

# Financial soundness and subjective financial well-being: Do government policies matter?

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## Abstract

Does government policy intervention enhance citizens' financial well-being, particularly when considering the increased financial soundness attributed to the private sector? This study empirically addresses this question, using data from more than 200,000 individuals worldwide. To provide causal evidence, we employ a two-stage least squares (2SLS) approach with a high-dimensional fixed-effect estimator, which captures multiple levels of control and addresses endogeneity concerns. Our findings suggest that (i) improvements in financial soundness—proxied by domestic credit development—significantly increase financial satisfaction, whereas (ii) surprisingly, government interventions, whether in the form of policies tightening or loosening, tend to erode this positive effect. This outcome may reflect either (i) ineffective interventions or (ii) the government serving as a scapegoat for a decline in subjective financial well-being. Our findings imply that to optimize public satisfaction, governments should approach interventions in the private sector with caution, thereby strengthening government legitimacy.

*Keywords:* financial soundness, financial satisfaction, macroprudential policies.

*JEL classification:* G28, I31.

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## 1. Introduction

Finance is often regarded as the lifeblood of an economy, and financial soundness plays a crucial role in a country's economic and social development (Levine, 2005). For individuals, this means that financial soundness generally has a direct, less disputed impact on their objective well-being, although there are some limitations related to information asymmetry and the powerful monopolies of major tech companies (Dinh et al., 2023). However, another critical question that needs addressing,

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though less discussed, is whether financial soundness improves people's subjective well-being. For some, this question may not be significant, given that an individual's feelings at a specific moment are not noteworthy, as long as they become wealthy and benefit from financial development in the long term. Nonetheless, it would be ideal if policymakers could determine how to achieve financial progress that simultaneously enhances both objective and subjective well-being.

Domestic credit is a pivotal component of a nation's financial system. This form of credit, provided by banks and other financial institutions, facilitates access to capital for businesses and individuals, thereby enabling investment, consumption, and economic expansion (Beck, 2020; Beck et al., 2007). By bolstering entrepreneurial activities and providing necessary financial resources, domestic credit supports job creation, enhances income levels, and fosters overall economic stability (King and Levine, 1993). Thus, domestic credit plays a crucial role in promoting financial resilience and improving the quality of life for individuals by ensuring that they have the means to engage in productive economic activities and manage financial challenges effectively (Levine, 2005). Notably, for developing countries, an increase in this indicator is critical for improving infrastructure, supporting small and medium-sized enterprises, enhancing overall economic stability, and reducing poverty, by empowering individuals and communities with the means to invest in education, healthcare, and entrepreneurial ventures (Van Le and Tran, 2022, 2023; Van Le et al., 2022). Thus, given resource constraints, this paper will explore domestic components of financial soundness as a "special case."

Another important discussion revolves around the role of government coordination and regulation in achieving an effective state of socio-economic development. Accordingly, the government's role is essential not only in enhancing efficiency, but also in avoiding the misuse of public resources, as observed in developing countries (Tran et al., 2022; Trinh Thanh et al., 2023; Nguyen et al., 2024). Harmonizing this sector with the activities of the private sector seems to be a key element in pursuing sustainable goals (Van Le and Tran, 2024a; Van Le et al., 2022). However, historical development shows that reaching these goals means navigating a "narrow corridor" (Acemoglu and Robinson, 2019). Inefficient interventions can lead to a decline in people's subjective well-being, thereby eroding trust in government (North, 1990; Williamson, 2000). Nonetheless, it is fair to say that government action can sometimes serve merely as a scapegoat for public or crowd anger (Aberbach and Walker, 1970). In other words, regardless of what action they take, government often ends up as a scapegoat for an angry crowd.

These discussions motivate us to investigate the extent to which sovereign government policies contribute to optimal citizen welfare in light of financial soundness improvements driven by the private sector. More broadly, our goal is to provide empirical evidence of the dynamics—either harmonious or conflicting—among key economic players: the state, the private sector, and citizens. Specifically, we aim to answer two questions: (1) How do private-sector-led improvements in financial soundness influence citizens' financial satisfaction? And if this relationship exists, then, (2) Do government interventions facilitate this relationship in a way that benefits citizen welfare?

This study makes several key contributions. *First*, we give a presentation of the causal relationship between domestic credit and the subjective financial well-

being of more than 200,000 individuals worldwide by combining individual-level financial satisfaction data with country-level macroeconomic data. This global-scale analysis employs a two-stage least squares estimator (2SLS) with high-dimensional fixed effects, utilizing monthly international export price shocks as a theoretically valid instrument to address endogeneity concerns. Notably, increases in export prices in international trade are linked to significant capital inflows, which strengthen national financial systems (Arezki and Brückner, 2012; Arezki et al., 2017), establishing these shocks as a theoretically valid instrument for this study.

*Second*, we are aiming to explore the regulatory role of government policy—whether through tightening or loosening—in the moderated relationship by leveraging the global Integrated Macropudential Policy (iMaPP) database,<sup>1</sup> which records government policies on a monthly basis. This approach enables governments to assess the effects of their interventions on subjective well-being, rather than focusing solely on objective outcomes. The remainder of the paper is organized as follows: Section 2 presents the literature review. Section 3 outlines the theoretical framework, empirical equations, and research data. Section 4 discusses the research findings, and Section 5 concludes with key policy implications.

## 2. Literature review

Research on well-being spans both subjective and objective dimensions, examining individuals' perceptions of their quality of life. Financial satisfaction, often equated with subjective financial well-being, encompasses an individual's personal evaluation of their financial situation, incorporating both emotional responses and life satisfaction influenced by financial and economic conditions (Diener et al., 1999; Sen, 2014). This construct is particularly useful for assessing societal welfare, as it reflects citizens' emotional responses to government financial policies, particularly during periods of improved financial stability (Kahneman and Deaton, 2010).

### 2.1. *The relationship between financial soundness and subjective financial well-being*

Classical theories propose that financial soundness significantly enhances individuals' financial well-being (Beck, 2020; Beck et al., 2007). For instance, an increase in credit to the private sector often stimulates entrepreneurship by providing essential financial resources, thereby creating jobs and fostering economic stability (King and Levine, 1993; Levine, 2005). Such economic improvements, particularly in developing countries, provide individuals with greater economic choices, which subsequently form the basis for their future financial freedom and well-being (Sen, 2014). In settings characterized by capital shortages (De Soto, 2001), these developments are essential for enhancing infrastructure and alleviating poverty through investment in education, healthcare, and business ventures (Van Le and Tran, 2022, 2023; Van Le et al., 2022).

Another strand of research directly relates financial soundness to financial well-being by examining the adverse effects of financial instability or scams on

<sup>1</sup> <https://www.elibrary-areaer.imf.org/Macropudential/Pages/iMaPPDatabase.aspx>

the economy. Financial unsoundness, indicating instability or weakness in financial institutions or systems (Stiglitz and Weiss, 1981), can lead to vulnerabilities in utilizing financial services, such as personal data theft, online fraud, digital discrimination, and the exclusion of disadvantaged groups from financial services (Dinh et al., 2023; Mader, 2018). For example, Dinh et al. (2023) highlighted that during an era of rapid digital transformation, large companies often have access to consumer data or data from their partners, which allows them to intentionally segment customers or manipulate their behavior through big data analytics.

Furthermore, there is a broad consensus on viewing the SME sector as a vital foundation for enhancing financial performance, economic growth, and productivity (Mau, 2018; Voskoboynikov, 2017; Gutierrez et al., 2019). Returning to mainstream economic theories, the competitive nature of the private sector is seen as a way to produce better financial products at more reasonable prices (Smith, 1937), even in a global context (Friedman, 2005). Moreover, Austrian economists argue that market mechanisms optimally coordinate societal “know-how” through price mechanisms (Hayek and Caldwell, 2014). Thus, the private sector plays an essential role in promoting the financial soundness of the economy, allowing individuals to achieve optimal financial satisfaction through free market interactions, and incidentally benefiting from fair market competition. Practical observations in transitional countries such as Vietnam (from a centrally planned to a socialist-oriented free market economy) and Russia (from a Soviet command economy to a market economy dominated by private enterprise) can be vividly illustrative (Bulatov, 2022; Gutierrez et al., 2019).

**Hypothesis 1:** Financial soundness enhances financial subjective well-being.

## 2.2. Examining the moderating role of government policies

We now turn to the third major entity in the economy, which is the government. The central inquiry concerns whether governmental interventions improve or detract from the existing relationship. If considered purely from the standpoint of efficient economic allocation, expected to directly affect citizens’ financial well-being, state intervention, as posited by Keynesian and post-Keynesian economists, can potentially rectify market failures (e.g., provision of public goods, addressing externalities, curbing monopolies, and resolving information asymmetries). Post-Keynesian perspectives also stress the importance of targeted governmental investment to effectively foster or anticipate systemic market risks (Collins, 2017; Krugman and Obstfeld, 2009; Mazzucato, 2015; Parui, 2021). Conversely, as emphasized by Austrian, Chicago, and libertarian economists, such interventions can generate long-term market noise, leading to inefficient economic actor interactions and increased transaction costs (Friedman, 2005; Hayek, 1980; Hayek and Caldwell, 2014; Rothbard, 2009; Smith, 1937).

Historical economic analyses by Acemoglu and Robinson (2012, 2019) conclude that institutional harmony, balancing power between the state and society, is crucial for a country’s economic and financial growth. This balance is particularly important in the realm of digital finance, where significant information asymmetries exist between big tech companies and their customers (Dinh et al., 2023; Van Le and Tran, 2024b). Empirical research in transitioning countries increasingly supports this balanced institutional theory (Van Le and

Tran, 2022; Van Le et al., 2022), suggesting a clear endorsement of the impact of government policies when effectively implemented, either by positively influencing economic outcomes or by fostering a conducive environment for economic entities to interact (e.g., between the private sector and citizens). Conversely, an ineffective government, either overly dominant or dominated by the private sector, can negatively affect economic efficiency, and thereby be reasonably expected to diminish citizens' welfare (Acemoglu and Robinson, 2019).

However, the moderating impact of government policies on the relationship between financial soundness and subjective financial well-being remains under-explored. This is likely due to differences in data structures, where individual-level financial satisfaction data change daily/monthly, while policy and financial development data are measured on an economic scale with potential annual fluctuations. Some studies at the individual level assess policy changes subjectively (Gholipour et al., 2022; Lee et al., 2023), while others may aggregate annual financial satisfaction data with datasets reflecting year-over-year government policies. It should be noted that measuring financial satisfaction at the national level may be less meaningful due to the variability of individual sentiments throughout the year and differing welfare perceptions among individuals (Rawls, 1971). To the best of our knowledge, no empirical study has yet reflected the moderating relationship between government policies and the current nexus. One might anticipate that, given effective government action towards the economy, government interventions might enhance the positive influence of financial soundness on subjective financial well-being (**Hypothesis 2**).

Last but not least, the subjective perception of financial satisfaction is not solely influenced by government promises of economic prospects, typically visible in the short term. Governments frequently emerge as the central point of public dissatisfaction and frustration, often bearing the brunt of blame during economic or social turmoil—a phenomenon known as the “scapegoat” effect. This effect encapsulates the propensity of citizens to level their grievances at governmental entities, irrespective of whether the root causes of these grievances originate from broader global economic dynamics or structural issues within the economy (Aberbach and Walker, 1970). Owing to its prominent role and the responsibilities associated with national governance, the government is typically held accountable for social challenges, regardless of its actual influence over the contributing factors.

For instance, during the European debt crisis, despite the underlying issues stemming from global financial market dynamics and historical mismanagement, the Greek government faced intense public scorn as it enforced austerity measures under duress from international lenders (Mitsopoulos, 2011). Similarly, during the Asian Financial Crisis of 1997–1998, governments of affected Southeast Asian nations, like Thailand, Indonesia, and South Korea, were criticized heavily as they navigated severe economic downturns triggered by swift capital outflows, speculative attacks on currencies, and inherent weaknesses in their financial systems (Radelet et al., 1998). Another illustrative case occurred during the 1998 Russian financial crisis, when external pressures, such as plummeting oil prices compounded with domestic financial frailties, precipitated a severe recession, placing the Russian government at the forefront of public discontent, despite the fact that many of the causes of the crisis lay outside its direct control (Desai, 2000).

In a nutshell, scholarly work to date highlights a clear theoretical and empirical relationship between the advancement of financial soundness driven by the private sector and financial subjective well-being. The principal mechanism underpinning this relationship is the freedom individuals have to make their own choices and the consequent improvements in goods and services, facilitated by competitive processes in the global market (Friedman, 2005; Hayek and Caldwell, 2014; Smith, 1937).

Furthermore, an effective government can significantly enhance economic efficiency and reduce transaction costs within an economy, improving the nexus between private sector activities and public financial welfare (Krugman and Obstfeld, 2009; Parui, 2021), while this positive relationship can be undermined either by ineffective governmental interventions or when the government is made a scapegoat for any prevailing economic adversities, regardless of the actual effectiveness of its policies.

### 3. Methodology and data

Contemporary theoretical research models often consider subjective well-being (SWB), perceived in life satisfaction and happiness, as a function influenced by a set of factors including social relationships, income, personal traits, social characteristics, and environmental living conditions (Blanchflower and Oswald, 2011; Tan et al., 2020).

$$\text{Satisfaction} = f(\text{financial status, education, personal characteristics, environmental characteristics}). \quad (1)$$

While many studies focus primarily on personal characteristics affecting SWB, Bjørnskov et al. (2008) have broadened the analytical framework to incorporate country-specific attributes, such as economic growth, levels of democracy, and institutional structures. This expanded analytical model integrates individual-level characteristics with national-level traits in the determination of SWB, positing that individuals within the same country in a given year, irrespective of personal differences (e.g., gender, age, education level), are uniformly affected by shifts in the country's macroeconomic variables. We leverage this research design in our examination of financial soundness indices. Consequently, the empirical design is structured as follows:

$$\text{Satisfaction}_{i,c,y,m} = \beta \text{Financial soundness}_{c,y} + \alpha_c + \lambda_y + \theta_m + Z'_\eta + \varepsilon_{i,c,y,m}. \quad (2)$$

$\text{Satisfaction}_{i,c,y,m}$  denotes the financial subjective well-being of individual  $i$ , in country  $c$ , during month  $m$  of year  $y$ . Collected from the World Values Survey from 1981 to 2022 across nearly 100 countries, the data is based on the question, “How satisfied are you with the financial situation of your household?” Although this measure of financial subjective well-being has its limitations, it is a widely used and sufficiently comprehensive method for examining more complex issues, as will be analyzed later (Diener et al., 1999; Voukelatou et al., 2021).

*Financial soundness* is represented by domestic credit to the private sector domain for two main reasons. First, domestic credit is a crucial indicator commonly analyzed

in recent discussions (Fosu and Abass, 2020; Lane and McQuade, 2014), especially in countries with financial access deficiencies. Second, and more importantly, it facilitates a balanced discussion of the roles of the public and private sectors. Accordingly, government interventions are expected to promote private sector development rather than creating crowding out effects (Acemoglu and Robinson, 2012).

Empirically, the initial financial soundness indicators were expected to be gathered from the Financial Soundness Indicators<sup>2</sup> with monthly frequency. However, due to insufficient data when merging with the master dataset, we used data from the World Development Indicators with an annual frequency.  $\alpha_c$ ,  $\lambda_y$ ,  $\theta_m$  represent time-invariant country-specific fixed effects (e.g., geography and culture), time-year fixed effects, and time-month fixed effects, respectively. Controlling for monthly time trends in this design allows for capturing people's relative emotions in real-time, rather than using conventional year-over-year data.  $Z$  is a control vector representing individual characteristics controlled in the model, including gender, income, personal beliefs, health status, and age (Diener et al., 1999; Howell and Howell, 2008; Riitsalu and Murakas, 2019). In equation (2),  $\beta$  is the estimated coefficient of interest and is expected to be positive.

Given that the research design in equation (2) controls for fixed effects on a monthly, annual, and country-specific basis, we employ high-dimensional fixed effects as suggested by Correia (2017). This approach allows us to control for unobserved factors specific to the three categories (i.e., country, year, and month), which is advantageous. It should be noted that high-dimensional fixed effects are particularly adept at mitigating biases introduced by such multi-layered structures, and are crucial for large-scale data applications where standard fixed-effect models may face computational constraints.<sup>3</sup> Additionally, this estimator seamlessly integrates with other econometric techniques, such as instrumental variables, enabling robust checks of our research findings.

*Heterogeneity.* The impact of domestic credit on people's financial satisfaction may be heterogeneous depending on different government interventions. This heterogeneity, theoretically anticipated, may arise because (i) government interventions either mitigate or amplify the benefits or drawbacks of financial soundness (Collins, 2017; Hayek and Caldwell, 2014) or (ii) government actions merely act as a catalyst for public discontent, regardless of their effectiveness (Aberbach and Walker, 1970). The empirical model is structured as follows:

$$\begin{aligned} \text{Satisfaction}_{i,c,y,m} = & \omega_0 \text{Financial soundness}_{c,y} + \\ & + \omega_1 \text{Financial soundness}_{c,y} \times \overline{\text{GovAc}_c} + \\ & + \alpha_c + \lambda_y + \theta_m + Z'_\eta + \varepsilon_{i,c,y,m} \end{aligned} \quad (3)$$

For simplicity, we examine government actions ( $\text{GovAc}_c$ ) categorized in two opposing directions, (i) policy tightening actions and (ii) policy loosening actions. Data for this analysis is collected and detailed in the iMaPP database, which assesses 17 government tools used to regulate the economy. These tools are classified according to three effects: either (i) tightening existing policies (e.g., restricting

<sup>2</sup> <https://data.imf.org/?sk=51B096FA-2CD2-40C2-8D09-0699CC1764DA>

<sup>3</sup> Our study utilizes original data from the World Values Survey, spanning from 1981 to 2022, covering nearly 100 countries and including more than 400,000 observations.

international financial flows or limiting foreign currency reserves), (ii) loosening existing policies, or (iii) maintaining the status quo (do nothing). We analyze the average value of these actions over the period ( $\overline{GovAc}_c$ ) to determine if consistent government actions, whether tightening or loosening policies, moderate the relationship in question. In other words, we will not look at the government's temporary actions in response to specific situations but instead focus on consistent long-term action (for at least 30 years). Our main estimated coefficient of interest is  $\omega_1$ . If  $\omega_1$  is positive and statistically significant in at least one of the government action proxies, we can reasonably assert that government actions can enhance the positive impact of financial soundness on subjective financial well-being.

*Endogeneity.* Equation (2) may encounter confounding effects, where a variable in the error term simultaneously affects both financial soundness and financial satisfaction. This leads to inconsistent coefficients. To address this, we employ a robust two-stage regression model to analyze changes in exogenous factors (instrumental variables) that influence financial subjective well-being solely through the financial soundness channel. Accordingly, we look for cases where a country suddenly receives a significant financial influx from international trade. Arezki et al. (2017), for example, found that discovering new oil reserves provided a cash windfall through oil sales, boosting financial soundness. Similarly, an increase in a country's export prices can be set up in the same way, reasonably assuming that countries are unlikely to influence global export prices in the short term (Arezki and Brückner, 2012). We thus design a two-stage least squares (2SLS) estimator with high-dimensional fixed effects (using the *ivreghdfe* option in Stata) as follows.

First stage:

$$\text{Financial soundness}_{c,y,m} = f(\text{exported price shocks}_{c,y,m}, Z). \quad (4)$$

Second stage:

$$\begin{aligned} \text{Satisfaction}_{i,c,y,m} = & \beta_{IV} \widehat{\text{Financial soundness}}_{c,y,m} + \\ & + \alpha_c + \lambda_y + \theta_m + Z'_\eta + \varepsilon_{i,c,y,m}. \end{aligned} \quad (5)$$

Monthly data on export price shocks is collected from Gruss and Kebhaj (2019). Details on the data and variables used are presented in Table 1. The dataset indicates an average financial satisfaction score of 5.766 among households, with substantial variability (SD = 2.564) reflecting diverse economic circumstances. This variability is mirrored in the broad range of domestic credit to the private sector (1.267% to 243.215% of GDP), emphasizing the complex interplay between demographic, economic, and cultural factors in shaping financial well-being.

## 4. Empirical Results

### 4.1. Correlation analysis

First, we analyze the relationship to the private sector between the average value of subjective financial well-being and domestic credit. Fig. 1 shows a positive, though modest, correlation between these two variables, as evidenced by the upward-sloping trend line. This indicates that, generally, as domestic

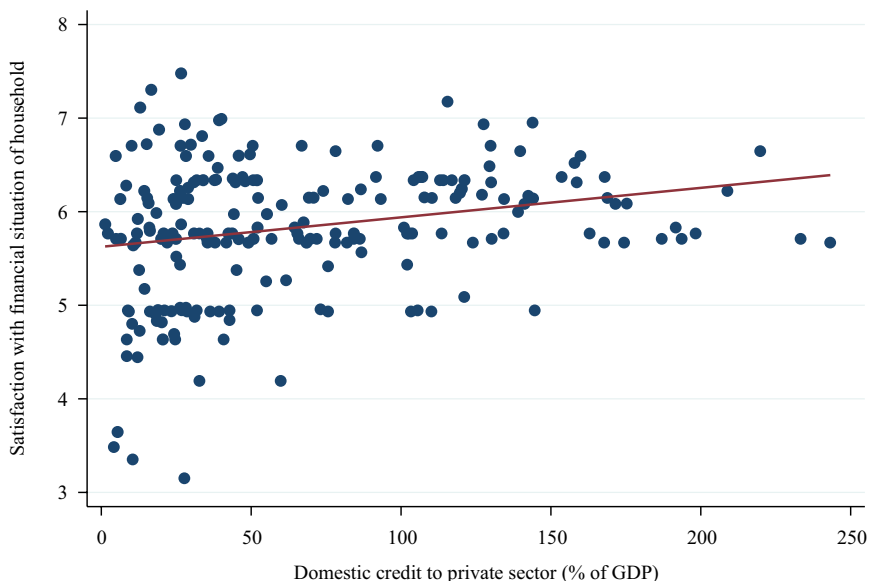


**Table 1**  
Descriptive statistics.

Variable	Units	Source	Obs	Mean	SD	Min	Max
Dependent variable: financial subjective well-being							
Satisfaction with financial situation of household	= 1 if lowest satisfaction, = 10 if highest	WVS (all waves)	426,629	5.766	2.564	1.000	10.000
Independent and control variables							
Domestic credit to private sector	% of GDP	WDI	315,252	68.615	53.502	1.267	243.215
Health status	= 1 if poorest health status, = 5 if highest	WVS (all waves)	421,302	2.193	0.886	1.000	5.000
Belief in God	Dummy	WVS (all waves)	308,313	0.854	0.353	0.000	1.000
Gender	= 1 if male, = 0 if female	WVS (all waves)	426,629	0.475	0.499	0.000	1.000
Income levels	= 1 if poorest, = 10 if richest	WVS (all waves)	392,920	4.684	2.258	1.000	10.000
Age	Years	WVS (all waves)	422,073	41.339	16.240	13.000	103.000
Unemployment status	= 1 if unemployed, = 0 otherwise	WVS (all waves)	426,629	0.088	0.283	0.000	1.000
Democracy	Z-score	V-Dem	409,740	0.571	0.261	0.017	0.921
GDP growth	%	WDI	403,359	3.925	6.144	-23.043	53.382
Macroeprudential policies							
Loosening policy action	= +1 if loosening policy action, = 0 if not	iMaPP	338,158	0.016	0.124	0.000	1.000
Tightening policy action	= +1 if tightening policy action, = 0 if not	iMaPP	338,158	0.088	0.426	0.000	5.000
Instrumental variable							
Export price shocks	Standardized by IMF	IMF	392,451	96.967	6.517	57.775	113.900

*Note:* WVS — World Values Survey database; WDI — World Development Indicators; V-Dem — Varieties of Democracy dataset; iMaPP — Integrated Macroeprudential Policy database; IMF — World Economic Outlook (WEO) database.

*Source:* Authors' calculations.



**Fig. 1.** The correlation between subjective financial well-being and domestic credit to the private sector.

*Note:* Averaged data from 1981 to 2022.

*Source:* Authors' calculations.

credit to the private sector rises, financial satisfaction tends to increase. However, the spread of the data points around this trend line suggests considerable variation. Linked with the evolution of average value over time in Appendix A, the highest financial satisfaction in the 7th World Values Survey (2017–2022) includes countries in Northern and Western Europe, such as Scandinavia, where robust welfare policies contribute to economic security and high satisfaction levels. In contrast, Sub-Saharan Africa often shows the lowest levels of financial satisfaction, likely due to economic instability and limited social safety nets.

#### 4.2. Regression analysis

Table 2 displays the main estimated coefficient of interest ( $\beta$ ) for equation (2). Column [1] shows the relationship between domestic credit with the private sector in its simplest form, comparing individuals within a country. After accounting for time-year fixed effects in column [2], time-month fixed effects in column [3], and personal characteristic effects in column [4], the coefficients remain positive and statistically significant. This supports the prevailing view that financial soundness is a crucial factor in enhancing the financial well-being of individuals (Beck, 2020; Beck et al., 2007). According to the literature, an increase in credit to the private sector boosts entrepreneurship initially by providing essential financial resources, creating new jobs, and promoting overall economic stability (King and Levine, 1993; Levine, 2005). Furthermore, in developing countries characterized by capital shortages (De Soto, 2001), such growth is vital for improving infrastructure and reducing poverty by enabling investments in education, healthcare, and entrepreneurial activities (Van Le and Tran, 2022, 2023; Van Le et al., 2022).

Considering additional control variables, the coefficient in column [4] (0.003)

**Table 2**

The influence of domestic credit on the private sector regarding satisfaction with the financial situation of the household.

Dependent variables	Satisfaction with financial situation of household [1, 10]					
	[1]	[2]	[3]	[4]	[5]	[6]
Domestic credit to private sector ( $\beta$ )	0.004*** (0.000)	0.004*** (0.000)	0.004*** (0.000)	0.003*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
State of health: Good <sup>a)</sup>				-0.501*** (0.013)	-0.496*** (0.013)	-0.496*** (0.013)
State of health: Fair				-1.033*** (0.015)	-1.028*** (0.015)	-1.028*** (0.016)
State of health: Poor				-1.713*** (0.025)	-1.709*** (0.025)	-1.709*** (0.027)
State of health: Very poor				-1.983*** (0.068)	-1.982*** (0.068)	-1.982*** (0.082)
Belief in God (yes)				0.074*** (0.018)	0.069*** (0.018)	0.069*** (0.016)
Male				-0.062*** (0.010)	-0.063*** (0.010)	-0.063*** (0.010)
Income scale: second step <sup>b)</sup>				0.220*** (0.024)	0.223*** (0.024)	0.223*** (0.028)
Income scale: third step				0.498*** (0.022)	0.500*** (0.022)	0.500*** (0.027)
Income scale: fourth step				0.918*** (0.022)	0.920*** (0.022)	0.920*** (0.026)
Income scale: fifth step				1.262*** (0.021)	1.263*** (0.021)	1.263*** (0.025)
Income scale: sixth step				1.603*** (0.022)	1.606*** (0.022)	1.606*** (0.026)
Income scale: seventh step				1.940*** (0.024)	1.944*** (0.024)	1.944*** (0.027)
Income scale: eighth step				2.255*** (0.027)	2.261*** (0.027)	2.261*** (0.029)
Income scale: ninth step				2.294*** (0.036)	2.286*** (0.036)	2.286*** (0.039)
Income scale: tenth step				2.533*** (0.037)	2.522*** (0.037)	2.522*** (0.042)
Age				0.010*** (0.000)	0.010*** (0.000)	0.010*** (0.000)
Unemployed				-0.406*** (0.018)	-0.409*** (0.018)	-0.409*** (0.020)
Democracy index					1.316*** (0.090)	1.316*** (0.091)
GDP growth					0.013*** (0.003)	0.013*** (0.003)
Country fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	No	Yes	Yes	Yes	Yes	Yes
Month fixed effect	No	No	Yes	Yes	Yes	Yes
Adjusts for heteroskedasticity	No	No	No	No	No	Yes
Observations	315,252	315,252	309,722	203,255	202,454	202,454
R-squared	0.094	0.105	0.109	0.226	0.228	0.228
Number of countries	86	86	86	73	72	72
Number of years	33	33	33	26	26	26

<sup>a)</sup> The control group is the group with a health status of “very good.”

<sup>b)</sup> The control group is the group with the lowest income level.

*Note:* We use estimations with high-dimensional fixed effects. In columns [1]–[4], we run the model sequentially with controls for country fixed effects, year fixed effects, and individual characteristics. In column [5], we further control for the democracy index and GDP growth, while in column [6], we adjust for standard errors using the robust option in Stata. The variables used in the model do not exhibit high correlation (see Appendix B for more details). Standard errors are shown in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

*Source:* Authors’ calculations.

indicates that a 1% increase in domestic credit to the private sector as a share of GDP results in a 0.03% increase in financial satisfaction. It is worth noting that our sample includes more than 200,000 people worldwide from 1981 to 2022. Although this marginal effect appears small, when accounting for the 240% range between the highest and lowest country values, the difference in financial well-being between the two extremes could exceed 7.2%. It is important to mention that domestic credit is just one aspect of financial soundness, and the influence of individual characteristics on financial satisfaction is also consistent with the expectations of previous studies (Bjørnskov et al., 2008).

Although a country's fixed effects have been allowed for, one might be concerned about the impact of changes in institutional factors and national growth expectations on people's perception of happiness. Thus, in column [5], we further control for the democracy index and the country's economic growth rate, which are expected to be positively correlated with financial satisfaction. The coefficients of our interest remain statistically significant. To obtain more precise estimates (with the lowest variance), in column [6] we perform the estimation with heteroskedasticity-robust standard errors, which correct standard errors in the presence of heteroskedasticity. Appendix B also presents the variance inflation factor (VIF) between the variables used, showing that the results imply that there is no high correlation between the estimated variables in the model. For the remainder of the study, and to save space in the paper, we only report the key variables of interest.

In Table 3, we assess the robustness of the results using global trade shocks as a valid instrumental variable. Our basic assumption is that an exogenous increase in export prices provides a windfall for a country, subsequently significantly improving its financial condition (Arezki and Brückner, 2012; Arezki et al., 2017).

**Table 3**  
Robustness checks with two-stage least squares (2SLS).

Variable	Satisfaction with household financial situation			
	[1]	[2]	[3]	[4]
Domestic credit to private sector ( $\beta_{11}$ )	0.015*** (0.002)	0.013*** (0.004)	0.008* (0.004)	0.267*** (0.065)
Country fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	No	Yes	Yes	Yes
Month fixed effect	No	No	Yes	Yes
Personal characteristic fixed effect	No	No	No	Yes
Observations	307,706	307,706	307,706	202,454
R-squared	-0.007	-0.002	0.000	-0.841
Under-identification test (Anderson canonical correlation LM statistic)	0.000	0.000	0.000	0.000
Weak identification test (Cragg–Donald Wald $F$ -statistic) <sup>a)</sup>	4890.857	1959.091	2485.690	30.768
Excluded instruments	Net exported price shocks	Net exported price shocks	Net exported price shocks	Net exported price shocks
Number of countries	86	86	86	73
Number of years	33	33	33	26

<sup>a)</sup> Stock–Yogo critical values for the weak identification test: 10% maximal IV size is 16.38.

*Note:* We use two-stage regression with high-dimensional fixed effects (the *reghdfe* option in Stata). The instrumental variable used is the global price shock measured monthly. The control variables are similar to those in Table [2]. Standard errors are shown in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

*Source:* Authors' calculations.

Although technical tests suggest that the instrumental variable is valid, the magnitude of the estimate in Table 3, column [4], is more than three times larger than the OLS estimate in Table 2, warranting caution in using this estimate as a primary result. There are two possible reasons for the significant coefficient. Either (i) the local average treatment effects (estimated by *ivreghdfe*, using two-stage regression) at the shock point are bigger than the averaged effect (estimated by *reghdfe*), or (ii) the omitted variables led to severe bias in the Table 2 estimates, or (iii) both. However, we tend to favor the first explanation because domestic credit to the private sector is measured annually, while the instrumental variable (export price shocks) is measured monthly.

*Heterogeneity.* Table 4 shows the coefficients for the interaction terms between domestic credit to the private sector (*DCTPS*) and loosening actions (Panel A), as well as tightening actions (Panel B). A reasonable expectation is that if government interventions are truly effective (i.e., they amplify the positive impact of domestic credit to the private sector on financial satisfaction), then the interaction

**Table 4**

The moderating impact of government policies on the nexus.

Dependent variable	Satisfaction with household financial situation			
	[1]	[2]	[3]	[4]
Panel A: Government action through loosening policies				
Domestic credit to private sector (DCTPS)	0.004*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.002*** (0.001)
DCTPS $\times$ ( <i>loosening actions</i> )( $\omega_1$ )	-0.025*** (0.005)	-0.059*** (0.006)	-0.067*** (0.006)	-0.094*** (0.006)
Country fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	No	Yes	Yes	Yes
Month fixed effect	No	No	Yes	Yes
Personal characteristic fixed effect	No	No	No	Yes
Observations	272,720	272,720	271,082	180,262
R-squared	0.087	0.101	0.104	0.231
Number of countries	71	71	71	61
Number of years		31	31	25
Panel B: Government action through tightening policies				
Domestic credit to private sector (DCTPS)	0.003*** (0.000)	0.001* (0.000)	0.001** (0.000)	0.002*** (0.001)
DCTPS $\times$ ( <i>tightening actions</i> )( $\omega_1$ )	0.004*** (0.001)	0.001* (0.001)	0.000 (0.001)	-0.021*** (0.004)
Country fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	No	Yes	Yes	Yes
Month fixed effect	No	No	Yes	Yes
Personal characteristic fixed effect	No	No	No	Yes
Observations	272,720	272,720	271,082	180,262
R-squared	0.087	0.101	0.104	0.230
Number of countries	71	71	71	61
Number of years		31	31	25

Note: Data on government policy adjustments are recorded monthly, both tightening (in Panel B) and loosening (in Panel A). The value of the policy variable is averaged over the entire study period. Standard errors are shown in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Source: Authors' calculations.

term coefficient should be positive and statistically significant in at least one case (i.e., either loosening or tightening). At least, we expect intervention actions to be no less effective than remaining neutral, or the estimated coefficients will not be negative and statistically significant. In column [4] of Panels A and B of Table 4, the estimated coefficients of  $\omega_1$  are negative and statistically significant. It is worth noting that although the interaction term coefficient is positive and significant in column [1] of Panel B, this result is not robust once other personal characteristic variables are controlled for. It should be noted that we did not find similar studies with which to compare our results.

This result can be explained in at least three ways. (1) Government interventions might generally be ineffective in the long term, meaning that people do not benefit from the financial development of the private sector as they would if the government did not intervene. This view aligns with the Chicago and Austrian economic schools (Friedman, 2005; Hayek and Caldwell, 2014). (2) The second explanation could be endogenous government actions. In this case, it is not the government’s intervention that affects financial well-being; rather, areas with lower financial well-being may be likely to pressure governments into action. Consequently, this could lead to a correlation in the data where government actions align with lower financial satisfaction. However, our correlation evidence suggests this explanation is not very plausible, as the correlation between these variables (financial satisfaction and government action) is nearly zero (see Fig. 2). In other words, no correlation was found at the cross-country level between

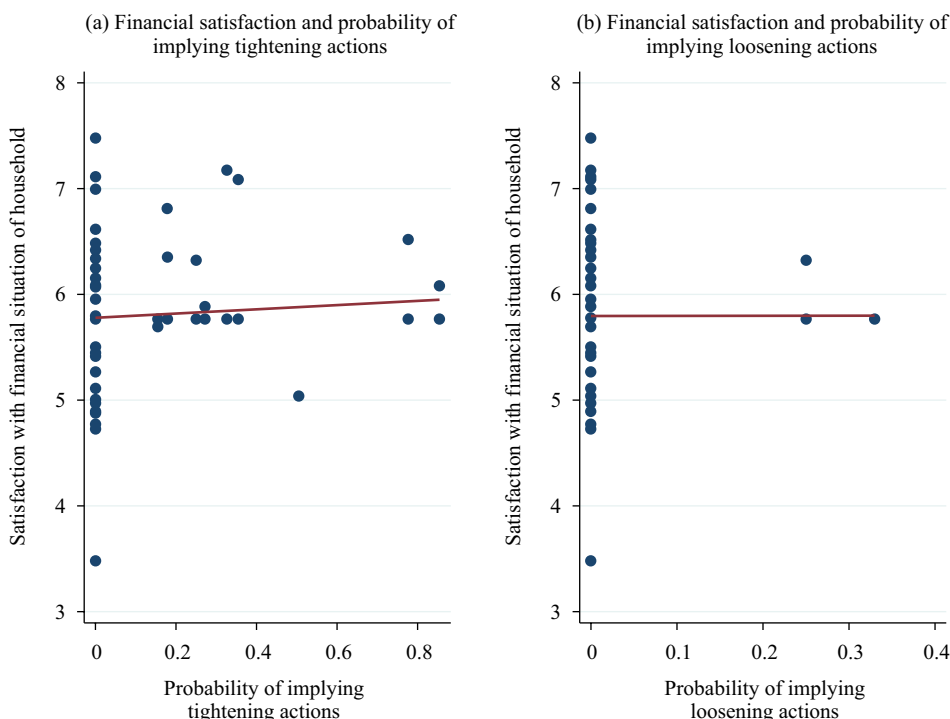


Fig. 2. The correlation between financial satisfaction and government policies.

Note: The average values are calculated for each country from 1990 to 2021.

Source: Authors’ analysis based on the World Values Survey (WVS) and the Integrated Macropprudential Policy (iMaPP) databases.

government policy adjustments and the reactions of the public.

The third explanation, suggested by Aberbach and Walker (1970), is that the government may be considered a “scapegoat” for public dissatisfaction. This implies that government actions may merely serve as a pretext to deflect public discontent, regardless of the effectiveness or nature of these actions. This finding also explains why reconciling state and private sector actions has historically been difficult, akin to navigating a “narrow corridor” (Acemoglu and Robinson, 2012, 2019). While it is challenging to determine which explanation is more valid, it is clear that any government action tends to lessen the positive impact of financial soundness on the subjective well-being of more than 200,000 people globally.

## 5. Conclusion and policy implication

This paper presents evidence linking financial soundness with financial subjective well-being and the efficiency of government interventions. We confirm that (i) obviously, improvements in domestic credit to the private sector have a positive influence on the financial satisfaction of individuals, at least for more than 200,000 people globally. This finding is supported by theoretical frameworks, such as Levine’s (2005), and may be even more pronounced in developing countries.

Interestingly, we observe a correlation between government interventions—regardless of direction—and decreased financial satisfaction, given the episode of increased financial soundness. It is highly likely that either (i) government interventions are ineffective or (ii) the government serves as a “scapegoat” for public dissatisfaction. It is less likely that governments will respond and adapt to public dissatisfaction. Regardless of the underlying cause, our findings suggest that government actions responding to increased financial soundness do not align well with enhancing the financial satisfaction of their citizens. Whether public dissatisfaction is justified or not, Arendt and Thoreau (2024, p. 8) seem correct in asserting “that government is best which governs least.”

What remains for policymakers to consider? To achieve governmental legitimacy, public trust and sentiment are crucial. It is undeniable that effective government interventions can yield positive economic development outcomes. However, with growing financial soundness, a proactive yet imprudent government may take what the public subjectively perceives as unnecessary risks. This state of affairs could be due to the ineffectiveness of interventions or because such government actions may serve as convenient scapegoats for public discontent in various situations.

Two precautions should be considered before any governmental intervention aimed at optimizing citizens’ financial welfare. *Firstly*, as robustly supported by evidence, to achieve optimal economic and financial efficiency, policy activities should focus on correcting market failures and reducing transaction costs in the economy rather than imposing policies that restrict the market’s operational autonomy, at least in the long term. We concur with Hayek and Caldwell (2014) that promoting interaction mechanisms among economic agents through transparency and market price signals is essential.

*Secondly*, following the discussion by Acemoglu and Robinson (2019) on the need to build an institution that balances power between the state and society, government action should revolve around cooperation and support

for businesses. Evidence from transitioning countries shows that supporting the SME sector (rather than foreign or state-owned enterprises) forms a crucial foundation for sustainable socio-economic development (Van Le and Tran, 2022, 2023; Van Le et al., 2022). *Thirdly*, concerning subjective well-being, it is highly likely that there is no one-size-fits-all approach for government action to achieve high public consensus. This may depend on the historical data of a specific country. Therefore, developing deeper impact assessment models within government agencies regarding various types of activity before attracting public sentiment can be an essential step towards effective national governance.

Future research could further explore the impact of various aspects of financial soundness on financial well-being. Researchers might consider examining facets of objective well-being to assess the consistency of the impacts under review. Regarding heterogeneous effects, the exploration could extend to measure these effects within specific macroeconomic contexts (e.g., low-income, lower-middle-income, and high-income countries). We believe that investigating these dynamics across different national contexts could provide valuable insights for policymakers globally. Notably, researchers could focus on better addressing endogeneity issues through the scrutiny of specific case studies where instrumental variables are prominent. Lastly, a detailed exploration of specific government policies that positively or negatively influence the relationship under consideration could significantly influence development scenarios in particular countries.

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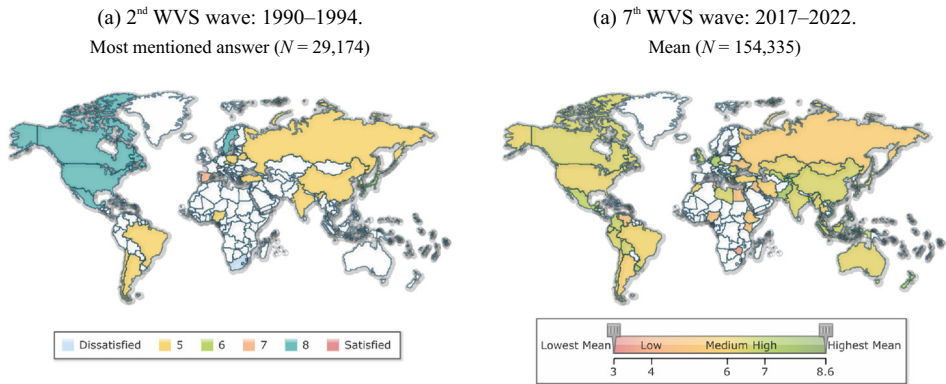
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## Appendix A



**Fig. A1.** The evolution of financial satisfaction.

Source: Compiled by the authors using data from the World Values Survey (WVS) database.

## Appendix B

**Table B1**

Variance inflation factor (VIF).

Variable	VIF	1/VIF
Domestic credit to private sector	1.160	0.861
State of health: Very good (baseline)		
State of health: Good	1.570	0.636
State of health: Fair	1.610	0.621
State of health: Poor	1.230	0.813
State of health: Very poor	1.030	0.973
Belief in God (Yes)	1.130	0.886
Male	1.010	0.991
Income scale: the lowest step (baseline)		
Income scale: second step	1.840	0.544
Income scale: third step	2.130	0.470
Income scale: fourth step	2.290	0.436
Income scale: fifth step	2.660	0.376
Income scale: sixth step	2.290	0.437
Income scale: seventh step	2.030	0.493
Income scale: eighth step	1.670	0.600
Income scale: ninth step	1.280	0.784
Income scale: tenth step	1.250	0.799
Age	1.140	0.880
Unemployed	1.040	0.965
Mean VIF	1.570	

Source: Authors' calculations.