



The Effect Of Digital Economy On The Growth Of Social Media Users And Non-Cash Economic Transactions

Sugito¹, Megasari Gusandra Saragih²

¹ Management Study Program, Faculty of Economics, Medan Area University, Medan, Indonesia

² Management Study Program, Faculty of Social Science, Pembangunan Panca Budi University, Medan, Indonesia

Email: Sugito@gmail.com¹, megasarigusandrasaragih@dosen.pancabudi.ac.id²

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ABSTRACT

The research objective is to examine the impact of digital economic development on the growth of social media users in conducting non-cash economic transactions. The use of research data with data series ranges from 2012 to 2018. The study uses analysis tools, namely SEM PLS 3.0. The findings obtained in this study are that the digital economy has a positive and significant effect on the growth of social media users. The digital economy has a positive and not significant effect on non-cash economic transactions. The growth of social media users has a negative and not significant effect on non-cash economic transactions. Social media users do not mediate the effect of the digital economy on non-cash economic transactions.

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1. Introduction

The concept of the digital economy was first introduced by Tapscott (1995) in his book entitled "The Digital Economy: Dawn of a New Era". The digital economy is also known as the internet economy, new economy, or web economy. In the late 1990s, analyzes primarily focused on Internet adoption and early thinking about the economic impact (with reference to the "Internet Economy") (Brynjolfsson & Kahin, 2002). Then in the mid-2000s, the definition evolved into the analysis of various policies and digital technology, on the one hand, as well as the growth of information and communication technology in digital-oriented companies as the key to the success of the digital economy (WTO OEcD, 2014).

In recent years, many digital-based companies have developed technology, services, products, techniques, and skills that have transitioned from traditional to digital. This process is often referred to as digitization, defined as a business transition through the use of digital technology, products, and services (Brennen & Kreiss, 2014). Even now digital services are starting to influence traditional sectors, such as agriculture, tourism, and transportation.

Financial services in digital banking have developed well, such as internet banking, mobile banking, banking, ATMs, e-money, mobile banking, payment galleries, branchless banking, online debit, digital outlets, virtual credit cards, cash management systems, EDC, mobile branches, mobile accounts, and smartphone-based financial applications.



Fig 1. Internet User Penetration in Indonesia

Source: Asosiasi Penyelenggara Jasa Internet Indonesia (APJII), 2019



Based on Figure 1 above, according to the results of the APJI survey and the Indonesian Polling, the number of Internet users in Indonesia in 2018 increased by 27.91 million (10.12%) to 171.18 million. This means that internet penetration of internet users has increased to 64.8% of the total population reaching 264.16 million. The increase in internet users is related to the increase in infrastructure development to support e-business in accelerating the emergence of the digital economy in Indonesia, where this infrastructure still needs to be improved. In addition, digital systems and platforms are an important element of the digital economy, as is the growth of transactions in the economy.

The principle of trust in making transactions must also be considered, due to the high level of non-cash online transaction fraud (Saragih, 2019). Social media also acts as an online media that connects users with strong social ties (Gerritsen et al, 2014). Social media is the most effective media for promotion/advertising. When a user thinks about buying something, they immediately search the internet (social media), looking for products by comparing prices from other brands.

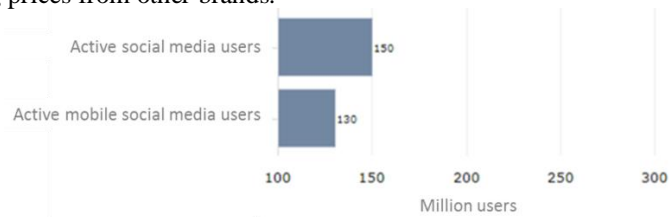


Fig 2. Indonesian Social Media User Data
Source: Wearesocial Hootsuite, 2019

Hootsuite's 2019 Wearesocial research in January stated that in Indonesia there are around 150 million (56%) social media users of the total population. This figure is an increase of 20% from the previous survey conducted by Wearesocial. Then gadget users amount to 130 million (48%) of the population. The increasing use of the internet and gadgets from year to year is a potential for the national digital economy.

The rapid change to financial technology and digital banking shows that technology is capable of playing a strategic role in Indonesia in providing accessible financial services. The availability of digital banking services and products is highly valued by customers, both individuals and businesses of Multi-national Companies to Small and Medium Enterprises (MSMEs).

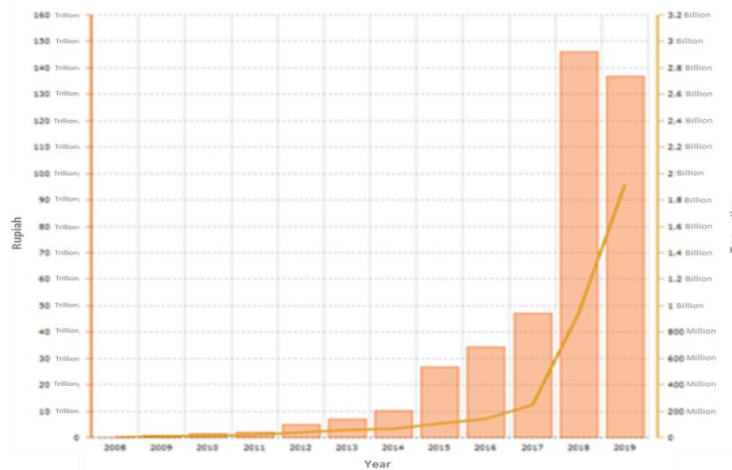


Fig 3. Volume and Electronic Money Transactions (Non-Cash)
Source: Bank Indonesia, 2020

Based on Figure 3. Bank Indonesia (BI) data shows that the volume of electronic money (non-cash) transactions at the end of 2018 jumped 209.8% to 2.9 billion transactions compared to 2017's 943.3 million transactions. As of July 2019, the volume of electronic money transactions had reached 2.7 billion transactions, or close to the figure at the end of 2018. The same thing happened to the value of electronic money transactions which jumped to 281.39%. In 2018 the value of electronic money transactions reached Rp. 47.2 trillion. This figure increased by IDR 34.8 trillion or almost three times compared to 2017 which amounted to IDR 12.4 trillion. Until July 2019, the value of electronic money transactions had exceeded the value of transactions in 2018, which was IDR 69 trillion.

The increase in electronic money transactions is in line with the National Non-Cash Movement program launched by BI since 2014. The high level of traffic and awareness in e-commerce transactions have driven electronic payments. Currently, the most common forms of payment when shopping online are via internet banking or mobile banking (37 percent), ATM transfers (20 percent), electronic money ranks third as a means of payment when shopping on e-commerce (Anggitha, 2017). This shows that consumers have been using the non-cash payment system in their growing transactions in Indonesia. However, the number of non-cash transactions should be even higher when compared to the number of social media users in Indonesia, which is far more than the number of social media users in Asia, which is less, with the number of non-cash transactions that are not much different.

Based on this background, researchers are interested in conducting research with the title: " The Effect of Digital Economy on The Growth of Social Media Users and Non-Cash Economic Transactions".

2. Theory Basis

a. Digital Economy

Bukht et al (2019) reveal that the concept of 'Digital Economy' can be identified:

- 1) E-business infrastructure (hardware, software, telecommunications, networks, human resources, etc.),
- 2) E-business (how business is done, every process that the organization performs through computer-mediated networks),
- 3) E-commerce (transfer of goods, for example: when books are sold online).

In measuring the potential of infrastructure and E-business activities that can be used by both local governments and business people and academics according to Indrajit (2013) are:

- 1) Computer penetration is the percentage of the population of a certain area who already owns and uses computers in their daily life. A penetration rate of 3%, for example, means that for every 100 residents there are 3 people who have computers.
- 2) Internet penetration in an area to see the potential for future development. Internet penetration is the percentage number of the population in an area that is connected to the internet network. Internet penetration of 8% means that out of 100 residents there are 8 people who are connected to the internet.
- 3) Mobile Phone Penetration is a very valuable value if the cell phone penetration rate (mobile phone) in an area can be known. The 7% figure shows that there are 7 cell phone owners and users in every 100 population.

b. Social Media

Social media is a medium for socializing with each other and is done online which allows humans to interact with each other without being limited by space and time. Social media removes the boundaries of humans to socialize, the boundaries of space and time, with this social media it is possible for humans to communicate with each other wherever they are and at any time, no matter how far they are, and no matter day or night. Social media has a huge impact on our lives today. Someone who is originally "small" can instantly become big with social media, and vice versa, a "big" person can instantly become "small" with social media. Social Media is an Internet-based application with the use of Web 2.0 technology which enables users to create content and exchange content (Kaplan & Haenlein, 2010).

c. Non-Cash Transactions

According to Slamet Wiyono (2005), a transaction is an economic/financial event that involves at least two parties where the two parties exchange, involve themselves in business unions, borrow and borrow, and others based on their respective wishes or on the basis of provisions. applicable law. Non-cash is a digital payment system without using physical money (paper or metal), which was introduced to the public in the 1990s. In Indonesia, this cashless payment system was not designed to replace the cash payment system but complemented one another. According to Lintangari, N et al (2018), variations of non-cash payment instruments are used, among others:

- 1) ATM / debit card
- 2) Credit card
- 3) Electronic money (e-money).

The use of non-cash transactions as an innovative and practical means of payment is expected to help smooth payments for mass, fast, and microeconomic activities, so that their development can help smooth transactions in the growth of the digital economy.

d. Conceptual Framework

The research conceptual framework was built by combining the models researched by Qu et al (2014) that the number of internet users, the number of e-commerce, and online customers have an effect on economic growth. The intention to use social networks for transactions, Hansen et al (2018) and the digital economy serve as a new paradigm of economic development and financial transactions, Vovchenko et al (2017). Based on the combination of these research results, the conceptual framework is described as follows:

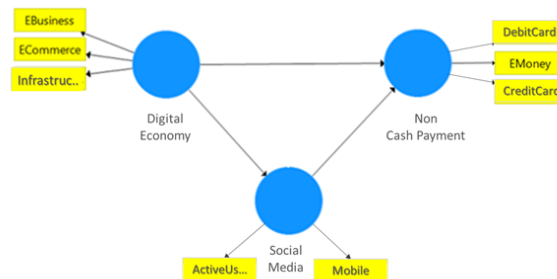


Figure 4. Conceptual Framework

e. Hypothesis

Research by Qu et al (2014) reveals that internet users, the number of e-commerce, and online customers have an effect on economic growth. Furthermore, research from Febriaty, H. (2019) states that the non-cash payment system has a positive and significant effect on the level of economic growth, therefore the hypothesis in this study can be described as follows:

- H1: The digital economy has a positive and significant effect on the growth of social media users.
- H2: The digital economy has a positive and significant effect on non-cash economic transactions
- H3: The growth of social media users has a positive and significant effect on non-cash economic transactions
- H4: The growth of social media users mediates the digital economy towards non-cash economic transactions.

3. Research Methods

Sources of data used in the study are secondary data published by the Central Bureau of Statistics, Bank Indonesia, and domestic and foreign information and technology provider organizations in the period 2012 to 2018. Indicators of data and information used include:

- 1) The pillars of the digital economy in Indonesia are:
 - a) Information and Communication Technology Development Index (IP-ICT)
 - b) E-Business Penetration Potential
 - c) The volume of E-Commerce transactions
- 2) Growth of active and mobile social media users in Indonesia
- 3) The volume of non-cash economic transactions in Indonesia
 - a) ATM / Debit Card
 - b) Credit Card
 - c) E-Money

The analysis used to achieve the objectives of this study is to conduct SEM PLS 3.0 modeling analysis with steps such as developing a theory-based conceptual model, constructing a path diagram, and PLS-SEM modeling (validity testing in the outer model and the structural model / inner model).

4. Research Results and Discussion

1. Research Results

Evaluation of the Outer Model (Measurement Model) is carried out to see the loading factor that correlates between indicators and their latent constructs. Indicators with high loading factors have a higher contribution to explain their latent constructs. In contrast, indicators with low loading factors have a weak contribution to explain the latent construct. In most of the reference factor weights in Fig. 5, this study > 0.50 or more is considered to have sufficiently strong validation to explain latent constructs (Hair et al, 2010; Ghozali, 2008).

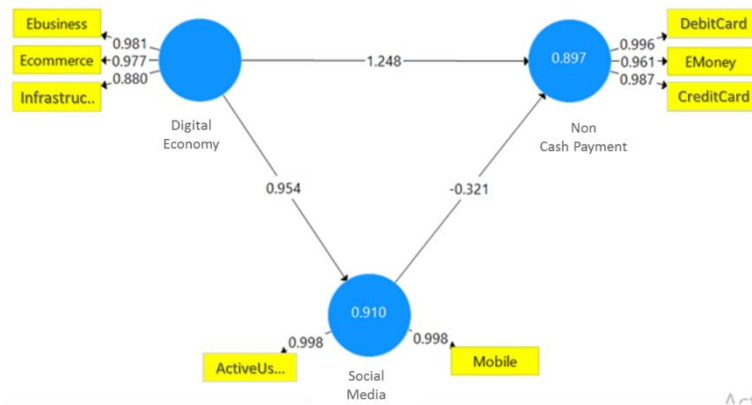


Fig 5. Results of Loading Factor Value

Convergent validity is part of the measurement model which in SEM-PLS is usually referred to as the outer model while in covariance-based SEM it is called confirmatory factor analysis (CFA). The outer model (measurement model) meets the convergent validity requirements for the reflective construct. Outer loading ≥ 0.70 (Hair et al., 2010).

TABLE 1. OUTER LOADING VALIDITY & RELIABILITY TEST RESULTS

Outer Loadings			
Matrix	Digital Economy	Social Media	Non Cash
DebitCard			0.996
ActiveUs...		0.998	
EMoney			0.961
Ebusiness	0.981		
Ecommerce	0.977		
Infrastru...	0.880		
CreditCa..			0.987
Mobile		0.998	

The next table presents the results of validity and reliability testing based on the value of outer loading, average variance extracted (AVE), Cronbach's alpha (CA), and composite reliability (CR).

TABLE 2. CRONBACH'S ALPHA, COMPOSITE RELIABILITY, AVE VALIDITY & RELIABILITY TEST RESULTS

Construct Reliability and Validity				
Matrix	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extract...
	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Digital Economy	0.942	0.959	0.963	0.897
Social Media	0.996	0.996	0.998	0.996
Non Cash Pay...	0.980	0.983	0.987	0.962

The results of the validity test based on the outer loading value in Table 1 and Table 2 show that all loading values are ≥ 0.7 . This means that it has met the validity requirements based on the loading value so that the direct effect hypothesis (Inner Model) can be continued.

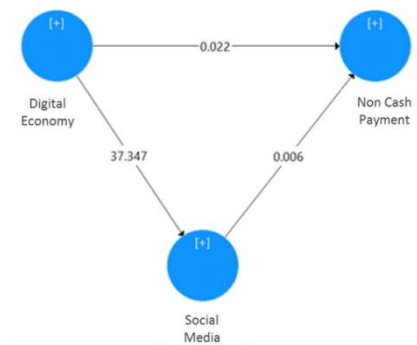


Fig 6. Bootstrap Research Model

2. Discussion

The following shows the path coefficient values and the P-values for testing the significance of the direct effect:

TABLE 3.
SIGNIFICANT TEST

Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)
Digital Economy -> Social Media	0.954	0.960	0.026	37.347
Digital Economy -> Non Cash ...	1.248	4.740	56.336	0.022
Social Media -> Non Cash Pa ...	-0.321	-3.808	56.342	0.006

From Figure 6 and Table 3, it will be described in detail to be able to more clearly answer the hypothesis of this study as follows:

The Effect of the Digital Economy on the Growth of Social Media Users

The influence of the digital economy on the growth of social media users is significant with a T-statistic of $37.347 > 1.96$. The original sample estimate value is positive, which is 0.954 which indicates that the direction of the relationship between the digital economy and the growth of social media users is positive. Thus, the H1 hypothesis in this study states that the digital economy has a positive and significant effect on the growth of social media users. Hypothesis 1 is accepted. This means that the digital economy has driven an increase in social media users in Indonesia.

The Effect of the Digital Economy on Non-Cash Economic Transactions

The effect of the digital economy on non-cash economic transactions is not significant with a T-statistic of $0.022 < 1.96$. The original sample estimate value is positive, namely 1.248 which indicates that the direction of the relationship between the digital economy and the growth of social media users is positive. It can be concluded that the digital economy has a positive and insignificant effect on non-cash economic transactions. Hypothesis 2 is rejected.

The Influence of Social Media User Growth on Non-Cash Economic Transactions

The influence of the growth of social media users on non-cash economic transactions is not significant with a T-statistic of $0.006 < 1.96$. The original sample estimate value is negative, which is -0.321 which indicates that the direction of the relationship between the digital economy and non-cash economic transactions is negative. It can be concluded that the growth of social media users has a negative and insignificant effect on non-cash economic transactions. Hypothesis 3 is rejected.

The Effect of the Digital Economy on Non-Cash Economic Transactions Mediated by the Growth of Social Media Users

The significance test for the indirect effect of this study can be seen in Table 4 below:

TABLE 4.
SIGNIFICANCE TEST OF INDIRECT EFFECT (INDIRECT EFFECT TEST)

Specific Indirect Effects					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O /STDEV)	P Values
Digital Economy->Social Media-> Non Cash	-0.306	-3.794	56.342	0.005	0.996

The indirect effect of the digital economy on non-cash economic transactions is mediated by the growth of social media users, namely -0.306, with a P-Values value of 0.996 > 0.05, it is concluded that social media users do not mediate the influence of the digital economy on non-cash economic transactions. Hypothesis 4 is rejected.

5. Conclusions and Suggestions

a. Conclusion

The conclusions obtained from the research results:

- 1) The digital economy has a positive and significant effect on the growth of social media users.
- 2) It can be concluded that the digital economy has a positive and insignificant effect on non-cash economic transactions.
- 3) The growth of social media users has a negative and insignificant effect on non-cash economic transactions.
- 4) Social media users do not mediate the influence of the digital economy on non-cash economic transactions.

b. Suggestions

The suggestions that the researchers propose include:

- 1) The Indonesian government plays an active role in overseeing the use of non-cash transactions in banks in Indonesia because they are prone to fraud.
- 2) The government must continue to strengthen the development of digital economic infrastructures such as hardware, software, telecommunications, networks, human resources, and others.
- 3) With regard to social media users, it is hoped that a strong law regulates the mechanism of online buying and selling so that consumers feel more protected.

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