PENANOMICS
International Journal of Economics
ISSN: 2829-601X

Financial Literacy and Financial Inclusion for The Welfare of Kuningan Households

Dwi Hartini Rahayu[1], Nurhayati[2], Richy Wijaya[3]
[123]Universitas Trisakti
E-mail: [1)]dwihartini@trisakti.ac.id, [2)]nurhayati@trisakti.ac.id, [3)]richy.wijaya@trisakti.ac.id

Abstract

Financial literacy and financial inclusion are widely acknowledged as important determinants of household welfare, particularly in emerging economies and rural areas. This study examines the influence of financial literacy and financial inclusion on household welfare in Kuningan Regency, West Java, Indonesia. Using primary data collected from 160 households, the study applies Partial Least Squares–Structural Equation Modeling (PLS-SEM) to analyze the proposed relationships. Financial literacy is measured through financial knowledge, behavior, and attitude, while financial inclusion is assessed based on access, usage, and quality of financial services. Household welfare is captured through indicators of consumer durables, housing characteristics, and access to public utilities. The results show that financial literacy has a positive and statistically significant effect on household welfare, although its impact is relatively modest. In contrast, financial inclusion demonstrates a strong and highly significant positive influence on household welfare, indicating its dominant role in improving living standards. These findings suggest that policies aimed at improving household welfare should prioritize expanding financial inclusion while simultaneously strengthening financial literacy to ensure effective utilization of financial services.

Keywords: *financial inclusion, financial literacy, house-hold welfare, PLS-SEM*

1. INTRODUCTION (TNR, 11 Bold)

Financial literacy and financial inclusion have increasingly attracted the attention of policymakers, academics, and international organizations as key instruments for strengthening financial systems and enhancing public welfare. Since the 2010 Organization for Economic Co-operation and Development (OECD) forum, leaders of G20 member countries have consistently emphasized the integration of financial literacy, financial inclusion, and consumer protection as a comprehensive framework for promoting financial stability and inclusive economic growth. This commitment was reaffirmed during Indonesia's G20 Presidency in 2022, where financial inclusion emerged as one of the core priorities, highlighting its strategic role in reducing inequality and supporting sustainable development, particularly in emerging economies.

Over the past five years (2019–2024), the trajectory of financial literacy and financial inclusion in Indonesia has demonstrated notable progress alongside persistent challenges. In 2019, the financial inclusion index had already reached a relatively high level of approximately 76 percent, while financial literacy lagged significantly at around 38 percent. This disparity indicated that although access to financial services was expanding, many individuals lacked sufficient understanding to utilize these services optimally. By 2022, both indices experienced substantial growth, with financial literacy increasing to about 49.7 percent and financial inclusion reaching approximately 85.1 percent, largely driven by the rapid expansion of digital financial services and intensified national financial education programs. In 2024, financial literacy rose sharply again to around 65.4 percent, reflecting improvements in the depth and quality of financial understanding among the population. In contrast, the financial inclusion index declined to approximately 75.0 percent, a change attributed mainly to adjustments in survey methodology that enhanced representativeness rather than signaling a real reduction in access. Overall, this period reflects strong progress toward more inclusive and higher-quality financial systems in Indonesia, while a noticeable gap between financial literacy and financial inclusion remains, suggesting that access to financial services continues to outpace the public's ability to fully understand and use them effectively (OJK, 2024).

Financial literacy is generally understood as a combination of knowledge, skills, attitudes, and behaviors that enable individuals to make informed and effective financial decisions. Biswas & Gupta (2013) define financial literacy as a set of individual competencies that support rational decision-making through an adequate understanding of financial matters. Similarly, the OECD (2019) emphasizes that financial literacy encompasses not only knowledge of financial concepts and risks but also the motivation and confidence to apply such knowledge in diverse financial contexts to improve individual and societal financial well-being. Individuals with higher levels of financial literacy are therefore better equipped to manage income, control expenditure, plan for the future, and evaluate financial products, enabling them to make more effective money management decisions (Dewi et al., 2020).

A growing body of international empirical evidence supports the positive relationship between financial literacy and welfare. In the United States, Brent & Ward (2018) find that a substantial portion of wealth inequality can be attributed to low levels of financial literacy. In Russia, improvements in financial literacy have been shown to encourage more economically rational behavior, including the use of appropriate financial products and services, which ultimately enhances quality of life and social welfare (Vovchenko et al., 2018). In the Indonesian context, Brillianti & Kautsar (2020) demonstrate that knowledge of formal financial institutions, particularly those providing credit services, has a positive effect on household welfare. Likewise, Yuesti et al. (2020) argue that stronger financial knowledge, attitudes, and decision-making behavior accelerate improvements in community financial welfare. Financial literacy positively enhances household welfare, especially by improving economic stability and financial resilience, yet its development remains constrained by limited structured training and digital education adoption (Pratiwi et al., 2025).

In addition to financial literacy, financial inclusion plays a crucial role in improving welfare and reducing poverty. Financial inclusion is widely recognized as one of the most important instruments for alleviating poverty and promoting equitable economic development (Khan et al., 2022). Empirical evidence from Indonesia shows that increased financial inclusion significantly reduces poverty levels, as demonstrated by panel data analyses across 31 provinces during 2005–2013 (Anwar et al., 2016). Similar findings are reported in cross-country studies covering 116 developing countries, where higher levels of financial inclusion are associated with lower poverty rates (Omar & Inaba, 2020). Beyond poverty reduction, financial inclusion has also been linked to improved financial stability, as observed in Jordan (Al-Smadi, 2018). At the household level, evidence from Ethiopia indicates that access to financial services leads to higher total expenditure, including spending on food, utilities, and education, compared to households without such access (Hussen & Mohamed, 2023). Access to formal financial services—particularly credit—enables households to accumulate productive assets, smooth consumption over time, and strengthen resilience to economic shocks, thereby contributing to improved overall welfare (Kadir et al., 2025)

PENANOMICS
International Journal of Economics
ISSN: 2829-601X

Despite the growing literature, the interaction between financial literacy, financial inclusion, and household welfare remains a relevant and underexplored issue, particularly in rural and semi-rural contexts where disparities in access, capability, and utilization of financial services are often more pronounced. Rural communities may face structural constraints, limited financial education, and uneven access to quality financial services, making the effectiveness of financial inclusion highly dependent on the level of financial literacy. Therefore, this study aims to further investigate the influence of financial literacy and financial inclusion on community welfare in Kuningan Regency, West Java, providing empirical evidence that contributes to both academic discourse and policy formulation on inclusive and sustainable financial development in Indonesia.

IMPLEMENTATION METHOD

This study employs a hypothesis-testing research design to systematically examine the influence of financial literacy and financial inclusion on community welfare. Primary data were obtained through a structured questionnaire administered to 160 respondents residing in Kabupaten Kuningan, West Java Province, an area characterized by a diverse socio-economic background. The demographic characteristics of the respondents include gender, age, education level, occupation, and monthly household income. These characteristics are important for understanding the socio-economic background of the sample and assessing the generalizability of the findings.

Table 1: Characteristics Respondents

		Frequency	%
Gender			
Male		70	43.8
Female		90	56.3
	Total	160	100.0
Age			
≤ 25 years		24	15.0
26 - 35 years		50	31.3
36 - 45 years		74	46.2
46 - 55 years		8	5.0
> 55 years		4	2.5
	Total	160	100.0
Education Level			
Primary School		18	11.3
Junior High School		21	13.1
Senior High School		70	43.8
Diploma		7	4.4
Bachelor’s Degree		42	26.3
Postgraduate Degree		2	1.3
	Total	160	100.0
Occupation			
Housewife		40	25.0
Civil Servant		3	1.9

		Frequency	%
Private Employee		63	39.3
Entrepreneur		30	18.8
Farmer		10	6.3
Others		14	8.7
	Total	160	100.0
Monthly Household Income			
< Rp1,000,000		66	41.3
Rp1,000,000 – Rp2,000,000		54	33.8
Rp2,000,000 – Rp3,000,000		27	16.9
Rp3,000,000 – Rp4,000,000		12	7.5
> Rp 4,000,000		1	0.6
	Total	67	100,00

Most respondents are in the productive age group of 36–45 years (46.2%) and have completed senior high school (43.8%), followed by those holding a bachelor's degree (26.3%). The majority work as private-sector employees (39.3%) or housewives (25.0%), while smaller proportions are entrepreneurs and farmers. In terms of income, most households earn below IDR 2,000,000 per month, indicating that the sample largely represents low- to middle-income households in rural and semi-rural areas.

The questionnaire was carefully designed to capture three core constructs relevant to the research objectives. Financial literacy is operationalized through three interrelated dimensions, namely financial knowledge, financial behavior, and financial attitude, which collectively reflect individuals' ability to understand financial concepts, manage financial resources, and make responsible financial decisions. Financial inclusion is represented by the dimensions of access, usage, and quality of financial services, capturing not only the availability of formal financial institutions but also the intensity of service utilization and perceived service adequacy. Meanwhile, community welfare is assessed using indicators related to ownership of consumer durables, housing characteristics, and access to public utilities, which together provide a comprehensive representation of households' material well-being and living standards.

Prior to hypothesis testing, the measurement instruments were evaluated for validity and reliability. The results indicate that all indicators meet the required criteria. Specifically, the factor loadings of all indicators exceed the minimum threshold of 0.45, confirming indicator validity (Hair et al., 2018). In addition, the Cronbach's Alpha values for each construct are greater than 0.60, demonstrating satisfactory internal consistency and reliability (Sekaran & Bougie, 2016).. Therefore, all instruments used in this study are considered valid and reliable. The results of the instrument testing based on the questionnaire are presented as follows.

Table 2: Instrument Test

PENANOMICS International Journal of Economics
ISSN: 2829-601X

No	Statement	Factor Loading	Cronbach's Alpha
	Welfare		
	Consumer Durables		
1.	I have a television and it works fine	0.712	
2.	I have a refrigerator and it works fine	0.700	
3.	I have a phone/mobile phone and it works fine	0.618	
4.	I have a bike and it works fine	0.518	
5.	I have a car and it works fine	0.669	0,692
6.	I have household appliances that cost under Rp500,000 and function well	0.698	
7.	I have household appliances that cost under Rp500,000 and function well	0.712	
	Housing Characteristics	0.869	
1.	The floor of my house is made of ceramics or tiles	0.872	
2.	My house already has a bathroom equipped with a toilet (latrine)	0.864	0,837
3.	My house has enough bedrooms with the number of family members		
	Public Utilities		
4.	I get access to electricity	0.877	
5.	The availability of clean water in my house comes from PAM	0.877	0,701
	Financial Literacy		
	Knowledge		
1.	In my opinion, it is better to spend IDR 1,000,000 today than next year because you will get more goods	0.611	
2.	If I lend my money today of IDR 250,000 and returned tomorrow afternoon of IDR 250,000, then the amount of loan interest is 0%	0.458	0,667
3.	In my opinion, investments with high returns have high risks as well	0.800	
4.	In my opinion, a high inflation rate means that the cost of living is also increasing	0.829	
5.	In my opinion, if you save money in several places, the risk of losing all the money will be smaller	0.558	
	Financial Behavior		
1.	I always make plans in managing household finances (income and expenses)	0.794	
2.	I always keep a record of spending/spending	0.828	
3.	I always separate the money for regular payments (pay for electricity, water, tuition, installments) with daily expenses	0.757	0,728
4.	I use the app to manage household finances to keep expenses tracked	0.577	
	Financial Atttitude		
1.	I feel more satisfied to spend money on consumption than to keep it for the long term	0.829	0,729

No	Statement	Factor Loading	Cronbach's Alpha
2.	In my opinion, money is there to spend	0.832	
3.	I tend to live for today and not worry about tomorrow	0.756	
	Financial Inclusion		
	Access		
1.	I found a bank that is close to where I live	0.682	
2.	I easily find an ATM machine around me	0.701	
3.	I have no difficulty finding an agent to make payments (such as paying electricity or water bills, charging electronic money or transferring money)	0.630	0,743
4.	I have adequate internet access	0.697	
5.	I have access to my phone	0.646	
6.	I have a debit card	0.633	
	Usage		
1.	I have an account at a bank or other financial institution (including e-wallets such as gopay, ovo, dana, shopeepay and others)	0.677	
2.	I have been actively using the account for transactions for the last 12 months	0.754	0,803
3.	I have a loan from a financial institution (including credit cards)	0.617	
4.	I have insurance	0.652	
5.	I made a cashless transaction	0.793	
6.	I made a digital payment transaction	0.770	
	Quality		
1.	I have a good understanding of finance	0.754	
2.	I have savings just in case	0.821	
3.	When opening an account with a bank, I can understand the terms and conditions well	0.770	0,749
4.	When opening an insurance account, I can understand the terms and conditions well	0.686	

Source: Data processing results, with *SPSS 21.0*

To answer the questions in this study, validated and reliable data were then tested with a Structural Equation Modeling analysis tool with *the Partial Least Square* (PLS) method. The measurement model was evaluated in terms of indicator reliability, internal consistency reliability, convergent validity, and multicollinearity. Overall, the results indicate that the constructs used in this study meet the recommended criteria for a reliable and valid measurement model.

For financial literacy, all indicators exhibit satisfactory outer loadings, ranging from 0.641 to 0.933. Although the loading for the knowledge indicator (0.641) is slightly lower than the commonly suggested threshold of 0.70, it remains acceptable in exploratory and social science research, particularly when supported by strong composite reliability and AVE values. The construct demonstrates good internal consistency, as reflected by a composite reliability (CR) of 0.837, and strong convergent validity with an AVE of 0.756, exceeding the minimum threshold of 0.50.

Similarly, financial inclusion shows strong indicator reliability, with outer loadings between 0.853 and 0.909. The CR value of 0.780 indicates adequate internal consistency, while the AVE of 0.696 confirms that the construct explains a substantial proportion of variance in its indicators. These results suggest that access, usage, and quality dimensions effectively represent the financial inclusion construct.

The household welfare construct also demonstrates robust measurement properties. All indicators have outer loadings above 0.70, ranging from 0.779 to 0.933. The construct achieves a high level of internal consistency, indicated by a CR of 0.857, and strong convergent validity with an AVE of 0.788, suggesting that the indicators reliably capture the underlying welfare concept.

Regarding multicollinearity, all VIF values are below the critical threshold of 3.0, indicating the absence of multicollinearity issues among the indicators. This confirms that each indicator contributes uniquely to its respective construct without redundancy.

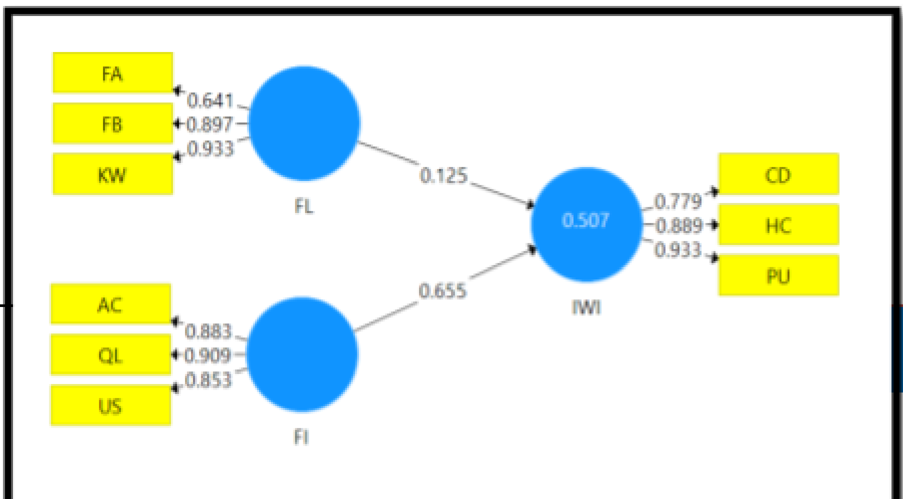
Table 3: Measurement Model

Variable	Dimension	Outer Loadings	VIF	CR	AVE
Financial Literacy	Knowledge	0,641	2.485		
	Behavior	0,897	2.549	0,837	0,756
	Attitude	0,933	1.265		
Financial Inclusion	Access	0,883	2.332		
	Usage	0,909	1.872	0,780	0,696
	Quality	0,853	2.503		
Household Welfare	Consumer Durables	0,779	1.593		
	Housing Characteristics	0,889	2.506	0,857	0,788
	Public Utilities	0,933	2.894		

Source: Data processing results, with *Smart*PLS Software 3. 3

3. RESULTS AND DISCUSSION

The structural model was assessed using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) approach with SmartPLS 3.3. Figure 1 presents the path diagram, while Table 3 summarizes the results of hypothesis testing, including path coefficients, t-statistics, and p-values.



Source: Data processing results, with *Smart*PLS oftware 3. 3
Figure 1: *Path* Diagram *Output* Hypothesis Testing

The model explains a considerable proportion of the variance in household welfare, with an R^2 value of 0.507 and an adjusted R^2 of 0.497, indicating that approximately 50% of household welfare variation is explained by financial literacy and financial inclusion. This reflects a moderate to strong explanatory power of the model and confirms the relevance of financial factors in determining household welfare outcomes.

Table 3: Output Hypothesis Testing

Independent Variable	Hypothesis	R^2	Adjusted-R^2	Estimate	p-value (1- tailed)	Conclusion
Financial Literacy Household Welfare	+	0,507	0,497	0,125	0,072	H1 accepted*
Financial Inclusion Household Welfare	+			0,655	0,000	H12 accepted***

Source: Data processing results, with *Smart*PLS Software 3. 3

Financial literacy and household welfare

The results of the structural model analysis indicate that financial literacy has a positive effect on household welfare, with a path coefficient of 0.125 and a p-value of 0.072, which is below the 10 percent significance level. This finding supports the proposed hypothesis that financial literacy positively influences the household welfare of the Kuningan community. Although the magnitude of the effect is relatively modest, the result suggests that improvements in financial literacy contribute meaningfully to welfare outcomes.

Higher levels of financial literacy enable individuals to make more informed financial decisions, such as budgeting, saving, borrowing, and managing financial risks, which ultimately enhance household welfare. In particular, individuals who possess adequate knowledge of financial products and borrowing facilities are better positioned to access appropriate financial resources and avoid unfavorable financial decisions. This finding is consistent with prior studies, which indicate that individuals with better financial knowledge tend to achieve higher levels of welfare compared to those with limited financial understanding (Brillianti & Kautsar, 2020).

Financial inclusion and household well-being

The results of the structural model analysis show that financial inclusion has a strong and positive effect on household welfare, with a path coefficient of 0.655 and a p-value of 0.000, which is below the 5 percent significance level. This finding provides strong empirical support for the proposed hypothesis that financial inclusion positively influences household welfare in the Kuningan community. The relatively large coefficient indicates that financial inclusion plays a substantial role in improving household welfare compared to other explanatory variables in the model.

Improved financial inclusion enables households to access and utilize formal financial services more effectively, including savings accounts, credit facilities, insurance, and payment systems. Access to these services allows households to better manage financial risks, smooth consumption, and allocate resources more efficiently. As a result, individuals with greater access to the financial system are more capable of enhancing their well-being through improved health outcomes, increased investment in education and business activities, and more informed decision-making regarding the most profitable financial options. This finding is consistent with previous research, which highlights the crucial role of financial inclusion in promoting welfare and economic resilience (Emara & Mohieldin, 2020).

4. CONCLUSION

Financial literacy and financial inclusion play a crucial role in improving people's welfare, particularly in strengthening the economic resilience of households. This research provides empirical evidence that in rural communities, both financial literacy and financial inclusion have a positive and significant influence on household welfare. Households with a better understanding of financial concepts, products, and risks, combined with easier access to formal financial services and funding sources, tend to manage their finances more effectively, smooth consumption, increase productive activities, and ultimately achieve higher and more sustainable levels of welfare. Financial literacy enables households to make informed financial decisions, while financial inclusion ensures that these decisions can be implemented through access to appropriate financial products and services.

Efforts to improve financial literacy and financial inclusion therefore require the active involvement and collaboration of multiple stakeholders, particularly those within the financial services sector. Financial service providers are expected not only to expand access and improve the quality and affordability of their services, but also to deliver continuous and targeted financial education tailored to the needs of different communities. With improved understanding, enhanced financial skills, and greater confidence in using financial products while recognizing their associated risks, individuals are more likely to change their financial attitudes and behaviors. This behavioral transformation is essential for fostering prudent financial management, encouraging savings and investment, reducing vulnerability to financial shocks, and enabling households to make effective and responsible financial decisions that support long-term welfare improvement.

REFERENCES

Al-Smadi, M. O. (2018). The Role of Financial Inclusion in Financial Stability: Lesson from Jordan. *Banks and Bank Systems*, *13*(4), 31–39. https://doi.org/10.21511/bbs.13(4).2018.03

Anwar, A., Uppun, P., Tri, I., & Reviani, A. (2016). The role of financial inclusion to poverty reduction in Indonesia. *Journal of Business and Management (IOSR-JBM)*, *18*(6), 37–39. https://doi.org/10.9790/487X-1806033739

Biswas, S., & Gupta, A. (2013). Financial Inclusion and Financial Literacy: A Comparative Study in their interrelation between selected urban and rural areas in the state of West Bengal. *IOSR*

Journal of Economics and Finance, 67–72.

Brent, D. A., & Ward, M. B. (2018). Energy Efficiency and Financial Literacy. *Journal of Environmental Economics and Management*, *90*(May), 181–216. https://doi.org/10.1016/j.jeem.2018.05.004

Brillianti, F., & Kautsar, A. (2020). Apakah Literasi Keuangan Memengaruhi Kesejahteraan Rumah Tangga di Indonesia? *Kajian Ekonomi Dan Keuangan*, *4*(2), 103–115. https://doi.org/10.31685/kek.v4i2.541

Dewi, V. I., Febrian, E., Effendi, N., & Anwar, M. (2020). Does Financial Perception Mediating The Financial Literacy on Financial Behavior? A Study of Academic Community in Central Java Island, Indonesia. *Montenegrin Journal of Economics*, *16*(2), 33–48. https://doi.org/10.14254/1800-5845/2020.16-2.3

Emara, N., & Mohieldin, M. (2020). Financial Inclusion and Extreme Poverty in The MENA Region: A Gap Analysis Approach. *Review of Economics and Political Science*, *5*(3), 207–230. https://doi.org/10.1108/reps-03-2020-0041

Hair, J. F. J., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate Data Analysis* (8th ed.). Annabel Ainscow. https://doi.org/10.1002/9781119409137.ch4

Hussen, M. S., & Mohamed, M. A. (2023). Impact of Financial Inclusion on Household Welfare in Ethiopia. *Future Business Journal*, *9*(1), 1–12. https://doi.org/10.1186/s43093-023-00243-y

Kadir, R. D., Wahyudi, S. T., Maski, G., & Sagita, V. D. (2025). The Role of Financial Inclusion in Reducing Household Poverty : Insights from Eastern Indonesia. *Cogent Economics & Finance*, *13*(1), 1–22. https://doi.org/10.1080/23322039.2025.2588925

Keuangan, O. J., & Statistik, B. P. (2024). *Survei Nasional Literasi dan Inklusi Keuangan (SNLIK) 2024*.

Khan, I., Khan, I., Sayal, A. U., & Khan, M. Z. (2022). Does financial inclusion induce poverty, income inequality, and financial stability: empirical evidence from the 54 African countries? *Journal of Economic Studies*, *49*(2), 303–314. https://doi.org/10.1108/JES-07-2020-0317

OECD. (2019). *OECD/INFE Survey Instrument to Measure the Financial Literacy of MSMEs*. 1–42.

Omar, M. A., & Inaba, K. (2020). Does Financial Inclusion Reduce Poverty and Income Inequality in Developing Countries? A Panel Data Analysis. *Journal of Economic Structures*, *9*(1). https://doi.org/10.1186/s40008-020-00214-4

Pratiwi, I. G. A. M. M. A., Suarbawa, I. W., & Kusmawan, I. M. H. (2025). Peran Literasi Keuangan bagi Ibu Rumah Tangga dalam Meningkatkan Kesejahteraan Keluarga. *Jurnal Ilmiah Sains Sosial Kewirausahaan Dan Kebudayaan*, *03*(01), 73–80.

Sekaran, U., & Bougie, R. (2016). Research Methods for Business. A Skill-Building Approach. In *John Wiley & Sons* (Seventh Ed). John Wiley & Sons.

Vovchenko, N. G., Galazova, S. S., Danchenko, E. A., Ivanova, O. B., & Kostoglodova, E. D. (2018). Improvement of Financial Literacy as a Crucial Factor of Economic Development. *European Research Studies Journal*, *21*(1), 16–24. https://doi.org/10.35808/ersj/1154

Yuesti, A., Rustiarini, N. W., & Suryandari, N. N. A. (2020). Financial Literacy in The COVIDd-19 Pandemic: Pressure Conditions in Indonesia. *Entrepreneurship and Sustainability Issues*, *8*(1), 884–898. https://doi.org/10.9770/jesi.2020.8.1(59)