A look at individuals' financial resilience in Albania before COVID-19

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Abstract:- In this article we explore financial resilience of individuals in Albania based on novel data from financial literacy survey of Bank of Albania. Also we analyze the impact that financial literacy has on individual financial resilience. Financial resilience is defined as the ability of individual to cope with an unexpected expenditure shock, liquidity constraint and higher indebtedness. In general the data display a low level of financial resilience of Albanians, where 64 % of individuals declare that they cannot come up with an unexpected expenditure shock and 69 % of individuals have financial cushion less than 3 months and only 15 % of individuals are concerned about their level of debt. The data show high level of heterogeneity of financial resilience based on socio-demographic characteristics of individuals. Empirical results based on binary regressions show that financial literacy increase the prevalence of financial resilience of individual in Albania. Thus promoting financial literacy would be a key elements policies for increasing financial resilience of individuals in short and long- term but also their financial well-being.

Keywords: Personal Finance, Household Saving, Borrowing, Wealth, Financial Literacy

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1. Introduction

The latest financial crisis and moreover the pandemic caused through Covid-19 have put against to the fore the households financial wealth and their ability to withstands shocks such as a sudden drop in income, a health event, job loss, or an unexpected expenditure. Some individuals are less resilient to financial shocks than others. This may be because have low level of savings, have limited access to affordable credit, have higher debt level or have lack financial skill to manage households' budget. Data collected from Bank of Albania, before COVID-19 hit Albania, indicated that financial fragility of individuals was a critical issue, in terms of income of expenditure shocks. So 2/3 of individuals could resist less than 3 months if they face a mid-sized financial shock and 64 % of individuals couldn't come up with an expenditure shock equivalent with their monthly income, without borrowing any money form family or friend. While only 15 % of individuals agree that their level of debt is high. These figures indicate that individuals in Albania were financial fragile, as results the economic impact of current crisis would jeopardize their financial wellbeing, especially most vulnerable sub-groups.

One of the main issue on analyzing financial resilience is that financial resilience is a dynamic concept and there is not a single measure to use for it. Based on literature review, financial resilience is about the ability to resist to a shock, resulting from a health event, job loss or an economic downturns, which would impacts individuals' income or wealth. Additionally financial resilience reflects the financial capacity of individuals or households to adapt and adjust to a stressful life events and function well in challenging or threatening circumstances (O'Neill& Xiao, 2006, 2011). Financial resilience of individuals or households is function not only on their financial assets and income, but also on its debt obligations and their personal finance knowledge, attitude and behavior.

O'Neill and Xiao (2006) have underlined that financial resilience of households is attributed to three main factors: financial resources, social and community resources (e.g friends, social support) and personal resources (such us skills to search for information). As mentioned above although financial resilience of households is highly correlated with its financial resources such as income or wealth, it is also related to household debt obligations and money management practices.

Lusardi et.al (2011) present a metric to measure financial resilience against financial fragility, through the ability of individuals to cope with an unexpected expenditure or income shock, approach that was followed by other authors (Room and Merikull (2017)). Anderloni and Vondone (2011) and Jappelli et.al (2013) have explored other sources of financial distress focusing on institutional factors as well as income and spending volatility. In general past research has focused on both objective (liquid or debt ratio) and subjective measures of financial fragility (people confidence level to meet emergency expenses) to identify the profiles and the distribution of most vulnerable households and to estimate how the impact of different macroeconomic shock, such as a job loss or interest rate shock may effect bank stability. However one issue related to this strand of the literature is the lack of a uniform standard concept for the households' financial resilience or vulnerability (Leika and Marchettin 2017). In 2021, Deevy et al propose three different proxies to measure financial resilience, which take to account the ability of individuals to cope an emergence expense, to hold precautionary saving that could cover living expenses for three months and their judgment about the level of their debt.

The aim of this article is to explore the financial resilience of individuals in Albania based on financial literacy survey data conducted by Bank of Albania during 2019. Following Deevy et al (2021) we have measured financial resilience through three proxies, which tend to capture the individual's ability to come up with an income and expenditure shocks and with their level of indebtedness. Furthermore, we have estimated the impact that financial literacy of individuals has on financial resilience.

Based on our best knowledge there is not exist a study that treat and discuss the importance of financial resilience of individuals. Most of the studies based on macro data investigate the determinants and the evolution of households' indebtedness and their importance for the financial sector, without considering financial resilience of individual and their ability to cope with unexpected shocks. Therefore this article attempts to fill the gap in the empirical literature on the relationship between financial resilience and literacy in Albania by employing a novel data. For this propose we use individuals level data from the third wave of Financial Literacy Survey, developed by the Bank of Albania in early 2019 and we employ a logit model to estimate the impact of financial literacy on financial resilience of individuals.

Generally, the data show that most of individuals in Albania are financial fragile, they do not have enough financial cushion and could not come up with an expenditure shocks. On different subgroups we have recognized that less financial resilience are: women, individuals with less education and individuals with low income. Empirical results show that higher level of financial literacy increase the prevalence of financial resilience, measured through all three proxies proposed by Deevy et al (2021).

The article is structured as follows. Section 2 presents on overview of financial resilience in Albania based on survey data. In section 3 we present the methodological approach and empirical results of the impact of financial literary on financial resilience and finally we conclude.

2. Data

In this article the main source of data are individuals data taken from 2019 Adult Financial literacy survey (AFLS) done by Bank of Albania. This survey is based on questionnaire developed by OECD (2018) adapted on Albanians characteristics and has the aim to collect a lot of data for Albanian individuals in different topic related to financial literacy components, financial inclusion, financial resilience and financial wellbeing of individuals. The sample size of survey is 1000 adults over 18 years old distributed proportionally throughout the territory of Albania. The selection of these individuals was done randomly through a three-step approach following by INSTAT which conducted face-to-face interviews. The survey is a self-assessment of individuals for different subjects. A details descriptions of the survey, data collection and results of the first and second wave are showed by Ceca et al, (2014) and Isaku et al., (2018).

As we mentioned in the literature review, financial resilience is a dynamic concept and consists of the ability of individuals or households to recover from a financial shock. Based on Deevy et al. (2021) we have used three proxies to assess the level of financial resilience in Albania (table 1).

The first indicator tend to assess the level of precautionary saving of individuals measured in terms of saving equals at least three months of income. The second indicator tend to measures not only the level of liquid assets but also debt and level of indebtedness, as well other aspects of individuals personal financial related to their reasons for not saving in emergencies, the type of resources that could easily disposed of on rainy days. While through the third proxy we attempt to estimate the level of indebtedness of individuals based on their assessment on the level of debt.

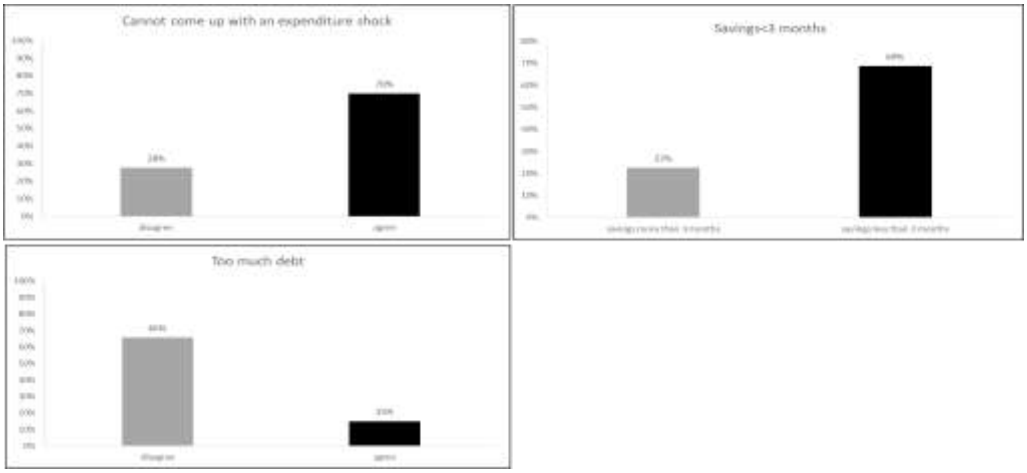
Table 1: Financial resilience proxy and survey questions

	Proxy name	Survey question
1.	Cannot come up with an expenditure shock	If you personally faced a major expensive today –equivalent to your monthly income-would be able to pay it without borrowing the money or asking family or friend to help
2.	Saving less 3 months of expenses	If you lost your main source of income, how long could your household continue to cover living expenses, without borrowing any money or moving house? a) Less than a week b) At least a week, but not one moth c) At least one month, but not three months d) At least three months, but not six months e) Don't know f) Refused
3.	Too much debt	How strongly do you agree or disagree with the following statement? I have too much debt right now. 1-5, 1 completely agree, 5=completely disagree

Source: Financial Literacy Survey (2019)

Basically we have assess the financial resilience of Albanian based on three question related to: the affordability of an expenditure shock, the level of savings less than 3 months of expenses and the level of indebtedness . The data in figure 1 show that 64 % of Albanians are not able to cover an expenditure shock equal to their monthly income, if an emergency arise. Also 69 % of households state that have inadequate liquid asset to cover less than three months of expenses, without borrowing any money. While for only 15 % of individuals their debt level is unaffordable. Overall data show that 2/3 of individuals in Albania are more concerned about an income and expenditure shock rather than their level of indebtedness, suggesting that they were unprepared to face the economic consequences of Covid-19.

Figure 1: Facts about individuals' financial resilience in Albania



Source: Financial Literacy Survey (2019), authors' calculations
Note: Percentage weighted data

Table 1 presents some variations of financial resilience of individuals based on different socio-demographic characteristics such as: gender, age, education level, employment situation and household income level. Overall the data reconfirm the low prevalence of individuals' financial resilience across different subgroups even before the pandemic crisis caused by COVID-19. Some of the main observations are as follows.

So women compared to men claim to have less protection in terms of an expenditure and income shock, they are also more concern about the level of debt. The data show that young and older individuals are more vulnerable to an expenditure and income shock than middle-aged individuals, which are more afraid for their debt level. Based on the level of education, we see a clear difference in terms of financial resilience between individuals who have lower and higher level of education. So less-educated individuals, those with basic or without education are less financial resilience comparing to individuals, which have a secondary or tertiary education, indicating that education is a key element of financial behavior of individuals.

Based on employment status, we realize that unemployed, retired and others individuals have higher incidence of being financially fragile compared to employed or self-employed individuals. Also, data show that financial resilience increase with the income level of households. Thus low income individuals have the likelihood to be more financial vulnerable compared to middle- ore high-income individuals. However we recognize that high-income individuals are not immune to expenditure or income shock. About 40 % of individuals declare that they savings are less than 3 months of expenses and cannot afford an expenditure shock.

Table 2: Differences in financial resilience based on different subgroups

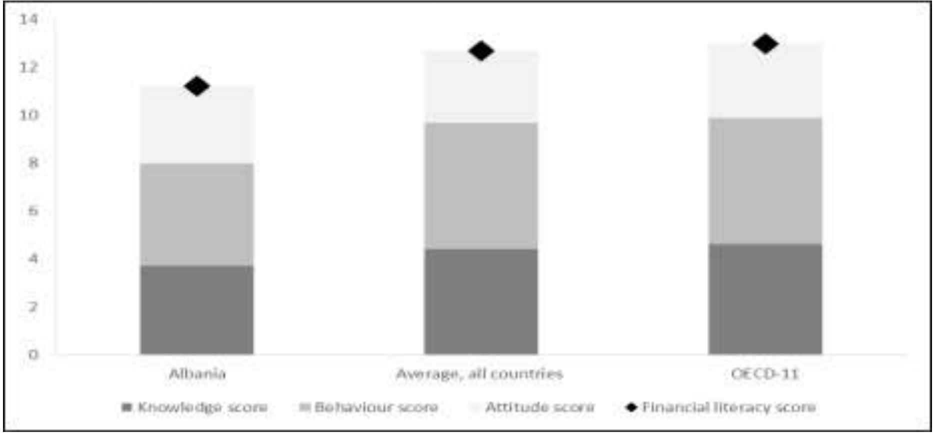
		Cannot come up with an expenditure shock	**Savings< 3 months**	**Too much debt**
Individuals	Total	**69.9 %**	**68.7 %**	**14.9 %**
Gender	Female	72.1%	79.0%	19.3%
	Male	67.8%	71.7%	17.8%
Age	18 - 29 years old	66.5%	77.3%	18.2%
	30 - 59 years old	69.2%	71.8%	20.9%
	60 - 79 years old	73.9%	79.9%	14.4%
Education	Tertiary level	47.0%	58.4%	8.1%
	Secondary level	68.7%	72.6%	14.8%
	Basic level	82.8%	86.6%	28.5%
	No education	100.0%	100.0%	91.3%
Work situation	Employed	61.8%	62.9%	11.4%
	Student	56.4%	74.0%	8.6%
	Unemployed	81.8%	90.1%	46.8%
	Retired	87.4%	83.0%	24.8%
	Others	77.2%	85.0%	17.7%
Income level	Low level (at 35,000 AL)	83.7%	89.4%	28.9%
	Medium level (35001-60,000 AL)	63.4%	67.9%	7.7%
	High level (above 60,001 AL)	36.6%	39.9%	8.2%

Source: Financial Literacy Survey (2019), authors' calculations, Note: Percentage weighted data

As we mention above our aim is to investigate the impact of financial literacy on individuals' financial resilience. As a measurement of financial literacy we have used financial literacy index proposed by OCED (2018). This index is defined as a combination of financial knowledge, skills, attitudes and behaviors needed to undertake sound financial decisions in order to increase financial well-being (OECD (2018). The financial literacy score is calculated as the sum of three components, financial knowledge index, financial behavior index and financial attitudes index. Dushku (2021) estimate that financial literacy index for Albania is 11.2 (out of 21, the maximum level) in 2019, which indicates a low level of financial literacy in the country (figure 2). She showed that individuals in Albanian hold only 53 % of financial knowledge, behaviors and attitudes, which is lower than the global level (61 %).

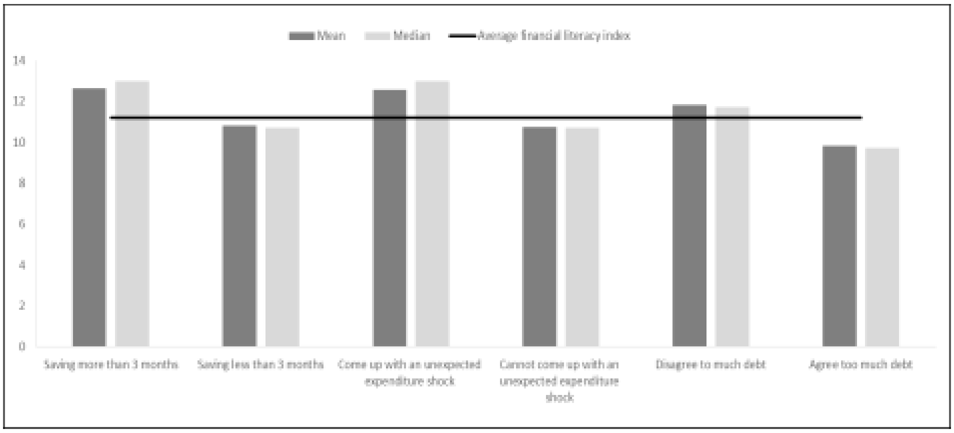
While in figure 3 we present mean and median of financial literacy index based on different level of individuals' financial resilience. Data display a positive correlation between financial literacy index and financial resilience, which indicate that individuals with higher financial literacy are more resilient compared to individuals, who are less financial literate.

Figure 2: Financial literacy index and its main components



Source: Dushku (2021)

Figure 3: Changes in financial literacy index based on variation of individuals financial resilience



Source: Financial Literacy Survey (2019), authors' calculations, Note: Percentage weighted data

3. Methodology and estimated results

Based on empirical literature we have estimate a logit regression model to estimate the impact that financial literacy and other socio-demographic variables such as age, gender, income level, employed status have on financial fragility specifies as follow:

$$\boldsymbol{F\_F^{*}{}_{i} = \grave{x}_{i}\beta + \mu_{i}}$$

Where $\boldsymbol{F\_F_{i}}$ is a dummy variable, which is used to define whenever the individual is consider financial fragile or not, $\boldsymbol{\grave{x}_{i}}$ are exogenous variables and $\boldsymbol{\mu_{i}}$ is a random disturbance.

$$\boldsymbol{F\_F_{i}} = \begin{cases} \boldsymbol{1}\ \boldsymbol{if}\ \text{savings <3 months, or aggree cannot come up} \\ \quad\text{with expenditure shock or to much debt"} \\ \qquad\qquad\qquad\qquad \boldsymbol{0} \end{cases}$$

While the probability of an individual being financial fragile is determined as follows:

$$\begin{aligned}\Pr(y_i = 1|x_i\beta) &= \Pr(\boldsymbol{F\_F^*}_{\boldsymbol{i}} > \mathbf{0}) \\ &= \Pr\big(\, \boldsymbol{\grave{x}_i\beta} + \boldsymbol{\mu_i} > \mathbf{0}\big) \\ &= \mathbf{1} - \boldsymbol{F_u}\big(-\boldsymbol{\grave{x}_i\beta}\big)\end{aligned}$$

Where $\boldsymbol{F_u}$ is the cumulative distribution function of $\boldsymbol{\mu_i}$,

The empirical results present in table 3 generally reaffirm the conclusions draw from descriptive statistics provided in Table 2. We find that women have a statistically likelihood of being financial fragile relative to men, measured through the level of savings less than 3 months and aptitude to face an expenditure shock. While in terms of level of debt, women have a low significant probability of being financial resilience. We find that youngest age category (ages 18-29) and middle age group (ages 30-59) have higher probability for being financial fragility compared to older individuals (ages 60-79). The results reveal that the likelihood of being financial fragile decrease significantly with high level of income and education. Results indicate that being employed (full time, part time or self-employment) increase the probability of being financial resilience in terms of financial cushions and level of debt compared to being unemployed. In the last row are shown the results about the effect of financial literacy on financial fragility. The results reveal that being financial literate reduce the likelihood of being financially fragile for both financial fragility indicators. We would emphasize that in the model we have controlled for the education level of individuals so the impact of financial literacy on financial fragility is above and beyond the education level.

Furthermore, we used a narrow indicator for financial literacy, a dummy variable, which takes the value of 1 if individuals give correct answer to all three questions related to interest, inflation and risk. Results indicate that having financial knowledge on interest, inflation and risk decrease the probability of being financially fragile in terms of saving and debt, but not in terms of an expenditure shock.

Table 3: Estimated results based on logit model

	Dependent variable: Financial fragility (Dummy=1 for financial fragility response)		
	Model 1 : (Financial fragility=1,savings< 3 months	Model 2: (Financial fragility=1,Cannot come up with an expenditure shock	Model 3: (Financial fragility=1, agree too much debt
Gender: Female	0.284	0.179	-0.127
p-value	*0.000*	*0.000*	*0.000*
	Age (omitted category: age 60-79)		
Age 18-29	0.548	0.156	1.163
p-value	*0.000*	*0.000*	*0.000*
Age: 30-59	0.330	0.262	1.221
p-value	0.000	0.000	0.000
	Education (omitted category: no education)		

Tertiary level	-0.382	-0.680	-0.828
p-value	*0.000*	*0.000*	*0.000*
Secondary level	-0.281	-0.231	-0.567
p-value	0.000	0.000	0.000
	Income (omitted category. high income)		
Low	2.019	1.676	0.569
p-value	*0.000*	*0.000*	*0.000*
Medium	0.000	0.939	-0.651
p-value	*0.000*	*0.000*	*0.000*
Employment status: (Employed full or part time or self-employed)	-0.585	0.054	-0.545
p-value	*0.000*	*0.000*	*0.000*
Financial literacy index	-0.126	-0.196	-0.255
p-value	*0.000*	*0.000*	*0.000*
R2-adjusted	0.269	0.253	0.254

Source: Authors' calculations

4. Conclusions

Individuals and households are generally characterized by a considerable level of heterogeneity, not only in terms of finances, but also in terms of the behavior towards them. This has led to greater attention to micro-level data analysis in order to better illustrate the heterogeneity that exists in households data. Following the latest financial crisis and pandemic crisis, household's data are used to assess the financial vulnerability of the household based on different socio-economic factors. Furthermore, these data are used to identify those groups that are most vulnerable to various risk factors and how they may impair financial stability.

In this article we have analyses individuals' financial resilience, which is defined as the ability of individuals to recovery quickly from financial shocks. Understanding why some households are more resilient to financial shock than are others, can help to develop policies to improve financial resilience.

Based on individual data taken from financial literacy survey of Bank of Albania, we have estimate that financial resilience in Albania is low. Moreover, data display high heterogeneity between sub-groups of individuals, where most vulnerable individuals are women, youngest, individuals with primary or less education, student, unemployed and individuals with low income. Furthermore, empirical results show that the highest the level of financial literacy increase the prevalence of financial resilience of Albanians. Our results indicate that policy interventions that promote and enhance financial knowledge, behaviors and attitudes can increase individuals' ability to withstand future financial shocks.

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The authors have no conflicts of interest to declare that are relevant to the content of this article.

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