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## CAPABILITY DEPRIVATION MEETS THE DIGITAL DIVIDE: THE URGENCY OF ACCESSIBILITY AND CONNECTIVITY IN ALLEVIATING THE POVERTY OF TOBACCO FARMERS IN INDONESIA

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Article	Abstract
<p><b>Keywords:</b> accessibility, connectivity, deprivation of capability, digital divide, tobacco farmer poverty</p> <p><b>History of Article:</b> Received: April 2, 2022; Reviewed: April 10, 2022; Accepted: April 12, 2022; Published: April 14, 2022</p> <p><b>DOI:</b> <a href="https://doi.org/10.56282/jtlp.v1i1.62">https://doi.org/10.56282/jtlp.v1i1.62</a></p>	<p>Although the area and production of smallholder plantation tobacco plants cover more than 99% of the total plantation area and tobacco production in Indonesia, the allocation of Tobacco Excise Production Sharing Funds (<i>Dana Bagi Hasil Cukai Hasil Tembakau/DBHCHT</i>) in 2017-2021 has been approximately Rp. 2.9 trillion per year, and several DBHCHT laws and regulations are adequate, but many tobacco farmers are still in poverty. Based on the statute's normative method, conceptual, analytical, and case techniques. As the synthesis of several poverty theories affirms that poverty is the scarcity of means of livelihood or the limited level of welfare of a person or a community due to the instability of existing resources and the deprivation of basic capabilities, which results in the inability to achieve their certain functions and goals, it is essential to solving the capability deprivation and digital divide of tobacco farmers by improving the accessibility and connectivity. The Directorate General of Fiscal Balance is necessary to build a website and monitor and evaluate transparently against any obstacles to accessibility and connectivity. Two conclusions were generated. First, the deprivation of capabilities and the digital divide are causes of poverty, so it is necessary to assess alternative policies through access and connection of adequate and sustainable information and communication technologies for tobacco farmers and communities or farmer groups. Second, the government should provide the accessibility and connectivity of tobacco farmers in Indonesia by strengthening tobacco farmer groups (such as cooperatives) and strengthening the cost-effectiveness of technology and value-added service provision.</p>

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### 1. INTRODUCTION

Farmers are very vulnerable to the poverty line due to various factors, such as crop failure, the inability to return production capital, and oligopsonistic trading system that

turns out to be impartial to farmers, and the presence of farmers (especially tobacco farmers) who do not have bargaining power, because they have to sell their tobacco to middle intermediaries/lesaler (Wirawan and Sinaga, 2021)<sup>1</sup>.

The poverty that is vulnerable to farmers is also experienced by tobacco farmers (Al-Ansori, 2020)<sup>2</sup>. Most tobacco farmers live below the national poverty line, even though several parameters reflect inappropriate for tobacco farmers in Indonesia to experience poverty, such as data on the area and production of tobacco plants and data on the allocation of the Tobacco Excise Production Sharing Fund (*DBHCHT*). Several laws and regulations governing the provisions of the Tobacco Excise Production Sharing Funds are adequate, as the current formulation is contained in Law Number 33 of 2004 concerning Financial Balance between the Central Government and Regional Governments (Financial Balancing Law), Law Number 11 1995 as amended by Law Number 39 of 2007 concerning Excise (Excise Law). Table 1 shows that smallholder plantations covered more than 99% of the total plantation area and tobacco production throughout Indonesia in 2016-2020 (Badan Pusat Statistika, 2021).

**Table 1: Area and Production of Tobacco Plants in Indonesia 2016-2020**

Years	Large Plantation area (thousand hectares)	Smallholder plantation area (thousand hectares)	Large Plantation Production (thousand tons)	Smallholder Plantation Production (thousand tons)
2020	0,10	229,70	0,0	261,40
2019	0,30	234,30	0,0	269,80
2018	0,10	204,40	0,20	195,30
2017	0,10	201,80	0,10	180,80
2016	0,40	155,60	0,30	126,40

Source: Central Bureau of Statistics , 2021.

Then, the Tobacco Excise Production Sharing Funds allocation data that the government distributed in 2017-2021 is above Rp. 2.9 trillion per year, as the data is presented in Table 2 below.

**Table 2: Allocation of Tobacco Excise Production Sharing Funds for the Fiscal Year 2017-2021 (in trillion rupiahs)**

2021	2020	2019	2018	2017
3,48	3,46	3,18	2,96	2,95

Source: Minister of Finance Regulation (Regulation of the Minister of Finance - PMK) Number 230/PMK.07/2020 concerning Details of Revenue Sharing Funds for Tobacco Products Excise by Province/Regency/City for Fiscal Year 2021, PMK No. 13/PMK.07/2020 concerning Details of Tobacco Excise Revenue Sharing Funds by Province/Regency/City for the 2020 Fiscal Year, PMK No. 12/PMK.07/2019 concerning Details of Tobacco Excise Revenue Sharing Funds by Province/Regency/City for the 2019 Fiscal Year, PMK No. 30/PMK.07/2018 concerning Details of Tobacco Excise Revenue Sharing Funds by Province/Regency/City for the 2018 Fiscal Year, and

<sup>1</sup> Wirawan, A., and Sinaga, B. R. P. E-Governance in tobacco excise sharing funds: An Initiative to reduce the poverty of tobacco farmers in Indonesia. In Hendayani, R., et al. (eds.), *Synergizing Management, Technology and Innovation in Generating Sustainable and Competitive Business Growth*, London: Routledge, pp. 245-251. 2021.

<sup>2</sup> Al-Ansori, A. N. "Penelitian: Rokok Tidak Berpihak pada Kesejahteraan Petani Tembakau". Retrieved October 5, 2020, from <https://www.liputan6.com/health/read/4364613/penelitian-rokok-tidak-berpihak-pada-kesejahteraan-petani-tembakau>, 2020.

PMK No. 192/PMK.07/2017 concerning Details of Tobacco Excise Revenue Sharing Funds by Province/Regency/City for the 2017 Fiscal Year.

Table 1 shows that more than 99% of the production and area of tobacco plantations in Indonesia are owned by smallholders in contrast to the level of welfare referring to the 2020 Forbes Billionaire Index data stating that the three wealthiest ranks in Indonesia have cigarette businesses (Bisnis.com, 2020)<sup>3</sup>. Whereas based on the study by the Faculty of Demographic of the University of Indonesia at three central regions of tobacco production in Indonesia, namely Bojonegoro, Kendal, and East Lombok Timur, it was found that the average wage of farmworkers was Rp. 413 thousand or only 47% of the national average wage (Kompas.com, 2009). Subsequently, Table 1 has shown that the significant contributions of those smallholders plantation and farmworkers in generating tobacco excise are unable to be free from the poverty trap due to Article 66A of Law Number 39 of 2007 concerning amendments to Law Number 11 of 1995 concerning Excise (Excise Law) only allocates DBHCHT of 2% of the realization of tobacco excise per year, as the data for 2017-2021 is presented in Table 2. Moreover, the DBHCHT allocations are further allocated 25% for the health sector, 50% for the public welfare sector, and 25% for law enforcement, with a note that the earmarking of the use of DBHCHT in the community welfare sector is aimed at improving the welfare of tobacco farmworkers, cigarette factory workers, or tobacco farmers who are stakeholders who have contributed to the acceptance of tobacco excise (Universitas Indonesia, 2021)<sup>4</sup>.

The never-ending challenge of poverty will be a problem for the country, individuals, and society. The issue of poverty must be fought by the state, as the fourth paragraph of the Preamble of the 1945 Constitution of the Republic of Indonesia (UUD 1945) has formulated one of the national goals to create a just and prosperous society in Indonesia. Allowing poverty to occur will be a problem for individuals because of the waste of human potential (depriving the skills and talents of people to reach their valuable contributions to society and the economy) and lost opportunities. In contrast, the rihumanitysociety is the occurrence of a lack of income effectively, forcing people to live outside social norms. This will further cause problems for the state because individuals and society do not have sufficient income to participate in the country's economy, which needs consumption (Unwin, 2013)<sup>5</sup>.

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<sup>3</sup> Bisnis.com.. "JK Sebut 3 Orang Terkaya Indonesia Berbisnis Rokok, Benarkah?". Retrieved July 29, 2021, from <https://ekonomi.bisnis.com/read/20201209/9/1328689/jk-sebut-3-orang-terkaya-indonesia-berbisnis-rokok-benarkah>.

<sup>4</sup> Universitas Indonesia. "Peningkatan Tarif Cukai Rokok Dapat Menambah Dana Kesejahteraan Petani Tembakau". Retrieved July 29, 2021, from <https://www.feb.ui.ac.id/blog/2021/07/10/peningkatan-tarif-cukai-rokok-dapat-menambah-dana-kesejahteraan-petani-tembakau/>. 2021.

<sup>5</sup> Unwin, J. *Why Fight Poverty?*, London: London Publishing Partnership, p. 13. 2013.

It takes great efforts to alleviate the poverty still experienced by tobacco farmers in Indonesia, which in this study focuses on accessibility and connectivity related to tobacco farmers. The urgency of accessibility and connectivity in poverty alleviation of tobacco farmers refers to using information and communication technologies (ICTs) as an alternative to physical mobility (for example, e-work, e-services, e-business, and e-commerce) to limitations or lack of access. And connections (Velaga, 2012)<sup>6</sup> to tobacco farmers in Indonesia. Thus, this study seeks to answer two main problems. First, why are the deprivation of capabilities and the digital divide leading to poverty for tobacco farmers? Second, how can accessibility and connectivity alleviate poverty for tobacco farmers in Indonesia?.

## 2. RESEARCH METHODS

This study uses a normative juridical method to examine and analyze legal materials based on the research library. The use of this method is in line with the flow of thought in the form of prescriptive (to get suggestions to overcome the problems posed in the research) and evaluative (to assess the applicable and prevailing provisions) (Soekanto, 2010)<sup>7</sup>. This normative study uses several approaches, namely the statute approach, conceptual approach, and analytical approach.

The statutory approach is used because this study involves several legal rules that focus on DBHCHT and farmers' welfare. The conceptual process is carried out when there is no legal rule for solving the research questions, so a concept must be built as a reference in this study, where the idea is made from adequate literature studies. At the same time, the analytical approach helps know the meanings contained in the terms used in laws and regulations conceptually (Ibrahim, 2007)<sup>8</sup>.

Legal materials used in this research are primary legal materials, secondary legal materials, and tertiary legal materials. Primary legal materials have authority, such as the UUD 1945 and related laws and regulations. Secondary legal materials are legal materials that provide explanations for primary legal materials, such as textbooks, legal expert opinions, articles, seminar results, and research results. Tertiary legal materials can provide instructions and explanations for primary and secondary legal materials such as dictionaries, encyclopedias, and internet sources from appropriate and adequate websites (Marzuki, 2008)<sup>9</sup>.

## 3. ANALYSIS AND DISCUSSION

### A. An Overview of Poverty and Tobacco Farmers

There are various understandings of poverty. The United States Social Security Administration defines poverty as the minimum amount of money needed to maintain a

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<sup>6</sup> Velaga, N. R., Beecroft, M., Nelson, J. D., Corsar, D., and Edwards, P. Transport poverty meets the digital divide: accessibility and connectivity in rural communities. *Journal of Transport Geography*. Vol. 21, pp. 102–112. 2012.

<sup>7</sup> Soekanto, S. *Pengantar Penelitian Hukum*. Penerbit Universitas Indonesia, Jakarta. 2010.

<sup>8</sup> Ibrahim, J. *Teori & Metodologi Penelitian Hukum Normatif*, Malang: Bayumedia Publishing, pp. 46 & 300. 2007.

<sup>9</sup> Marzuki, P. M. *Penelitian Hukum*. Jakarta : Prenada Media Group, 2008.

consistent lifestyle (Wagner, 2011)<sup>10</sup>. Beck, Hahn, and Lepenies (2020)<sup>11</sup> consider that poverty is not only an economic deficiency that causes a decrease in welfare; it also refers to its operations and still disguises various more substantive normative controversies so that its meaning reaches out to the open deprivation of one's welfare or subpopulations so that it becomes permanently poor, for example, someone who does not enjoy access to welfare or specific public interests will be able to say that his welfare has been taken away. Wolff (2020)<sup>12</sup>, which emphasizes instability in the concept of poverty, emphasizes that poverty is the lack of resources needed to achieve goals related to human functions and objectives. Thus, although, in essence, there are rarely enough resources to perform a specific set of parts, most poverty discussions focus on the failure to achieve specific goals, and it is implicitly assumed that the absence of money is a critical factor. Aurbach (2011) argues that poverty is not limited to income alone, considering multidimensional causes<sup>13</sup>.

The measurement must also occur in several fields, as many people are poor because they are in their current situation, such as where they live, the level of education they can access, employability, and other factors. Furthermore, Sen (2000) defines poverty as a deprivation of basic capabilities rather than simply low income, the standard criterion for identifying poverty<sup>14</sup>. This shows that in analyzing social justice, there are strongly resold for assessing the benefits of an individual about the abilities a person has, namely, the substantive freedom he enjoys to lead the kind of life that individuapersonalfor being respected so that it can be asserted that with the perspective poverty, there is precisely no denial of the view that low income is one of the leading causes of poverty because lack of payment can be the main reason for the loss of one's ability.

Given the broad understanding of poverty, it is necessary to define poverty in terms of this study. In this case, poverty is the scarcity of means of livelihood or the limited level of welfare of a person or a community due to the instability of existing resources and the deprivation of basic capabilities, which results in the inability to achieve specific functions and goals or assemblies.

Poverty is also vulnerable to farmers in Indonesia, including tobacco farmers, because of the dominance of several things, such as the potential for crop failure, which will result in the inability to return production capital, constraints on availability, and expensive fertilizers to produce good quality tobacco harvests, still dominating the oligopsony category, in the form of the sale of the tobacco harvest of the farmers is only to

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<sup>10</sup> Wagner, G. "The Poor & the Working Poor", in Salem Press (Eds.), *Sociology Reference Guide: The Effects of Poverty & The Welfare State*, California dan New Jersey: Salem Press, p. 62. 2011.

<sup>11</sup> Beck, V., Hahn, H., and Lepenies, R., "Interdisciplinary Perspectives on Poverty Measurement, Epistemic Injustices and Social Activism", in Beck, V. et al (Eds.), *Dimensions of Poverty: Measurement, Epistemic Injusties, Activism*, Cham: Springer Nature Switzerland AG, pp. 2-3. 2020.

<sup>12</sup> Wolff, J. "Beyond Poverty", in Beck, V. et al (Eds.), *Dimensions of Poverty: Measurement, Epistemic Injusties, Activism*, Cham: Springer Nature Switzerland AG, pp. 30-31. 2020.

<sup>13</sup> Aurbach, M. P., "The Poverty Line," in Salem Press (Eds.), *Sociology Reference Guide: The Effects of Poverty & The Welfare State*, California dan New Jersey: Salem Press, p. 14, 21. 2011.

<sup>14</sup> Sen, A. *Development as Freedom*, New York: Alfred A. Knopf, Inc., p. 87. 2000.

certain intermediaries. There are still tobacco farmers who are always in debt bondage to moneylenders (Wirawan and Sinaga, 2021)<sup>15</sup>. The state should address the existence of poverty among tobacco farmers by strengthening its legal policies on improving the agricultural sector (Brooks, 2012) and ICTs, considering that the tobacco agricultural sector has contributed to the realization of excise on tobacco products, which in 2018 and 2019 had reached 103.2% and 103, 8% of the target for each year, namely Rp. 152.9 trillion and an amount of Rp. 164.9 trillion (Direktorat Jenderal Bea dan Cukai, 2018; Direktorat Jenderal Bea dan Cukai, 2019).

## **B. Multi Dimensions of Poverty and Its Relationship with Law**

Poverty has many dimensions because it is not only a matter of money. According to Amartya Sen, the most comprehensive starting point in obtaining the multidimensional concept of poverty is the framework of "capabilities and functionings." Even though an individual needs income as the minimum level of welfare generated by a set of attributes and a standard way of determining whether a person is above or below the poverty threshold, there are drawbacks to this income approach, such as the presence of some (non-monetary) attributes that are not can be purchased because of unavailability in the market, or a market that is not operating perfectly so that prices do not reflect the weight of benefits to households. There is the neglect of other main dimensions of poverty in life expectancy, education, provision of public goods, freedom, and security (Thorbecke, 2007)<sup>16</sup>. Furthermore, in terms of capabilities, Alkire (2007)<sup>17</sup> emphasizes that the core of the capabilities approach is a normative framework for assessing alternative or alternative policies, whether in welfare economics, development, or poverty alleviation, where this approach suggests that social arrangements must be evaluated considering the assumption that poverty is deprivation of freedom which is very valuable so that a multidimensional evaluation of poverty is needed in the space of capabilities.

The concept of poverty shows that sometimes multiple dimensions (e.g., economy, society, politics) will make a person or a society not conducive to poverty because of its complexity. This sometimes occurs in individuals or institutions who face profound structural barriers to overcoming their shortcomings due to discrimination in the market, labor market, or the education system, leading to social and political exclusion. However, even though there are multi-dimensions of poverty, Shepherd (2013) emphasizes that what is usually the core of the chronic poverty problem lies in two main things: politics

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<sup>15</sup> Sinaga, H. D. P., and Bolifaar, A. H. Blockchain Adoption for Plea Bargaining of Corporate Crime in Indonesia. ICBCT'20: Proceedings of the 2nd International Conference on Blockchain Technology, March 2020, pp. 115—119, DOI: 10.1145/3390566.3391680. 2020.

<sup>16</sup> Thorbecke, E., "Multidimensional Poverty: Conceptual and Measurement Issues", in Kakwani, Nanak, and Silber, Jacques, *The Many Dimensions of Poverty*, New York: United Nations Development Programme dan Palgrave Macmillan, p. 17. 2007.

<sup>17</sup> Alkire, S., "Choosing Dimensions: The Capability Approach and Multidimensional Poverty," in Kakwani, Nanak, and Silber, Jacques, *The Many Dimensions of Poverty*, New York: United Nations Development Programme dan Palgrave Macmillan, p. 90. 2007.

and how institutions or related institutions work<sup>18</sup>. These two main dimensions are closely associated with law, considering that poverty occurs due to the lack of motivation for policy direction or legal politics to make changes and occurs as a result of reluctance or limited resources in a country to develop and provide a basis for progressive legal policies, social cohesion. And growth for the greatest prosperity of the people. Furthermore, related to institutions and norms as part of the multidimensional poverty, Sindzingre (2007) concluded a straightforward two-step causal process involving cognitive phenomena<sup>19</sup>. First, institutions and norms determine access and achievement in various dimensions, such as income, human development, and social interactions. Second, institutions as evolutionary cognitive phenomena play a crucial role in existing causal processes.

Legal relations in the two core dimensions of chronic poverty that are politics and the workings of an institution, show that poverty alleviation that will be carried out on tobacco farmers in Indonesia, which an affiliated state institution or institution must carry out, cannot be separated from the policies of a country. Closely related to power, decision making, public policy, and allocation or distribution in carrying out specific functions for society (Budiardjo, 2008)<sup>20</sup>. Strengthening laws in poverty alleviation will determine policies in choosing the best lawyer for the community (Riyanto, 2010)<sup>21</sup>, as the pattern of relations between the state and its citizens must be realized in the form of rights and obligations based on the law (Sinaga et al., 2020)<sup>22</sup>.

### C. THE POVERTY OF TOBACCO FARMERS AND THEIR DIGITAL GAP

The strong market prospect for tobacco farming and several studies related to poverty-related to agriculture and farmers show that poverty traps can be alleviated if the state strengthens legal equality and ICTs in Indonesia. This will enable tobacco farmers to survive, increase their agricultural competitiveness and productivity, and develop comprehensive rural development. The demand for labor in the tobacco farming sector in rural areas will absorb the labor force in urban areas. (Mukherjee, 2015)<sup>23</sup>.

The need for equality of ICTs in poverty alleviation is related to two leading causes of poverty, that are: 1) the individual himself, where the actions or inaction of an individual who does not seek access to or take advantage of the resources and services he

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<sup>18</sup> Shepherd, A. "How do we get to zero on poverty – and stay there?", in Solheim, Erik (ed.), *Development Co-operation Report 2013: Ending Poverty*, Paris: OECD Publishing, p. 53. 2013.

<sup>19</sup> Sindzingre, A. "The Multidimensionality of Poverty: An Institutional Perspective", in Kakwani, Nanak, and Silber, Jacques, *The Many Dimensions of Poverty*, New York, United Nations Development Programme dan Palgrave Macmillan, pp. 67-68. 2007.

<sup>20</sup> Budiardjo, M. *Dasar-Dasar Ilmu Politik*, Jakarta: Gramedia Pustaka Utama, p. 14. 2008.

<sup>21</sup> Riyanto, A. *Filsafat Hukum*, Bandung: Penerbit YAPEMDO, p. 77. 2010.

<sup>22</sup> Sinaga, H. D. P., and Bolifaar, A. H. *Blockchain Adoption for Plea Bargaining of Corporate Crime in Indonesia*. ICBCT'20: Proceedings of the 2nd International Conference on Blockchain Technology, March 2020, pp. 115–119, DOI: 10.1145/3390566.3391680. 2020.

<sup>23</sup> Mukherjee, A. "Evaluation of the Policy of Crop Diversification as a Strategy for Reduction of Rural Poverty in India", in Heshmati, Almas, Maasoumi, Esfandiar, and Wan, Guanghua (Eds.), *Poverty Reduction Policies and Practices in Developing Asia*, Co-publication of the Asian Development Bank and Springer International Publishing AG, p. 140. 2015.

needs to increase personal income can prevent him from poverty, and 2) the government or relevant political institutions, which in this case are considered to have failed to provide access or means for poor individuals to gain access to the programs, resources, and services available (Aurbach, 2011)<sup>24</sup>. This confirms that the poverty experienced by tobacco farmers in Indonesia cannot be separated from the digital divide.

The digital divide, which is differential access to technology based on race, sex, or socioeconomic status, includes adequate and sustainable access to ICTs compared to those with limited access. The worrying sign of the digital race, sex, or socioeconomic status gap is based on the existence of barriers to access, affordability, lack of education, as well as inherent bias and socio-cultural norms in agricultural and rural areas that limit the ability of women and girls to benefit from the opportunities offered by digital transformation, in addition to girls' relatively lower educational participation in allows them to perform well in the digital world and ICTs (OECD, 2018)<sup>25</sup>. So it can be argued that the link between poverty and the digital divide lies in access to ICTs that a particular individual or society, or community does not have and prevent them from developing, which comes from more socially complex factors, such as race, income, location (urban/suburban versus rural), and other demographic characteristics (Schneider, 2014)<sup>26</sup>. In particular, elements originating from race and gender can lead to continued poverty if women and girls do not acquire the basic skills and competencies required for full participation in society. There are no concrete policy measures that promote women and girls' full participation and inclusion in the ICTs. Girls outperform boys in collaborative problem-solving skills, highly valued in job skills (OECD, 2018)<sup>27</sup>.

Definitely, suppose the digital divide happens to tobacco farmers in the internet era. In that case, it will become a severe problem as the internet has changed everything, including how to communicate, work, make decisions, and even think. Even the existence of the internet can be the primary communication and information infrastructure that regulates the social life of tobacco farmers, considering the use of the internet to be a prerequisite for participation in tobacco excise revenue for the state. Thus, tobacco farmers who do not gain insight into unequal access to the internet or ICTs have become one of the main challenges for the country as an understanding of this new form of inequality, called the digital divide, becomes even more valuable if more (advanced) internet use is made—Expanding to many domains of social life (LuPač, 2018)<sup>28</sup>.

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<sup>24</sup> Aurbach, M. P., "The Poverty Line," in Salem Press (Eds.), *Sociology Reference Guide: The Effects of Poverty & The Welfare State*, California dan New Jersey: Salem Press, p. 14, 21. 2011.

<sup>25</sup> OECD. "Bridging the Digital Gender Divide: Include, Upskill, Innovate". Retrieved from <https://www.oecd.org/digital/bridging-the-digital-gender-divide.pdf>. 2018.  
Republic of Indonesia, *The 1945 Constitution of the Republic of Indonesia*.

<sup>26</sup> Schneider, M. A., and Droege, S. B. *Poverty and the Digital Divide in Developing Nations*. *Studies in Asian Social Science* Vol. 1, No. 2, pp. 35-36. 2014.

<sup>27</sup> OECD. "Bridging the Digital Gender Divide: Include, Upskill, Innovate". Retrieved from <https://www.oecd.org/digital/bridging-the-digital-gender-divide.pdf>. 2018.

<sup>28</sup> LuPač, P. *Beyond the Digital Divide: Contextualizing the Information Society*, Wagon Lane: Emerald Publishing Limited, p. 1, 2018.



#### **D. Accessibility and Connectivity in Poverty Alleviation for Tobacco Farmers**

Even though there are regulations related to Tobacco Excise Production Sharing Funds as an alternative to improve the welfare of tobacco farmers, as in Article 2 of the PMK Number 206/PMK.07/2020 concerning Use, Monitoring, and Evaluation of Tobacco Excise Production Sharing Funds, among others, prioritizes recovery. The economy in the regions but the poverty alleviation model of tobacco farmers cannot be separated from the globalization of information and communication technology, whose concept is related to a combination of innovation factors and the influence of networks that are constantly developing from the desire to make it easier for people to achieve specific goals (Sinaga and Bolifaar, 2020)<sup>29</sup>. Thus, the poverty trap experienced by tobacco farmers in Indonesia must be addressed immediately because it is feared that it will cause tobacco farmers to leave this sector even though the prospect of the cigarette market is solid, considering that there is still too little profit from the economies of scale that tobacco farmers have received so far.

The deprivation of capability and digital divide among tobacco farmers shows that efforts to alleviate poverty must be carried out through legal equality and ICTs, which improve accessibility and connectivity to tobacco farmers in various parts of Indonesia. Accessibility can be defined as proximity or facilities for spatial interaction or virtual access, which refers to using ICTs or as a facility or opportunity to reach a basic service using a particular system (Kompas.com, 2009). Meanwhile, connectivity is the basis on which all the potential benefits (and costs) are associated with using it. Connectivity enables or facilitates a variety of economic and social services, such as financial services (internet banking, m-banking, money transfer, and insurance), business and distribution (primary producers connecting directly with markets, reduced distribution margins, and buyer oligopoly), employment and income (e.g., drivers and freelancers find work over the phone and increase their efficiency), and public services (telehealth, distance education, and many other e-government services) (Spence and Smith, 2010)<sup>30</sup>.

ICTs are an integrated development solution that enables all stakeholders to address some of the root causes of poverty, considering that the scope of ICTs has reached the provision of internet services, telecommunications equipment, and services, information technology equipment and services, media and broadcasting, libraries and documentation centers, commercial information providers, information services. Network-based, and other related information and communication activities. This scope is handy in facilitating the delivery of information and services that promote various things, such as wage standards, entrepreneurial issues, increased agricultural productivity, and quality of job creation. Of course, as an integrated development solution

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<sup>29</sup> Sinaga, H. D. P., and Bolifaar, A. H. Blockchain Adoption for Plea Bargaining of Corporate Crime in Indonesia. ICBCCT'20: Proceedings of the 2nd International Conference on Blockchain Technology, March 2020, pp. 115—119, DOI: 10.1145/3390566.3391680. 2020.

<sup>30</sup> Spence, R., and Smith, M. L. Reflections From and On the Forum: ICT, Development, and Poverty Reduction: Five Emerging Stories. Information Technologies & International Development Vol. 6, Special Edition 2010, p. 12. 2010.

to overcoming poverty, ICTs must be supported by higher internet connectivity so that farmers, workers, and other communities have equal access to take advantage of all opportunities contained in ICTs (such as expanding markets, facilitating remittances in their transactions, mobile banking for remote communities, and applications for people with physical disabilities), cloud computing for the coordinated delivery of public services to the public, to enable greater participation of every citizen in budget decisions and monitoring of development outcomes, and so that all relevant stakeholders can monitor the up to date of the poverty alleviation projects progress implemented by the government (Xu, 2017)<sup>31</sup>.

It is necessary to pay attention to the determinants of accessibility and connectivity. There are fundamental difficulties in viewing high technology as the main answer to poverty problems. First, those living in poverty need assistance in many fundamental ways before they can use computers or cell phones, so service should start with finding ways that people can earn a decent income based on jobs that are suitable for them and their local communities and accessibility is a good starting point in the long-term fight against poverty. Second, the poor clearly cannot afford high-tech products anytime soon, even waiting until they become middle-class consumers. Third, market forces alone will not change everything because technology companies tend to sell to those performing well and can afford to buy and benefit from it (Venkat, 2001)<sup>32</sup>.

Thus, the difficulty of accessibility and connectivity as the main answer to the poverty problems of tobacco farmers can be made through strengthening tobacco farmer groups (such as cooperatives), and the application of cost-effectiveness of technology, value-added service provision, commitment from the government, and entrepreneurial orientation. Farmer groups are considered an effective mechanism for improving farmer livelihoods because, in addition to reducing information asymmetry, farmer group members can collect resources and market their products collectively; address high transaction costs due to small individual sizes, and can increase members' access to resources (such as inputs, credit, training, transportation, and information), increase bargaining power and facilitate certification. Collective action through farmer groups can also reduce the risk of individual smallholders for long-term investments such as those required for annual crops and capital-intensive processing technologies (Liverpool-Tasie, 2014)<sup>33</sup>.

The technology used in tobacco growing areas must be cost-effective, reliable, and cover a wider area. In terms of value-added services, the network is used to provide several value-added services (not just used as a telephone line). Through these networks, tobacco farmers and their communities can access purchasing (fertilizers and seeds),

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<sup>31</sup> Xu, H., "How Information and communication technologies help to eradicate poverty". Retrieved on July 30, 2021, from <https://www.asia-pacific.undp.org/content/rbap/en/home/blog/2017/7/24/How-Information-and-communication-technologies-help-to-eradicate-poverty.html>.

<sup>32</sup> Venkat, K.. Digital Divide and Poverty. *Journal of Poverty* Vol. 5, No. 4, p. 115. DOI: 10.1300/J134v05n04\_06. 2001.

<sup>33</sup> Liverpool-Tasie, L. S. O. Farmer groups and input access: When membership is not enough. *Food Policy* Vol. 46, p. 37. 2014.

sales, agriculture, and e-governance. Creating an e-governance program to transform tobacco farmers and their communities can make the government's commitment. The government can set up free wifi in each tobacco farming community (such as cooperatives or community networks they form), conduct training on the use of ICTs for tobacco farmers, create websites related to tobacco farming (such as prices for fertilizers, seeds, and crops. updated list of buyers and sellers, online auction of tobacco, fertilizer and seeds production, online tobacco farming training modules, etc.).

This will significantly help tobacco farmers and their communities to implement several elements that can strengthen the selling power of their production or strengthen their purchasing competitiveness because of the open and guaranteed access and connectivity from the government to tobacco farmers and their communities. The economic and entrepreneurial scope is implementing quality and sustainable smallholder tobacco farming. Tobacco farmer communities or their cooperatives must innovatively organize supply chain activities and use a combination of participation forms of cigarette, fertilizer, and seed entrepreneurs through the ICT platform. (Narayanan, Jain, and Bowonder, 2005)<sup>34</sup>.

The success or failure of accessibility and connectivity in tobacco farming requires commitment from the central government (in this case, the ministry of finance), considering that its role as a regulator must be able to integrate ICTs in producing process improvements and at the same time increasing the productivity of tobacco farmers in an efficient, effective and accountable manner (Sinaga and Sinaga, 2021)<sup>35</sup>. The central government must continue to monitor and evaluate transparently against any barriers to accessibility and connectivity in poverty alleviation of tobacco farmers by creating official websites for each party involved in tobacco farming (such as suppliers of certified tobacco seeds and fertilizers, transparent auction of tobacco products. and online) which are also centralized to the Ministry of Finance's web site (in this case the Directorate General of Fiscal Balance).

#### 4. CONCLUSION

This study produces two conclusions. First, the combination of capability deprivation and the digital divide manifests in legal inequality and inequality of ICTs, which lead to prolonged poverty among tobacco farmers in Indonesia. This occurs due to the reluctance or limited resources available to the state, namely competent state institutions (central and local government), to develop and provide the basis for progressive legal policies, social cohesion, and growth for the greatest prosperity of tobacco farmers in Indonesia. Indonesia must build a normative framework to assess

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<sup>34</sup> Narayanan, A., Jain, A., and Bowonder, B. Providing rural connectivity infrastructure: ICT diffusion through private sector participation. *Int. J. Services Technology and Management*, Vol. 6, Nos. 3/4/5, pp. 434-436. 2005.

<sup>35</sup> Sinaga, E. N., and Sinaga, H. D. P. Business process reengineering of school committee in Indonesia. In Hendayani, R., et al. (eds.), *Synergizing Management, Technology and Innovation in Generating Sustainable and Competitive Business Growth*, London: Routledge, p. 90. 2021.

alternative poverty alleviation policies by providing access and connections to adequate and sustainable ICTs for tobacco farmers and their communities. The central government and local governments that are competent in the management of Tobacco Excise Production Sharing Funds are only carrying out their obligation to allocate Tobacco Excise Production Sharing Funds without establishing and opening access to information, consultation, and participation which are the rights of tobacco farmers, for example, in terms of income, human development, and social interactions. Second, accessibility and connectivity that can alleviate poverty for tobacco farmers in Indonesia can be done through strengthening tobacco farmer groups (such as cooperatives), the cost-effectiveness of technology, value-added service provision, commitment from the government, and entrepreneurial orientation. The Directorate General of Fiscal Balance is required to build a website and monitor and evaluate any obstacles to accessibility and connectivity transparently.

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