

# Mediating effect of social capital in enhancing financial inclusion - Evidence from Indonesian Citizens

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**Abstract.** The findings suggest that the higher the literacy level, the greater the chances of accessing financial inclusion. Fintech cannot affect the popularity of financial inclusion. Financial inclusion requires a good understanding so that all stakeholders have a comprehensive understanding of concepts and practices in the field.

**Keywords:** *Financial Literacy, Fintech, Financial Inclusion, Social Capital, Society*

## 1. Introduction

The term financial inclusion has evolved since the 2008 financial crisis, particularly due to the impact of the crisis on BOP groups (low-income, informal, rural, disabled, illegal workers, marginalized communities). It has become a trend. Often unbanked, which is very high outside of industrialized countries. G20 members decided in 2009 in Pittsburgh that this group's financial access needed to be improved. Then, in 2010, at the Toronto Summit, they released nine innovative financial inclusion principles to increase financial inclusion in developing countries. These principles are leadership, diversity, innovation, protection, empowerment, collaboration, knowledge, proportionality and framework. (Bank Indonesia, 2020).

Bank Indonesia has a policy to promote financial inclusion called the Financial Inclusion Policy. The policy aims to extend financial services to the lower and middle class. Financial services in Indonesia are not only an upper middle class problem, but also a lower middle class problem. All Indonesian citizens have the right to easy access to financial products. Bank Indonesia has an index called IKI – Financial Inclusion Index, which aims to measure the level of financial inclusion. IKI consists of three main variables namely access (access), use (usage) and quality (quality). Financial inclusion includes all efforts aimed at removing any barriers to public access to financial services (Rusdianasari, 2018).

The Organization of the Forum for Economic Co-operation and Development (OECD) states that strengthening financial systems and improving people's well-being requires a combination of financial inclusion, financial literacy and consumer protection. The existence of financial inclusion may address several reasons, including overcoming the lack of financial literacy in Indonesia. One kind of intelligence that modern people must have is financial quotient, that is, the intelligence to manage personal financial assets. Financial knowledge and

skills to handle personal finances are important for everyday life (Financial Services Authority, 2016a).

Financial literacy is essential to avoiding financial problems, as individuals often face compromises, situations in which they must sacrifice one interest for the benefit of another. By using the right financial management methods, individuals can expect to get the most out of the money they have (Aliyah & Nurdin, 2019).

They have to think creatively to fulfill their personal financial planning and invest according to their monthly spending budget. On the other hand, the level of financial literacy determines savings, investment behavior and debt ratio management (Lusardi, 2019). Higher levels of financial literacy will encourage people to accumulate wealth. In some cases, financial literacy is also why people plan for retirement and calculate financial risk.

The rising use of the Internet by the general public in Indonesia characterizes the digital age. With the development of Internet users in Indonesia, it has become one of the largest Internet users in the world. According to statistics, the number of Indonesian netizens in 2018 was 95.2 million, an increase of 13.3% from 84 million in 2017. Next year, from 2018 to 2023, Indonesian Internet users will grow by an average of 10.2%. The number of Internet users in Indonesia is expected to reach 107.2 million in 2019, an increase of 12.6% from 2018. By 2023, the number of Internet users in Indonesia is predicted to reach 150 million. eMarketer estimates that Indonesia's internet users will reach 112 million people, beating Japan in third place, where the growth in the number of internet users is slower. According to APJII survey data, the number of Internet users in Indonesia reached 142 million in 2017, and the penetration rate reached 54.69% of the total population. Internet access grew by 7.9% year-on-year last year and more than 600% over the past 10 years. Therefore, at this time, the activities of modern society tend to use technology more intensively to meet their needs. It has become a habit for today's society, when carrying out daily activities using technology, such as buying food, ordering transportation, sending goods, ordering tickets, and doing business. Due to technology (Ummanah et al., 2021).

Essentially, fintech is a technology-based financial service. Paying electricity bills online, vehicle payments or insurance premiums are some examples of fintech products that are commonly used in everyday life, as is sending money through online banking or checking account balances (Kusuma, 2019). The emergence of financial applications that are easily accessible to all users (fintech) has increased public access to financial products and services (financial inclusion), which is inextricably linked to public financial competence and knowledge (financial literacy) (Bachtiar et al. , 2022). With the public's easy access to financial products and services, the community will be more productive, have purchasing power and achieve the objectives of developing the pillars of this financial inclusion strategy (Fitriani, 2018).

Fintech has the advantage of helping Indonesians who are not served by the traditional financial industry, according to the Financial Services Authority (2016). As well as being an alternative for services outside the traditional financial industry that require alternative financing that is democratic and transparent (Kusuma, 2020). Fintech is expected to save time, thought, effort, and costs. Fintech is an innovative service in the financial sector that uses or takes advantage of the role of technology (Rachman & Salam, 2018).

Talent issues are still the focus and foundation of livable cities in the 21st century. Human resources or human capital is a very important strategic asset of a city. The investment in human resource improvement is not small, but it is difficult to feel the impact in the short term. Generating the required human resources requires a lot of time and patience as well as the right approach. One of the capitals that people are born with is social capital. Social capital

is the filter through which human and financial capital flows from parents and society to children for better education. When social capital is low, this can lead to conflicting values and low levels of trust. This shows the importance of increasing social relational engagement in transitional countries or regions in order to create human resources for better development. In the process of promoting the economy and development of a region, it is also inseparable from the important role of social capital in society, which can make the people of a region willing to contribute and participate in the development of the region (Natalia et al., 2020).

The phenomena related to financial inclusion in this study aims to promote the interaction between the community and financial institutions in Tegal City. Financial literacy and inclusion levels in Tegal City are currently low. According to the OJK, the financial inclusion rate in 2019 was 31.52%. While the banking industry has a literacy rate of 28.94 percent, insurance has a rate of 15.76 percent, pawnshops have a rate of 17.82 percent, financing institutions have a rate of 13.05 percent, pension funds have a rate of 10.91 percent, and the lowest capital market has a rate of 4.40 percent. Therefore, it is necessary to seek as much education as possible so that the public understands the features, benefits, costs and risks of purchasing financial services products. To date, many people still purchase and use financial products and services without understanding their features, benefits, costs and risks. As a result, many of them become victims of financial institution crime, become involved in fraudulent investments, or become victims of loan sharks (Financial Services Authority, 2016b).

## 2. METHODOLOGY

Place of activity for research is a place where research is carried out in order to obtain the information needed by researchers to carry out research activities. Implementation of research in the city of Tegal. The time for conducting this research is in June-July 2022. This research is a type of quantitative research with a survey approach.

The population is the general area of objects or subjects with certain traits and characteristics that researchers apply to research and draw conclusions. The population in this study is the people of the city of Tegal. The sampling method in this study was carried out by random sampling, where the samples were taken randomly so that each individual had the same opportunity to be sampled.

The following is the data for the people of Tegal City in 2021:

**Table 1**  
**Tegal City Community Data 2021**

The number of people in sub-districts in the city of Tegal in 2021							
No.	Subdistrict	Man		Woman		Amount	
	Name	Amount	%	Amount	%	District	%
1	South Tegal	35,141	50.24%	34,804	49.76%	69,945	100%
2	East Tegal	42,564	49.89%	42,753	50.11%	85,317	100%
3	West Tegal	35,653	50.77%	34,576	49.23%	70,229	100%
4	Margadana	144,684	50.37%	142,545	49.63%	287,229	100%
	Total population	258,042	50.33%	254,678	49.67%	512,720	100%

Based on the calculations, the results obtained were 99.9804 or rounded up to 100, so that a sample of 100 people was taken in Tegal City. Sampling was carried out using random sampling technique, namely the technique of determining the sample based on the time the researcher conducted the research.

The data used in this study is the original data, namely H. H. Sources of research data obtained directly from primary sources (not through an intermediary), usually from questionnaires distributed to respondents. Later the data obtained will be processed using Smart PLS, then analyzed with descriptive analysis and causal analysis.

### 3. RESULTS

#### RESULTS OF DATA ANALYSIS

##### Results of Validity and Reliability Test

The combined reliability of construct measures can be assessed using two types of measures, internal consistency and Cronbach's alpha. If the comprehensive reliability of the indicator set measuring a variable is  $\geq 0.7$ , even if it is not standard, it has good comprehensive reliability. In this study it was proven that the composite reliability value was proven to be  $> 0.7$ , which means it has good composite reliability.

**Table 2**

##### *Composite Reliability And Discriminate Validity*

AVE was calculated as the mean of standardized stressors divided by the number of

	Chrombach's alpha	rho	Composite Reliability	AVE
M	0.846	0.871	0.781	0.724
X1	0.827	0.712	0.719	0.780
X2	0.805	0.831	0.848	0.846
Y	0.784	0.825	0.837	0.823

indicators. AVE can demonstrate the ability of latent variable values to represent raw data values. The larger the AVE value, the more it explains the value of the indicator that measures the latent variable. A commonly used AVE cut-off value is 0.50, and the minimum AVE value is 0.50, which is a good measure of convergent validity, meaning that the index in the construction has a low probability (less than 0.50) of entering another variable, so the probability index will be Converge and enter the construct with a block median greater than 50%. In this study, it was demonstrated that AVE values  $> 0$ ,

##### Statistical T Test Results

In this study, the hypothesis is seen through the value of the t-statistic. Exogenous variables are declared significant in terms of endogenous variables if the results of the t statistic  $> t$  table are 1.96 (Sig = 5%). The results of the t statistics for each variable can be seen in the following table:

**Table 3**

### Hypothesis Testing Results

	Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics ( O/...	P Values
m -> y	1.212	1.107	0.211	5.755	0.000
x1 -> m	0.541	0.509	0.080	6.746	0.000
x1 -> y	-0.478	-0.389	0.151	3.164	0.002
x2 -> m	0.475	0.501	0.057	8.298	0.000
x2 -> y	0.205	0.228	0.112	1.827	0.068

Source: Smart PLS 3.0 Data Processing Results, 2017

Based on the table, it shows that the value of t statistics on the variable financial literacy on social capital, finance on social capital, financial literacy on financial inclusion, social capital on financial inclusion each has a significant effect because it has a t value > 1.96 (Sig = 5%) . The results of the original sample which are positive show a unidirectional (positive) effect between variables, except for financial literacy on financial inclusion which has an opposite or negative effect. Meanwhile, the relationship between finance and financial inclusion is not significant because it has a t < 1.96 (Sig = 5%). The original sample results with a positive value indicate a unidirectional effect between variables.

### Path Coefficients Test Results

The path coefficient test results of each variable are shown in the table below:

**Table 4**

### Path Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
x2 -> m -> y	0.576	0.551	0.105	5.509	0.000
x1 -> m -> y	0.655	0.569	0.148	4.419	0.000

Source: Data Processing Results SmartPLS 3.0, 2017

Below are the results of the intervention test:

- Based on the path coefficient result table, it shows that social capital can become a financial literacy variable, and the mediating effect on inclusive finance is 5.509, and the coefficient value is  $0.000 < 0.005$ . These results therefore support the hypothesis that social capital can influence the impact of financial literacy variables on financial inclusion.
- Based on the Path coefficient results table, it shows that social capital is able to become a mediator for the finance variable on financial inclusion of -4.419 with a coefficient value of  $0.000 < 0.005$ . These results thus support the hypothesis that social capital can moderate the impact of financial variables on financial inclusion.

## 4. DISCUSSION

### 1. The Relationship Between Financial Literacy and Financial Inclusion

Based on the above data analysis results, it can be seen that financial literacy has a positive and significant impact on inclusive finance in Tegal City, with a nominal value of 3.164 > 1.96 and a coefficient of  $0.000 < 0.005$ .

These results are consistent with the research of (Sari & Kautsar, 2020): "Financial literacy has a positive impact on the financial inclusion of the society, because the financial literacy level of the society belongs to the higher financial literacy category, and it also

improves people's awareness. Understanding Financial The importance of knowledge and skills, both now and in the future, so that they can use financial products and services. Wisely and make the right decisions. The government and financial institutions in their practical implications, feel the need to pay attention to the level of public financial literacy because it can affect the increase in financial inclusion.

Apart from that, Pradana & Suarmanayasa, (2022) shows that financial literacy is related to financial inclusion. In terms of benefits, financial literacy is the first step in raising community awareness to make informed financial decisions and perform good money management activities that can be implemented through financial literacy. Financial literacy provides benefits to individuals and the economy of a country. People who understand financial literacy can make the right decisions and demand better quality financial services.

## **2. The Relationship Between Fintech and Financial Inclusion**

Based on the results of the data analysis above, it shows that fintech has no positive and significant effect on the financial inclusion of the people of Tegal City with a nominal value of  $1.827 < 1.96$  with a coefficient of  $0.068 > 0.005$ .

This study is consistent with the findings of Sari & Kautsar, (2020). Fintech has not affected the financial inclusion of people in Surabaya City as people are not actively using Fintech to access their accounts at banking institutions for saving and borrowing, including debit cards, credit cards, mobile banking and internet banking, but instead use Fintech to access not Other products and services that promote financial inclusion. The government and financial institutions in their practical implications, feel the need to pay attention to factors other than financial technology in order to increase financial inclusion.

## **3. The Relationship Between Financial Literacy and Social Capital**

In this study, financial literacy had a positive and significant effect on the social capital of the Tegal city community with a nominal value of  $6.746 > 1.96$  with a coefficient of  $0.000 < 0.005$ .

In line with Bongomin et al., (2016) which states that there is a positive influence between social networks and financial inclusion in rural Uganda. Bongomin et al., (2017) argues that the presence of social capital can increase the level of money lending to the poor based on trust and the availability of information gathered over time between lenders and borrowers.

## **4. The Relationship Between Financial Technology and Social Capital**

In this study, financial inclusion had a positive and significant effect on the social capital of the Tegal city community with a nominal value of  $8.298 > 1.96$  with a coefficient of  $0.000 < 0.005$ .

That the conditions under which a person has fintech capabilities will have an influence on the social network encountered. It will have an influence when the use of fintech is in accordance with their social capital, such as the privilege they have in financial matters.

## **5. The Relationship Between Social Capital and Financial Inclusion**

Based on the results of the analysis of the data, it was found that social capital had a positive and significant effect on the financial inclusion of the Tegal city community with a nominal value of  $5.755 > 1.96$  with a coefficient of  $0.000 < 0.005$ .

This study is supported by the results of Pulungan & Ndruru, (2019)). Social capital has a positive and significant impact on the financial inclusion of UMSU students. That is, the greater the students' confidence in UMSU's inclusive finance, the stronger the development of inclusive finance.

Financial services and products can be used and provide benefits for welfare, there is a cooperation between social capital with self-confidence, solidarity, knowledge, understanding,

norms, rules. So that the role of social capital is very important as a social asset, individuals and groups can work together efficiently (Intishar, 2020).

Social capital as a series of values that are shared among its members in a society so as to enable collaboration. In this way, social capital can slowly increase the financial inclusion of societies, especially in rural areas (Suryani & Israfiani, 2021)

#### **6. Social Capital Moderates The Relationship Between Financial Literacy and Financial Inclusion**

Based on the above analysis results, it is shown that in this study, social capital has a positive and significant moderating effect on the relationship between financial literacy and inclusive finance in Tegal City, with a nominal value of  $5.509 > 1.96$  and a coefficient of  $0.000 < 0.005$ .

This result is consistent with the research of Clara & Krisnawati, (2020). The regression results of his study show that social capital has a significant impact on financial inclusion after controlling for financial literacy, sig  $0.000 < 0.05$ , regression coefficient (b) = 0.163 Due to acceptance of H3, financial literacy has a significant impact on financial inclusion through Social capital directly and indirectly affects financial inclusion. These results also reinforce the same findings as research conducted by Kamukama & Natamba, (2013) that social capital partially mediates financial access activities in a country.

Bongomin et al., (2017) Exploring how social capital indoctrination influences the relationship between financial literacy and financial inclusion in Ugandan communities. As well as the significant influence of the network or the surrounding environment on the relationship between financial literacy and financial inclusion. The level of individual financial literacy and the influence of the group's environment will increase a person's financial inclusion which will further increase their interaction with financial institutions.

#### **7. Social capital regulates the relationship between fintech and inclusive finance**

Based on the results of the data analysis above, in this study social capital had a positive and significant effect in moderating the relationship between financial technology and the financial inclusion of the people of Tegal City with a nominal value of  $4.419 > 1.96$  of  $4.419 > 1.96$ .

In a study by Okello Candiya Bongomin et al., 2017), the World Bank (2010) also highlighted that social capital can improve market functioning in the economy. Social capital can encourage better use of fintech capabilities to improve the Indonesian economy.

#### **AUTHORS' CONTRIBUTIONS**

Research planning was initiated by D.I, then initial observations and supporting data collection were carried out together with J and N.W.C. The preparation of the research concept was carried out by D.I together with A.F. B.F. N.W.C and J drafted the script.

After that, D.I and A.F did the sample calculation. B.F determined the research method.

The discussion of the questionnaire was carried out by all authors, namely D.I, A.F, BF, N.W.C, and J. The implementation of the research was carried out together by dividing the members into 2 groups.

After the research data was collected, the data was processed by D.I and J. Then analyzed and interpreted together with A.F, B.F and N.W.C.

A.F and N.W.C reorganized the script as a whole. B.F prepared the draft manuscript for submission. All authors reviewed the results and approved the final manuscript.

#### **ACKNOWLEDGMENTS**

We would like to express our deepest gratitude to our Savior and miraculous Allah, for His amazing ways in guiding us to complete this manuscript and for His continual love, guidance, and blessing during our research. Our sincere gratitude goes to our parents, for their love, efforts, prayers, and support.

To all the authors for their cooperation so that all stages of the research were completed.

To the people who are willing to help to be used as samples in this study.

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