046***	0.0075***	0.0010	0.0005	-0.0016*	-0.0028***
PYMNTPLAN	0.0099**	0.0004	0.0086**	-0.2177**	0.1008**	0.0219**	-0.0626***	-0.0167***	-0.0514**
PURPOSE	-0.0583***	-0.3434***	0.3514***	0.0921***	-0.0181***	-0.0913***	-0.0150***	-0.1587***	0.0136***
TYPE	-0.0926***	-0.1189***	0.1596***	0.0977***	-0.1179**	-0.0778***	0.0230***	-0.1801***	0.0163***
INITIAL	-0.0454***	0.0237***	-0.0002	0.4301***	-0.1239**	0.0542**	0.2559***	-0.0080**	-0.0142**
INCOME	0.0376***	-0.0271***	0.0164**	0.0705**	0.1540***	-0.0014*	0.2924***	-0.0127**	0.0993***
DTI	0.0186**	0.0126**	-0.0224**	-0.0132**	0.0633**	0.0259**	0.0424**	-0.0074**	-0.4300***
DELINQ	0.0193**	0.0138**	-0.0157**	-0.0691**	0.0516**	0.0780**	-0.0128**	-0.0138**	0.0522**
TAXLIENS	0.0144**	-0.0142**	0.0147**	-0.0626**	0.0049**	-0.0088**	-0.0596**	-0.0035**	0.0196**
EMPLENGTH	0.0393**	0.0362**	-0.0054**	-0.1686**	0.0728**	-0.0272**	-0.1360**	-0.0092**	0.0113**
HOMEOWNER	0.0911**	0.0732**	-0.0952**	0.1419**	0.2258**	0.0844**	0.0143**	0.0475**	-0.0083**
VERIFYTYPE	-0.0115**	-0.0609**	0.0459**	0.0030**	-0.0067**	-0.0164**	0.0053**	-0.0174**	-0.0159**
EARNINGS	0.0349**	0.2533**	-0.0592**	0.0086**	0.0026**	0.0008	0.0105**	0.0363**	0.0074**
UNEMP	0.0079**	0.2191**	-0.0208**	0.0129**	-0.0087**	-0.0143**	0.0114**	0.0021**	0.0063**
POPULAT	0.0124**	0.2610**	-0.0612**	0.0143**	-0.0074**	-0.0191**	0.0067**	0.0073**	0.0063**
NEWBUS	0.0057**	0.2536**	-0.0456**	0.0158**	-0.0114**	-0.0232**	0.0016*	0.0011	0.0068**
GDPCONTR	-0.0019*	0.2561**	-0.0714**	0.0013*	0.0015*	-0.0026**	-0.0096**	0.0130**	0.0044**
INTUSER	-0.0133**	0.0263**	0.0850**	0.0053**	-0.0093**	-0.0140**	0.0010	-0.0230**	0.0017**
REP	-0.0079**	-0.1502**	-0.0558**	0.0064**	-0.0007	-0.0033**	0.0004	-0.0092**	-0.0045**
RELIGIOUS	0.0010	-0.1985**	-0.0223**	-0.0020*	0.0010	-0.0008	0.0111**	-0.0004	-0.0167**

**Table 3**  
(continued)

	TOTHI	RATING	TERM	PYMNTPLAN	PURPOSE	TYPE	INITIAL	INCOME	DTI	DELINQ	TAXLIENS
TOTHI	1.0000										
RATING	0.1567***	1.0000									
TERM	0.0001	0.0016**	1.0000								
PYMNTPLAN	-0.0421***	-0.0705***	-0.0009	1.0000							
PURPOSE	0.0723***	0.0814***	0.0062***	0.0174***	1.0000						
TYPE	0.0732***	0.1462***	-0.0011	-0.0284***	0.1958***	1.0000					
INITIAL	<b>0.5464***</b>	0.1151***	0.0008	-0.0081***	-0.0738***	0.0674**	1.0000				
INCOME	0.2094***	0.0772***	0.0021***	-0.0959***	0.1128***	0.0049***	-0.2139***	1.0000			
DTI	0.0657***	-0.0155***	0.0013*	0.0224***	-0.0312***	-0.0198***	0.0680**	-0.0167***	1.0000		
DELINQ	-0.1018***	-0.0128***	0.0017**	0.0031***	-0.0088***	-0.0116***	-0.0599**	-0.0217***	-0.0499**	1.0000	
TAXLIENS	-0.1039***	-0.0405***	0.0016*	0.0043***	0.0617**	0.0012*	-0.1636***	0.0063***	-0.0305***	0.0200***	1.0000
EMPLENGTH	<b>-0.5971***</b>	-0.1102**	0.0008	0.0220**	-0.0617***	-0.0302***	-0.2415***	-0.0391***	-0.0477**	0.0072***	0.0602***
HOMEOWNER	0.0177***	0.0837***	0.0041***	0.0305***	-0.0588***	-0.0876***	-0.0075***	0.0748**	0.0230***	0.0260***	0.0187***
VERIFYTYPE	-0.0163***	-0.0016**	0.0002	0.0062***	0.0177***	0.0140**	0.0156**	-0.0297***	0.0118**	-0.0192***	0.0008
EARNINGS	-0.0547***	-0.0355***	-0.0008	0.0189**	-0.0776**	-0.0415**	0.0546**	-0.0675**	-0.0055**	-0.0030**	-0.0034***
UNEMP	-0.0492***	-0.0297***	-0.0001	0.0192***	-0.0193***	-0.0069**	0.0578**	-0.0625***	-0.0079**	-0.0037***	-0.0019**
POPULAT	-0.0529**	-0.0339**	-0.0004	0.0205**	-0.0354**	-0.0138**	0.0607**	-0.0699**	-0.0086**	-0.0029**	0.0002
NEWBUS	-0.0541***	-0.0339**	-0.0003	0.0195**	-0.0131**	-0.0051**	0.0631**	-0.0738**	-0.0115**	0.0007	0.0008
GDPCONTR	0.0050**	-0.0047**	-0.0010	0.0012*	-0.0622**	-0.0172**	0.0079**	-0.0011	-0.0053**	0.0036**	0.0002
INTUSER	-0.0153***	0.0004	0.0015*	0.0066**	0.1067**	0.0359**	0.0145**	-0.0110**	-0.0026**	-0.0128**	-0.0000
REP	0.0222**	0.0190**	0.0007	-0.0095**	0.0055**	0.0083**	-0.0045**	0.0122**	0.0039**	0.0042**	-0.0049**
RELIGIOUS	-0.0000	0.0122**	0.0004	-0.0090**	-0.0044**	0.0030**	-0.0127**	-0.0098**	0.0129**	0.0062**	0.0011



**Table 3**  
(continued)

	EMPLENGTH	HOMEOWNER	VERIFYTYPE	EARNINGS	UNEMP	POPULAT	NEWBUS	GDPCONTR	INTUSER	REP
EMPLENGTH	1.0000									
HOMEOWNER	0.0602***	1.0000								
VERIFYTYPE	0.0187***	-0.0211***	1.0000							
EARNINGS	0.0008	0.0435***	-0.0055***	1.0000						
UNEMP	-0.0034**	0.1183***	0.0095***	-0.0690***	1.0000					
POPULAT	-0.0019**	0.1189***	-0.0055***	-0.0926***	0.0525**	1.0000				
NEWBUS	0.0008	0.1446***	-0.0080***	-0.0957***	0.0458***	0.0024***	1.0000			
GDPCONTR	0.0002	0.0075***	0.0150***	0.0112***	0.1393***	0.1389**	0.1591***	1.0000		
INTUSER	-0.0000	0.0292***	-0.0210***	0.0036***	0.0887***	0.0934***	0.0727***	-0.0318***	1.0000	
REP	-0.0049***	-0.0379***	0.0007	0.0471***	-0.1411***	-0.1481***	-0.1962***	-0.0625***	-0.0529***	1.0000
RELIGIOUS	0.0011	-0.0132***	-0.0057***	0.1751***	-0.2385***	-0.2611***	-0.2962***	-0.1081***	0.0200***	0.5162***

Note: Table 3 reports Pearson's correlation coefficients between the variables employed in regression analyses of this study.

\*  $p < 0.05$ ,

\*\*  $p < 0.01$ ,

\*\*\*  $p < 0.001$ . Significant correlations are in bold.

## Ethics Statements

The dataset only includes secondary data that has been disclosed to the public. As such, there are no ethical concerns associated with the dataset.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## CRediT Author Statement

**Asror Nigmonov:** Conceptualization, Methodology, Software, Data curation, Writing – original draft, Visualization, Software; **Syed Shams:** Supervision, Validation, Writing – review & editing; **Khorshed Alam:** Supervision, Validation, Writing – review & editing.

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