USE OF DIGITAL CURRENCIES IN MEASURING INDONESIA’S DIGITAL ECONOMY

Lovaditya, Nasrudin (2019)
Integrating economic statistics in monitoring the 2030 Agenda
Sustainable Development Goals (SDGs)
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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (2020):

- Digital transformation affects economies and societies in complex and interrelated ways, demanding more strategic approaches
- Big Data create new opportunities for business and consumers

**Source:** World Bank

![Graph showing Individual using the Internet (% of Population) - Indonesia, 2010–2019](source Image)
BPS Statistics Indonesia does not have a fix measurement yet to measure the digital economy in the country.

- Data is needed to objectify data-driven policy.
“Digital Economy incorporates all economic activity reliant on, or significantly enhanced by the use of digital inputs, including digital technologies, digital infrastructure, digital services and data.

It refers to all producers and consumers, including government, that are utilising these digital inputs in their economic activities.”

- OECD, 2020

A Roadmap Toward A Common Framework For Measuring Digital Economy
Defining digital economy

1. Bottom-Up Approach
2. Top-Down Definition
3. Flexible Definition
DEFINING DIGITAL ECONOMY — FLEXIBLE DEFINITION APPROACH

Source: Bukht & Heeks (2017)
DIGITAL CURRENCIES

CARD-BASED PAYMENT INSTRUMENT is a payment instrument in the form of a credit card, Automated Teller Machine (ATM) card and/or debit card.

E-MONEY is a payment instrument that the value of money is stored electronically in a media such as a server or chip.

NON-CASH PAYMENT (NCP) SYSTEM
Use of total transaction from NCP Transaction in measuring Indonesia's digital economy is possible.
Proportion of NCP transaction to Indonesia’s nominal GDP is increased year by year from 31.55% (2010) to 50.29% (2019).
Indonesia’s Economic Growth VS Total Transaction Non-Cash Payment System Growth, 2011–2020

Source: BPS Statistics Indonesia, Central Bank of Indonesia
Indonesia’s Total Transaction in 4 Largest Marketplace VS Total Transaction Non-Cash Payment System Growth, 2018–2020

Source: BPS Statistics Indonesia, Central Bank of Indonesia

<table>
<thead>
<tr>
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<th>2018</th>
<th>2019</th>
<th>2020</th>
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</thead>
<tbody>
<tr>
<td>NCP Trans</td>
<td>7.84%</td>
<td>7.45%</td>
<td>-7.17%</td>
</tr>
<tr>
<td>Total E-Com</td>
<td>141.03%</td>
<td>91.54%</td>
<td>30.18%</td>
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Note: The diagram shows the percentage growth of total transactions in non-cash payment systems in Indonesia's largest marketplaces from 2018 to 2020, compared to total transactions. The table provides specific growth percentages for each year.
CURRENT INDONESIA’S DIGITAL ECONOMY MEASUREMENT

• Validity of Government Regulation No. 80 of 2019 about Trading Through Electronic Systems → In 2019 and 2020 BPS Statistics Indonesia managed to do E-Commerce Survey

• The number of samples is 17,063 (16,180 samples from business actors throughout Indonesia and 883 from data crawling marketplace in Jakarta)

• The main constraint: there is no complete sample frame yet, so that it is difficult to estimate the national value. However, this survey has a more targeted sample list to get an overview of the total transactions made through E-Commerce
The effectiveness of the use of digital currency in measuring the digital economy can be increased if the central bank can provide access to information on active transfers that are indeed used in payment transactions.

If the central bank still needs time to provide this information, digital currency from non-cash payments can still be used to provide an overview or as an approach to predict the growth/pattern of the digital economy in Indonesia.
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