

LINKING DIGITAL ECONOMY AND INCLUSIVE DEVELOPMENT: EVIDENCE FROM INDONESIA

WIRAWAN AGAHARI¹, DAYA SUDRAJAT²

¹*Delft University of Technology, Jaffalaan 5, Delft, the Netherlands*

²*International Institute of Social Studies, Kortenaerkade 12, The Hague, the Netherlands*
w.agahari@tudelft.nl

Abstract

The rise of the digital economy can be seen as an opportunity to achieve development goals in a more inclusive manner. Yet, how the digital economy can contribute to inclusive development is still not fully understood, particularly in the context of developing countries. Hence, this paper aims to provide empirical evidence on the dynamics and mechanisms of digital economy initiatives in achieving inclusive development, based on three case studies in Indonesia. Our findings suggest that each initiative has created a varying degree of inclusiveness that might evolve over time, depending on the practical problems, proposed solutions and specific domains. However, there are several technical and non-technical challenges that might hinder the potential of each initiative to create a greater impact on inclusiveness. We thus suggest that there should be a balance between narrowing the digital divide and preparing the next wave of technological innovation, so that the digital economy will promote inclusiveness and not widen the inequality gap in Indonesia.

Keywords: digital economy, inclusive development, Indonesia, case studies

1. Introduction

It is believed that achieving inclusive development has become a key agenda for every country all around the world. This means that the focus is not solely on resolving mainstream problems in development discourse such as inequality, poverty and economic growth. Instead, inclusive development puts additional emphasis on “social and environmental aspects of development” [1]. The key is to ensure that well-being is distributed fairly in society since this indicates that development in a particular country is achieved in an inclusive manner [2].

Meanwhile, recent technological innovation has led to the emergence of the digital economy, defined as “that part of economic output derived solely or primarily from digital technologies with a business model based on digital goods or services” [3]. Such innovations have a disruptive impact and successfully transforming the society, which is evident in the case of Indonesia that has a highest internet penetration rate in Asia and the dominant usage of smartphone as well as social media. But more than that, the digital economy can also be seen as a means to ensure that the development goals can be achieved in an inclusive manner [4], [5]. Yet, the relation between the digital economy and inclusive development is not fully understood, especially in the context of developing countries [6].

This paper aims to bridge this knowledge gap by providing empirical evidence on how the digital economy in developing countries can contribute to achieving inclusive development. To do so, we apply the inclusive development framework proposed by Farhan et al. [7] as an analytical lens in understanding three digital economy initiatives from the financial, fishery and e-commerce sectors in Indonesia. Thus, this paper serves as a contribution to the emerging research domain on digital economy and development by elaborating on the value creation mechanisms of each initiative as well as its drivers and barriers in achieving inclusive development.

2. Methodology

We conducted comparative case studies by examining two digital start-ups (Amartha & eFishery) and one initiative from a state-owned enterprise (Rumah Kreatif BUMN). We use a combination of desk research and interviews with representatives of each enterprise to gather relevant information about the solutions that they offer to achieve development goals as well as their impact on inclusiveness. We structure our findings based on the inclusive development framework that is derived from the literature [7]. The framework consists of three dimensions: economic (reducing inequality of wealth distribution), social (ensuring involvement and participation of people from all groups in the development process) and ecological (tackle impacts on the environment resulting from development processes).

An overview of each case studies are presented in Table 1. We are aware that there are other well-known start-ups and digital economy initiatives with arguably bigger impacts. However, we argue that to better understand the dynamics of the digital economy in achieving inclusive development, a comprehensive view of the initiatives from various sectors and scale is required. Understanding the context of different initiatives is important since different contexts might yield to a varying degree of inclusiveness.

Table 1. Overview of case studies

	Amartha	eFishery	Rumah Kreatif BUMN
Type	Start-up	Start-up	State-owned enterprise
Domain	Financial	Fisheries	E-commerce
The problem	Financially excluded population in rural areas	The inefficiency and high cost of fish feeding	Products sold by Small Medium Enterprises (SMEs) are not market ready
The proposed solution	Peer-to-peer lending for female microentrepreneurs	Internet-of-Things (IoT) solution for fish and shrimp farming	Capacity building and mentoring for SMEs

3. Results and Discussion

In general, our findings support the argument that the digital economy initiatives can contribute to achieving inclusive development. However, there is a variance in terms of the degree of inclusiveness that is achieved by each initiative. This is highly dependent on the context and focus of each initiative. For instance, the nature of eFishery, which focuses on improving the efficiency of fish farmers in providing fish food, has led to a significant contribution in achieving environmental inclusion, in a way in which no fish food is wasted and no water is polluted. Meanwhile, a comprehensive capacity building program provided by Rumah Kreatif BUMN offers the opportunity for Small Medium Enterprises (SMEs) to empower themselves with digital knowledge as well as participate and compete in the digital era. Additionally, Amarnya creates a unique value proposition that we describe as “multi-sided inclusiveness”: they empower women to become an entrepreneur and improve their quality of life while enabling every individual to become an investor and create social impact.

It should be taken into account that the impact and degree of inclusiveness might evolve over time along with the change of scope and focus for each initiative. This is evident from the case of Amarnya, where they initially did not focus on achieving ecological inclusion. However, they started to learn that there is a relation between environmental issues and poverty. Hence, they developed an intervention strategy to reduce plastic consumption as a means to increase environmental awareness.

We also identified several barriers that might hinder the potential of each initiative to achieve inclusive development. In the case of Rumah Kreatif BUMN, stimulating a digital mindset for SMEs has proved to be challenging, particularly due to lack of experience and knowledge in using digital technologies. A similar issue is also faced by eFishery, in a sense that they are facing difficulties to push their technological solutions into the traditional market due to lack of experience in using technology. Meanwhile, the challenges faced by Amarnya are more about financial literacy, since there are some cases of double credit where borrowers try to borrow money from multiple financial institutions.

Table 2. Findings: linking the digital economy with inclusive development

Development dimension	Sub-dimension	Amartha	eFishery	Rumah BUMN	Kreatif
Economic	1. Increasing household income	Yes	Yes	Yes	
	2. Access to finance	Yes	Yes	Yes	
Social	1. Enhancing access to education	Yes	Yes	Yes	
	2. Ensuring equity principles for participation	Yes	Unknown	Yes	
	3. Opening up opportunities for employment	Yes	Unknown	Yes	
	4. Equitably sharing rights, responsibilities and risks	Yes	Unknown	Yes	
Ecological	1. Environmentally concern	Yes	Yes	Unknown	

4. Conclusion and Recommendation

In this paper, we made an attempt to contribute to the growing research area of the digital economy and development by providing empirical evidence on the contribution of digital economy initiatives towards inclusive development in Indonesia. We pointed out that there is a varying degree of inclusiveness that can be achieved by each initiative depending on its context and area of focus. Also, the degree of inclusiveness is not static and can change over time. Finally, several technological and non-technological challenges might possibly hinder the potential of the digital economy in achieving inclusive development.

To conclude, the digital divide has been an ongoing and problematic issue in developing countries for some time, including in Indonesia. Hence, to get the best out of the digital economy, the Indonesian Government should put more effort into narrowing the digital divide in terms of access, skills and knowledge. This is necessary since the digital economy can promote both inequalities and inclusiveness at the same time. To some extent, the inclusiveness benefits of digital technology only can be accessed by particular communities. Furthermore, the next wave of emerging technologies is on its way, such as the Internet of Things (IoT), Artificial Intelligence (AI) and 3D printing. Hence, there should also be a balance between narrowing the digital divide and anticipate the impact of such technologies.

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