

DETERMINANT OF ISLAMIC FINANCIAL INCLUSION IN DIGITAL ERA: CROSS-PROVINCE ANALYSIS

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Abstrak: Sektor keuangan syariah adalah sektor yang paling vital pada sistem ekonomi syariah di Indonesia saat ini. Oleh sebab itu, inklusi keuangan syariah perlu untuk lebih diperhatikan dalam hal pengukuran serta pengambilan kebijakan dalam peningkatannya khususnya dalam menghadapi era digitalisasi. Penelitian ini mencoba melakukan pengukuran inklusi keuangan syariah pada tingkat provinsi di Indonesia melalui dimensi aksesibilitas, ketersediaan dan pemanfaatan serta menganalisis dampak dari adanya digitalisasi terhadap inklusi keuangan syariah tersebut. Pengukuran dilakukan dengan menggunakan Indeks yang dibuat oleh Sarma sedangkan analisis pengaruh digitalisasi terhadap inklusi keuangan syariah menggunakan fixed effect model pada balanced panel data. Hasil pengukuran menunjukkan bahwa provinsi yang maju secara ekonomi cenderung memiliki tingkat inklusi keuangan syariah yang lebih tinggi dibandingkan dengan provinsi yang sedang berkembang, selain itu provinsi dengan penduduk Muslim mayoritas juga memiliki tingkat inklusi keuangan syariah yang lebih tinggi dibandingkan dengan provinsi

dengan penduduk Muslim sebagai minoritas. Pada analisis data panel, ditemukan bahwa penetrasi internet berpengaruh negatif dan signifikan terhadap inklusi keuangan syariah, hal tersebut menunjukkan bahwa mayoritas masyarakat di Indonesia masih menggunakan internet untuk mengakses konten hiburan dan belum dioptimalkan untuk penggunaan layanan keuangan. Meskipun demikian, hadirnya platform fintech syariah mampu memberikan pengaruh positif yang signifikan terhadap inklusi keuangan syariah di Indonesia. Variabel tingkat penguasaan telepon seluler tidak berpengaruh signifikan terhadap tingkat inklusi keuangan syariah dan rata-rata lama sekolah berpengaruh negatif signifikan terhadap inklusi keuangan syariah.

Kata kunci: Digitalisasi, Fintech Syariah, Inklusi Keuangan Syariah

Abstract: *In recent years, the Islamic financial sector has become one of the most vital sectors in the Islamic economic system in Indonesia. Therefore, more attention needs to be paid to the measurement of Islamic financial inclusion and its and policy making, especially in facing the digitalization of economy, because the digitalization can be a momentum that provides opportunities as well as threats to Islamic finance. This study attempts to measure Islamic financial inclusion at the provincial level in Indonesia through the dimensions of accessibility, availability and utilization and analyzes the impact of digitalization on Islamic financial inclusion. Measurements are made using the Sarma Index, while the analysis of the impact of digitalization on Islamic financial inclusion employs the fixed effect model on the balanced panel data. The measurement results show that developed provinces tend to have higher levels of Islamic financial inclusion compared to developing provinces. Furthermore, provinces with a Muslim majority have a higher level of Islamic financial inclusion compared to provinces with a Muslim minority populations. In the panel data analysis, it was found that internet penetration has a negative and significant effect on Islamic financial inclusion, which shows that the majority of people in Indonesia still use the internet to access entertainment content and that internet use has not been optimized to access financial services. Nevertheless, the presence of the Islamic fintech platforms has a significant positive effect on Islamic financial inclusion in Indonesia. The variable level of cell phone usage has no significant effect on the level of*

Islamic financial inclusion and the average length of schooling has a significant negative effect on Islamic financial inclusion.

Keywords: *Digitalization, Islamic Fintech, Islamic Financial Inclusion*

Introduction

The Islamic financial sector is one of the most vital sectors in the current Islamic economic system. Islamic finance is still at the forefront of Islamic economic development, especially in Indonesia. However, even though Indonesia has a majority Muslim population of up to 85% of the total population, the services of the Islamic financial sector have not been equally accessible to every member of society across every province in Indonesia. The ability to access Islamic financial services is known as Islamic financial inclusion. Based on Presidential Regulation No. 82 of 2016, financial inclusion is a condition in which every member of the community has access to a variety of official financial institution that have high-quality, well-timed, efficient and secure services at affordable costs according to their respective needs and abilities. However, Indonesia does not yet have an official standard for measuring Islamic financial inclusion.

The Global Financial Inclusion (Findex) data from the World Bank shows that one of the factors that determines financial inclusion in Indonesia, namely account ownership by adults in general, has increased rapidly from 20% in 2011 to 48% in 2017, however this figure is still lagging behind other developing countries such as Malaysia, Thailand, India and Brunei Darussalam in terms of ownership of accounts at financial institutions as shown in Figure 1.

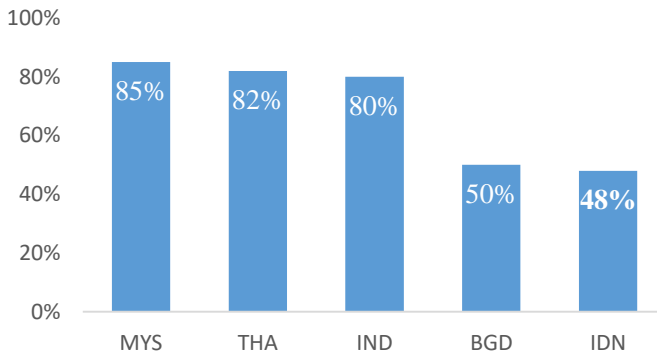


Figure 1
Percentage of Population Ages 15+ Who Have Accounts at Financial Institutions in 2017

Source : Global Findex Database World Bank (2019)

The above conditions can be caused by disproportionate development in Indonesia which is overly centered in the Province of the Special Capital Region of Jakarta, resulting in development inequality and which subsequently leads to under-development of the Islamic financial sector in other provinces that are less affected by national development. Apart from that, the geographical context of Indonesia, which is archipelagic in nature may also be a barrier to Islamic financial inclusion, as these geographical conditions set Indonesia apart from those of the comparable countries in the chart above.

Financial inclusion has an important role in economic development. There is a positive correlation between economic growth and various dimensions of financial inclusion, both of which have a

causal relationship¹. Accessibility to financial services also increase economic activity and play a role in poverty alleviation². It also found that there is a strong correlation between increasing financial inclusion and decreasing income inequality³. Seeing the importance of the role of financial inclusion in socio-economic development, Islamic financial inclusion in Indonesia deserves more attention, especially in terms of measuring and implementing policies to increase inclusion in the current digital era. The existence of the internet and financial technology platforms as a form of digitalization can be an opportunity to increase Islamic financial inclusion in Indonesia and must be utilized as effectively as possible. Based on the background above, the problem formulations in this study are as follows: What is the level of Islamic financial inclusion across provinces in Indonesia and What are the determinants that affect the level of Islamic financial inclusion in each province in Indonesia in the digital era?

Literature Review

Based on the Presidential Regulation of the Republic of Indonesia Number 82 of 2016 about the National Strategy for Financial Inclusion, financial inclusion is a condition in which every member of society has access to a variety of formal financial services that have quality, timely, smooth and safe at affordable costs according to their respective needs

¹ Sharma, D. (2016). Nexus between financial inclusion and economic growth Evidence from the emerging Indian economy. *Journal of Financial Economic Policy*, 8(1), 13–36. <https://doi.org/10.1108/JFEP-01-2015-0004>

² Bruhn, M., & Love, I. (2009). *The Economic Impact of Banking the Unbanked Evidence from Mexico*.

³ Park, C., & Mercado, R. V. (2015). *Financial Inclusion, Poverty, and Income Inequality in Developing Asia*.

and abilities. The financial services provided by these formal financial institutions must be acceptable to the community according to their needs and easily accessible. The existence of these regulations is also intended for development and improvement of public welfare through the financial sector.

According to Bank Indonesia, there is no standard definition of financial inclusion, but various institutions are attempting to define it⁴. For example, a research define it as a situation in which all working-age adults have effective access to credit, savings, payments and insurance from formal financial service providers⁵. Effective access involves providing services that are convenient and accountable at an affordable cost to the community and sustainable for service providers with the result that people prefer to use formal over informal financial services.

Meanwhile, according to The Financial Action Task Force, financial inclusion includes providing access to a series of formal financial service products that are safe, comfortable and affordable for vulnerable groups such as low-income, rural communities and less documented requirements⁶. According to The Reserve Bank of India, financial inclusion is the process of ensuring that access to financial products and services needed by society can be received with the right targets, especially by vulnerable and low-income groups at affordable,

⁴ www.bi.go.id

⁵ Cull, R., Demirgüç-kunt, A., & Lyman, T. (2012). Financial Inclusion and Stability: *CGAP Brief, May* (2008), 1–4.

⁶ FATF. (2011). FATF Guidance on Anti-money laundering and terrorist financing measures and Financial Inclusion. In *The Financial Action Task Force* (Issue June 2011).

fair and transparent costs by financial institutions⁷. According to Khan, financial inclusion plays an important role in financial system stability and economic growth, so financial inclusion is an important thing to improve⁸.

In measuring the financial inclusion index, Sarma tried to formulate a financial inclusion index measurement based on multidimensional factors consisting of dimensions of accessibility, availability and utilization of financial services⁹. The dimension of accessibility is used to measure financial penetration to society through the amount of third party funds in financial institutions per adult population. The dimension of availability is used to measure the ability of society to use formal financial services through the number of branches of financial institutions per adult population. Meanwhile, the utilization dimension is used to measure the use of finance to meet people's needs through the percentage of financing for Gross Domestic Product. Other researchers, Camara & Tuesta measured the financial inclusion index through three similar dimensions but use different way to calculate, the first dimension is 'usage' that obtained from the proportion of the adult population saving and loans from formal financial institutions, the second dimension is 'barrier' that use the percentage of the non-bankable adult population, and the third dimension is 'access' by using the number of ATMs per 100,000 adult population, number of banking branches per

⁷ The Reserve Bank of India. (2008). *Financial Inclusion in India – An Assessment*.

⁸ Khan, S. H. R. (2011). Financial inclusion and financial stability : are they two sides of the same coin ? *Indian Bankers Association & Indian Overseas Bank, Chennai, November*, 1–12.

⁹ Sarma, M. (2008). *Index of Financial Inclusion: Some Empirical Results* (No. 215; Issue 215).

100,000 adult population, number of ATMs per 1000 km² and number of banking branches per 1000 km² in areas¹⁰.

After determining the method of calculating the index of financial inclusion, Sarma & Pais also tried to measure the financial inclusion index in 49 countries and found that the highest level of financial inclusion was in Austria and the lowest in Madagascar¹¹. In addition, it was also found that financial inclusion has a relationship with socio-economic conditions and is positively correlated with the Human Development Index (HDI) and infrastructure in a country. The correlation of financial inclusion to HDI was also proven^{12, 13}.

Furthermore, Camara & Tuesta¹⁴ have also tried to measure the financial inclusion index in 82 developed and developing countries with Principal Component Analysis (PCA) method and found that South Korea has the highest financial inclusion index while Congo has the lowest financial inclusion index among other countries. The strength of PCA tools is it has comprehensive calculation by using weighting according to the priority dimensions, in this study the dimension that is considered as the most important aspect is accessibility. The same thing

¹⁰ Camara, N., & Tuesta, D. (2015). Measuring Financial Inclusion: A Multidimensional Index. *SSRN Electronic Journal*, September.

¹¹ Sarma, M., & Pais, J. (2011). Financial Inclusion and Development: A Cross Country Analysis. *Journal of International Development*, 23(5), 613–628.

¹² Umar, A. I. (2017). Index of Syariah Financial Inclusion in Indonesia. *Buletin Ekonomi Moneter Dan Perbankan*, 20(1), 99–126.

¹³ Ali, M. M., Sakti, M. R. P., & Devi, A. (2019). Developing An Islamic Financial Inclusion Index For Islamic Banks In Indonesia: A Cross-Province Analysis. *Journal of Islamic Monetary Economics and Finance*, 5(4), 691–712.

¹⁴ Camara, N., & Tuesta, D. loc. cit.

was done by Hanivan & Nasrudin¹⁵ specifically in the Indonesian context and it was found that the most priority dimension aspect in determining financial inclusion is utilization. Research on other measures of financial inclusion was also conducted by Demirguc-Kunt & Klapper globally on 148 countries using Global Findex data, this research also proves that high-income countries tend to have more inclusive financial services, besides that it was also found that 50% from a sample of adults have not been reached by financial services due to high costs, distance reason and lack of documentation¹⁶.

In addition to the above factors, individual variables such as education quality, gender, age and economic welfare of a person also have a positive relationship with financial inclusion¹⁷. Not only individual factors, the macroeconomic conditions of a country will also affect the level of financial inclusion in the country, that financial inclusion is positively correlated with economic growth. Even the financial system stability of a country is also related to financial inclusion in that country¹⁸.

Based on the Regulation of Financial Services Authority No. 77 of 2016, financial technology or known as fintech, has started operating legally in Indonesia in 2016 and fintech with sharia principles was first present in 2017, namely Ammana Fintek and Investree. Then the regulations regarding Islamic fintech were strengthened by the Fatwa of

¹⁵ Hanivan, H., & Nasrudin, N. (2019). a Financial Inclusion Index for Indonesia. *Buletin Ekonomi Moneter Dan Perbankan*, 22(3), 351–366.

¹⁶ Demirguc-Kunt, A., & Klapper, L. (2012). *Measuring Financial Inclusion The Global Findex Database* (Issue April).

¹⁷ Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. *Journal of Advanced Research*, 6(1), 46–57.

¹⁸ Dienillah, A. A., & Anggraeni, L. (2016). Dampak Inklusi Keuangan terhadap Stabilitas Sistem Keuangan di Asia. *Buletin Ekonomi Moneter Dan Perbankan*, 18(4), 409–430.

the Indonesian Ulama Council No. 117 of 2018. Digitalization of the financial sector through fintech can be an opportunity to increase financial inclusion¹⁹, this presence of Islamic fintech can support Islamic financial inclusion as well. A Malaysian case study which found that fintech can increase financial inclusion, especially fintech for investment purposes²⁰. The existence of investment-based Islamic fintech is attractive to people in Indonesia because it tends to provide a higher profit sharing rate than other investment instruments²¹.

In Indonesia, Islamic financial inclusion itself does not have a definite measure, but some other researchers have tried to measure it and found that the highest level of Islamic financial inclusion in Indonesia is in the provinces of Bangka Belitung and Yogyakarta, while the lowest level of Islamic financial inclusion is in the province of Nusa East Southeast²². However, there is different results where sequentially the highest level of Islamic financial inclusion is in the provinces of the Special Capital Region (DKI) Jakarta, East Java and Aceh, while the lowest level of Islamic financial inclusion is in the province of East Nusa Tenggara²³. Both researchers also analyzed the correlation between HDI

¹⁹ Marginingsih, R. (2019). Analisis SWOT Technology Financial (FinTech) Terhadap Industri Perbankan. *Cakrawalah*, 19(1), 55–60.

²⁰ Ibrahim, S. A., Mohd Roslen, S. N., Mohamad Salleh, N., Theam, T. S., & Lai, K. Y. (2018). Islamic Micro Financing: Crowd-Funding as a Drive to Improve Financial Inclusion in Malaysia. *International Journal of Engineering & Technology*, 7(4), 18–20.

²¹ Abdullah, Z., & Susanto, A. A. (2019). The Role of Investment-Based Islamic Crowdfunding for Halal MSMEs: Evidence from Indonesia. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah*, 11(2), 289–302. <https://doi.org/10.15408/aiq.v11i2.13623>

²² Umar, A. I. (2017). Index of Syariah Financial Inclusion in Indonesia. *Buletin Ekonomi Moneter Dan Perbankan*, 20(1), 99–126.

²³ Ali, M. M., Sakti, M. R. P., & Devi, A. (2019). loc. cit.

and Islamic financial inclusion and found that there was a positive relationship between the two. Thus, there is still a research gap in the form of Islamic financial inclusion determination based on macro-economic development factors with the digitalization of the financial sector via the internet and fintech. This research tries to fill that gap.

Methods

This study adopts indicators from Sarma as a measuring tool for the Islamic Financial Inclusion Index (ISFI) in each province in Indonesia with three dimensional approaches, namely accessibility, availability and utilization²⁴. The accessibility dimension is obtained through the proportion of total third party funds to the adult population per 1000 people. The availability dimension is obtained from the sum of the total branches of Islamic banking divided by the adult population per 100,000 people, while the utilization dimension is obtained from the percentage of the ratio of total financing to the provincial Gross Regional Domestic Product. The total province measured in this study covers 33 of the 34 provinces in Indonesia from 2014 to 2019. North Kalimantan Province is a new province that does not yet have sufficient data for measurement and analysis. The method of measuring the Islamic Financial Inclusion Index uses indicators with calculations as shown in Table 1.

²⁴ Sarma, M. (2012). *Index of Financial Inclusion – A measure of financial sector inclusiveness* (Berlin Working Papers on Money, Finance, Trade and Development Working, Issue 07).

Table 1
Method of Islamic Financial Inclusion Measurement

No	Dimension	Description	Calculation
1	Accessibility (d ₁)	Measurement of penetration of Islamic finance in society	$d_1 = \frac{\text{Third Party Funds } iB_{it}}{\text{Adult Population}_{it}} \times 1.000$
2	Availability (d ₂)	Measurement of the ability to provide formal Islamic financial services	$d_2 = \frac{\text{Total Branches } iB_{it}}{\text{Adult Population}_{it}} \times 100.000$
3	Utilization (d ₃)	Measuring the extent to which Islamic finance is utilized by the community	$d_3 = \frac{\text{Total Financing } iB_{it}}{\text{GDP Regional}_{it}}$

*Note: Adopted²⁵

After measuring the contribution of each dimension (d_i), it is assumed that each dimension has equal priority so that it is given the same weight (w_i), namely 1/3, so that the total weight is 1. Next, the calculation is carried out as follows:

$$d_i = w_i * \frac{A_i - m_i}{M_i - m_i} \tag{1}$$

$$X_1 = \frac{\sqrt{d_1^2 + d_2^2 + d_3^2}}{\sqrt{w_1^2 + w_2^2 + w_3^2}} \tag{2}$$

²⁵ Sarma, M. (2012). loc. cit.

$$X_2 = 1 - \frac{\sqrt{(w_1 - d_1)^2 + (w_2 - d_2)^2 + (w_3 - d_3)^2}}{\sqrt{w_1^2 + w_2^2 + w_3^2}} \quad (3)$$

$$ISFI = \frac{1}{2} * [X_1 + X_2] \quad (4)$$

Then, after obtaining the Islamic Financial Inclusion Index in each province in Indonesia, this index becomes the dependent variable in the balanced panel data analysis. The independent variables used and their sources are listed in Table 2.

Tabel 2.
Types and Sources of Data

No	Variables	Unit	Source
1	Third Party Fund of Islamic Banks	IDR	Financial Service Authority
2	Total Branches of Islamic Banks	Unit	Financial Service Authority
3	Total Financing of Islamic Banks	IDR	Financial Service Authority
4	Adult Population	Person	Central Bureau of Statistics
5	Internet Penetration Rate	Percentage	Central Bureau of Statistics
6	Average Length of School Year	Year	Central Bureau of Statistics
7	Islamic Financial Technology	Dummy	Financial Service Authority
8	Cellphone Penetration Rate	Percentage	Central Bureau of Statistics

Panel data analysis technique has advantages over other analysis techniques because it is able to accommodate differences in the characteristics of each individual within a certain time. The selection of the best panel data regression model is carried out through a series of

tests, namely the Chow Test, Hausman Test and Lagrangian Multiplier Test, besides that, the classical assumption test is also carried out. The models used are as follows:

$$ISFI_{it} = b_0 + b_1internet_{it} + b_2fintech_{it} + b_3cellphone_{it} + b_4schoolrate_{it} + e_{it}$$

Where,

- ISFI = Index of Islamic Financial Inclusion (index)
- Internet = Internet Penetration Rate (%)
- Fintech = Dummy of Islamic Financial Establishment, start from 2017
- Cellphone = Cellphone Penetration Rate (%)
- Schoolrate = Average Length of School Year (year)

Result and Discussion

After calculating the three dimensions of Islamic financial inclusion in 33 provinces in Indonesia from 2014-2019, through calculations that adopt indicators from Sarma (2012), the level of Islamic financial inclusion in each province in Indonesia is obtained as shown in Table 3.

Table 3
Islamic Financial Inclusion Level in 33 Provinces in Indonesia 2014-2019

Province	Index of Islamic Financial Inclusion						
	2014	2015	2016	2017	2018	2019	Average
Aceh	0,783	0,794	0,928	0,930	0,926	0,930	0,882
Bali	0,343	0,355	0,242	0,238	0,235	0,228	0,274

Province	Index of Islamic Financial Inclusion						
	2014	2015	2016	2017	2018	2019	Average
Banten	0,600	0,597	0,437	0,450	0,469	0,460	0,502
Bengkulu	0,721	0,681	0,514	0,520	0,551	0,514	0,583
D.I. Yogyakarta	0,838	0,847	0,742	0,753	0,789	0,759	0,788
D.K.I. Jakarta	1,000	1,000	0,980	0,986	0,987	0,981	0,989
Gorontalo	0,551	0,365	0,243	0,196	0,213	0,193	0,293
Jambi	0,606	0,581	0,380	0,381	0,417	0,391	0,459
Jawa Barat	0,624	0,642	0,463	0,450	0,456	0,437	0,512
Jawa Tengah	0,444	0,460	0,335	0,339	0,365	0,338	0,380
Jawa Timur	0,474	0,481	0,334	0,338	0,352	0,335	0,386
Kalimantan Barat	0,616	0,633	0,494	0,491	0,507	0,469	0,535
Kalimantan Selatan	0,770	0,782	0,652	0,695	0,667	0,636	0,700
Kalimantan Tengah	0,315	0,343	0,218	0,233	0,235	0,219	0,260
Kalimantan Timur	0,674	0,708	0,645	0,636	0,643	0,632	0,656
Kep. Bangka Belitung	0,560	0,527	0,433	0,389	0,348	0,346	0,434
Kep. Riau	0,723	0,725	0,669	0,645	0,640	0,603	0,667
Lampung	0,413	0,393	0,295	0,296	0,308	0,283	0,331
Maluku	0,116	0,127	0,108	0,113	0,119	0,092	0,112
Maluku Utara	0,355	0,359	0,306	0,394	0,430	0,421	0,377
Nusa Tenggara Barat	0,655	0,642	0,486	0,543	0,821	0,821	0,661
Nusa Tenggara Timur	0,025	0,021	0,004	0,000	0,005	0,005	0,010
Papua	0,130	0,131	0,082	0,077	0,075	0,060	0,092

Province	Index of Islamic Financial Inclusion						
	2014	2015	2016	2017	2018	2019	Average
Papua Barat	0,186	0,193	0,166	0,156	0,148	0,136	0,164
Riau	0,549	0,529	0,401	0,389	0,401	0,400	0,445
Sulawesi Barat	0,206	0,268	0,122	0,158	0,200	0,204	0,193
Sulawesi Selatan	0,620	0,635	0,441	0,422	0,428	0,408	0,492
Sulawesi Tengah	0,402	0,391	0,248	0,255	0,268	0,250	0,302
Sulawesi Tenggara	0,441	0,413	0,316	0,314	0,311	0,304	0,350
Sulawesi Utara	0,260	0,221	0,112	0,112	0,099	0,113	0,153
Sumatera Barat	0,763	0,752	0,579	0,551	0,542	0,538	0,621
Sumatera Selatan	0,603	0,566	0,382	0,404	0,434	0,424	0,469
Sumatera Utara	0,614	0,627	0,453	0,439	0,454	0,430	0,503
National Average	0,515	0,509	0,400	0,403	0,419	0,405	0,449

Source: Author's Calculation (2020)

DKI Jakarta Province has the highest level of Islamic financial inclusion, followed by Aceh and West Nusa Tenggara. This is reasonable because DKI Jakarta is the center of government whose advancement in its development, so that the entire community is inclusive of Islamic financial services. Likewise with Aceh and West Nusa Tenggara with predominantly Muslim populations and holding tightly to the teachings of Islam in daily life.

Meanwhile, the lowest level of Islamic financial inclusion is in East Nusa Tenggara, this is because the province of East Nusa Tenggara is still included in the 3T category (Underdeveloped, Outermost, Frontier). Regions with non-Muslim population dominance such as Bali,

North Sulawesi and Maluku also tend to have low levels of Islamic financial inclusion. The results of the Islamic financial inclusion index in each province are the dependent variable in the panel data analysis. Next is to determine the best panel data model from the equation in this study.

Table 4
Results of Chow Test, Hausman Test and Lagrange Multiplier Test

Model*	Test	Prob.	Result	Decision
Independent Variables : Internet Penetration Rate, Dummy of Islamic Fintech, Cellphone Penetration Rate and Average Length of School Year	Chow (CEM : FEM)	0.0000	Fixed Effect	Fixed Effect Model
	Hausman (REM : FEM)	0.0000	Fixed Effect	
	Lagrange Multiplier (CEM : REM)	0.0000	Random Effect	

Source : Author's Estimation (2020)

*Note : Index of Islamic Financial Inclusion as Dependent Variable

Based on Table 4, it can be concluded that the best model in panel data analysis in this study is the Fixed Effect Model. Furthermore, descriptive analysis is carried out first before estimating the model. Table 5 below is a descriptive analysis of each variable in the model.

Table 5
Descriptive Analysis of Variables in The Model

Variables	Mean	Std. Dev.	Min	Max
Province	17	9.55	1	33
Year	2016	1.41	2014	2018
Islamic Financial Inclusion Index	0.45	0.23	0	1
Internet Penetration Rate	46.93	15.52	11.99	89.04
Dummy of Islamic Fintech	0.4	0.49	0	1

Cellphone Penetration Rate	56.78	9.57	27.35	76.99
Average Length of School Year	8.13	0.97	5.76	11.05

Source: Author's Calculation (2020)

The results of the descriptive analysis show that there are a total of 33 provinces (n) and 5 units of time (years) in the panel data estimation to be carried out. So that a total of 165 data with 4 independent variables. The estimation results of the fixed effect model can be seen in Table 6 below.

Table 6
Estimation Results of Fixed Effect Model Analysis

Variabel	Koefisien	Robust Std. Error	t-Statistic	Prob.
Constant	2.2177***	0.5745	3.86	0.001
Internet Penetration Rate	-0.00337**	0.0014	-2.34	0.026
Islamic Fintech	0.0477***	0.0136	3.49	0.001
Cellphone Penetration Rate	0.0030	0.0040	0.74	0.462
Average of Schooling Year	-0.2213**	0.0841	-2.63	0.013
<i>R-squared</i>	0.359			
<i>Prob (F-statistic)</i>	0.0000			

Source : Author's Estimation (2020)

Notes : ***) significant at 1% level of significance, **) significant at 5% level of significance

The results of panel data regression analysis in Table 6 show an R-squared value of 0.359, meaning that 35.9% of the variance of the level of Islamic financial inclusion in each province in Indonesia can be explained by the variables of internet penetration, the existence of Islamic

fintech, cellphone penetration rate and the average of schooling year in the province. Other factors that affect 64.1% are explained by other variables outside the model.

It shows that internet penetration in society has a negative and significant effect at the 5% significance level. This indicate that the use of the internet by people in Indonesia is still dominated by the use of social media and other entertainment. Internet facilities have not been sufficiently optimized for the Islamic financial sector. The use of the internet in the community is very general both for work, study, browsing, reading and others. Therefore, platforms are needed in the internet world that can direct people to use digital financial services as a form of Islamic financial literacy education.

Although internet penetration has a negative and significant effect, the presence of the application of Islamic financial technology or fintech has a positive and statistically significant effect at the 1% significance level. This makes sense because based on Fintech statistics from the Financial Services Authority, people are using fintech to make investments or online loans. Investing through fintech can provide a higher return, making loans is also easy. So that people need to come to banking services to make financial interactions with fintech applications, such as making transfers or withdrawing funds.

The next digitalization variable is control of cellular telephones, where this variable has a positive but not statistically significant. This is very reasonable because the higher rate of the cell phone penetration will make easier and wider to access to information. So that it is easier for people to access and get information on the availability of Islamic

financial services in the province. However, no conclusions can be drawn because the significance value does not meet the minimum criteria.

The last variable which is the control variable, namely the average length of schooling year has a negative effect on the level of Islamic financial inclusion in the provinces in Indonesia with a significance value of 5%, this could happen because the longer a person is educated, the chance to get a better job will be higher, and good jobs are generally found in the Jakarta area. Currently there is a phenomenon of centralized economic growth in Jakarta, so it is natural that people in the regions choose to migrate to the capital to seek better income, but this actually has a negative impact on Islamic financial inclusion in their home regions. Constants in the model also show a positive and significant effect at the 1% significance level, so it can be concluded that there are other variables outside the model that contribute to the level of Islamic financial inclusion in every province in Indonesia.

Conclusion

The level of Islamic financial inclusion in each province in Indonesia varies widely from year over year, but tends to have a downward trend. Islamic financial services are increasingly inclusive in provinces that have a good level of economic development. In addition, provinces with Muslim majority populations also have high levels of Islamic financial inclusion, in contrast to provinces with Muslim communities as a minority which tend to have low levels of Islamic financial inclusion. The level of Islamic financial inclusion is measured through three dimensions, namely accessibility, availability and utilization. In taking the measurement, it was found that the dimensions

that were most dominant in contributing to Islamic financial inclusion were the dimensions of availability, utilization and accessibility, respectively.

It can be concluded that the availability of Islamic financial institutions is already good through its branch offices compared to the use by the community through the provision of financing and its accessibility as measured by the amount of third party funds. Therefore, one of the priority ways to increase inclusion of Islamic finance at this time is by increasing the amount of third party funds, of course this is done without neglecting the utilization factor by the public available through the service channels of Islamic financial institutions.

In current digital era, the digitization variable does not have a direct impact on the level of Islamic financial inclusion but has a positive and significant impact with the existence of a sharia fintech service platform. The presence of fintech has proven to be able to increase the level of Islamic financial inclusion.

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