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E-Government technology and the policy implications to food security in conflict area

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Abstract. This research focuses on government efforts to overcome food insecurity through online social media. The purpose of this study is to answer the question why did Indonesian government adopt e-government technology, and what are the policy implications for food security? This research results that the Indonesian government uses e-government to provide excellent service to the community. E-government innovation aims to improve the quality of service processes of government institutions so that people can control the work of government even if they are in conflict areas.

1. Introduction

Conflicts have a large impact on communities in conflict areas such as hunger because food sources are reduced and access to agriculture production is also reduced. Conflict causes the emergence of food insecurity which has a wide influence on the social, economic and political sectors of a country. Food insecurity and conflict create a reciprocal relationship that gives birth to a vicious circle because it influences other sectors. FAO data (Food and Agriculture Organization) explains that an increase in people experiencing chronic food shortages, 775 million in 2014 increased to 777 million in 2015 and to 815 in 2016. 489 million of them live in countries where conflict happened [1]. This condition shows that people who live in conflict areas tend to experience malnutrition due to food insecurity. FAO data shows an increase in the number of undernourished people in the world, namely in 2016 by 804.2 million people to 820.8 million people [2].

For the country of Indonesia, FAO data shows that there was a decrease in the number of people remaining undernourished, namely in the period 1990-1992 by 35.9 million people or 19.7% down to 19.4 million people or 7.6% in the 2014-2016 period, with the number of children being underweight by 28 percent and children under 5 suffer from stunted growth by 37 percent[3]. This data is a problem for the Indonesian government because the amount is still relatively large. Indonesia has around 17.500 islands so that it is nicknamed as the world's largest archipelago and has a strategic position because it is located between the Indian and Pacific Oceans and is a bridge between two continents, Asia and Australia with a population of around 250 million people, it is not easy to solve the problem.



One strategy that has been carried out by the Indonesian government is to increase social media involvement. This article aims to answer the question why did Indonesian government adopt e-government technology, and what are the policy implications for food security ?

2. Methods

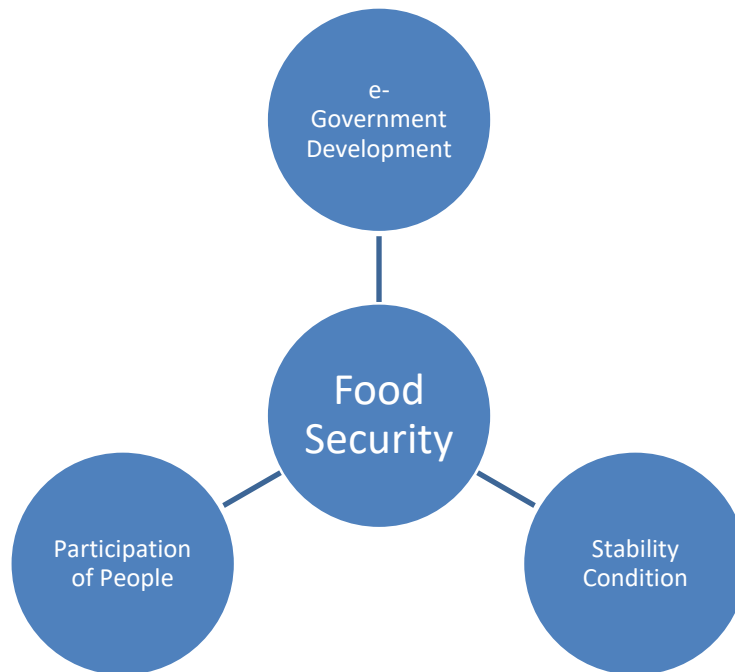


Figure 1. Framework of methodology

Note on items:

1. E-government development: government efforts or strategies that fight for food security.
2. Participation of people: Community involvement uses social media especially the use of e-government.
3. Stability condition: stable and peaceful conditions so that they can support the economic conditions better.

Food Security: Food security that benefits the community

3. Results and discussion

3.1. Indonesian government and use of social media

The growth of technology and information entering the 4.0 revolution pushed the Indonesian government to utilize this technology. The Indonesian government is currently forming eGovernment which aims to provide excellent services to the public by utilizing information and communication technology (ICT) based on internet use[4]. Indonesia is a country that has a large number of social media users [5]. This condition shows that the majority of Indonesian people have understood ICT making it easier for the Indonesian government to deliver messages that can provide benefits to the community.

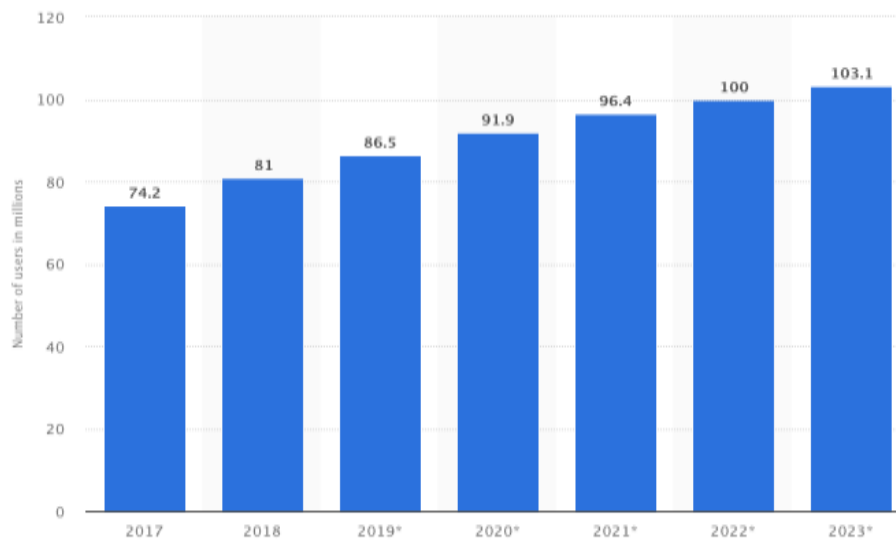


Figure 2. Number of users social media di indonesia from 2017 to 2023 (in millions)

Figure two shows the increasing number of social media users in Indonesia. This condition provides access to the government with limited risks in the use of e-government. The government can improve services so that it brings benefits through social media[6]. The Government of Indonesia has made several efforts in improving services through Presidential Instruction No.5 of 1984 concerning Guidelines for Simplification and Control of Licenses in the business sector. The government utilizes information technology because the technology can reduce costs compared to traditional or conventional methods.

E-government innovation aims to improve the quality of service processes of government institutions so that the community can control the work of the government. Internet use not only has national impact but also reaches a global level [7]. Therefore, the government is trying to provide convenience services to the public through forms of e-government such as e-audit, e-controlling, e-budgeting, e-catalog, e-procurement, and e-payment. Currently the Indonesian government can also make a passport, ID card and extend a driving license or vehicle registration online. This situation shows an increase in the use of technology in providing services to the community.

3.2. Social media and resolution conflict

The forms of social media websites that are often used are Facebook, Twitter, Instagram, LinkedIn, WhatsApp, and Snap Chat. Social media is a network site through electronic communication that gives permission to its members to share pictures, texts, and videos that are done online[8]. Social media can be used as a communication tool in conflict resolution because it can be used by decision makers, rebels, and government. The use of social media in conflict resolution because social media can reduce costs and disseminate information quickly [9]. Indonesia has thousands of languages and ethnicities can be one of the triggers of conflict. 3.600 times have occurred with a total of 10.700 victims between 1997-2004 [10].

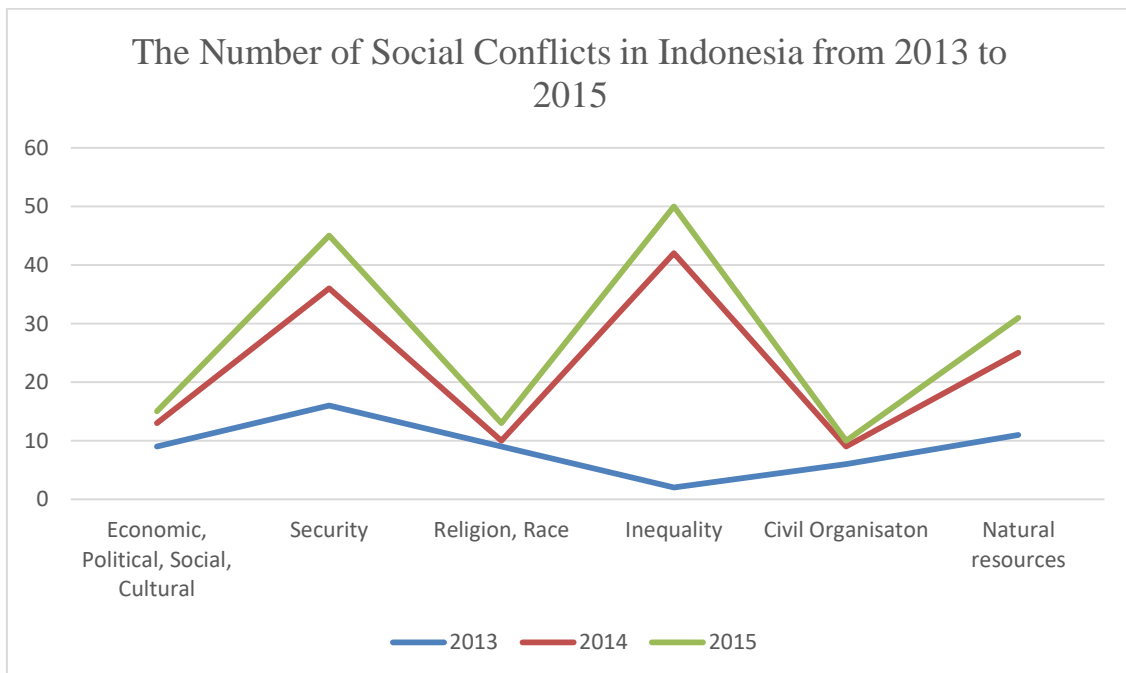


Figure 3. The number of social conflicts in indonesia from 2013 to 2015

Social conflicts that occurred in Indonesia as shown in figure 3 shows sadness because they are included in large numbers. Therefore, the Indonesian government through social media has the power to create contents that can reduce a conflict. One of the efforts made by the Indonesian government is to issue Law Number 19 of 2016 concerning amendments to Law Number 11 of 2008 concerning information and electronic transactions aimed at protecting the public interest from all types of disruption as a result of misuse of electronic information and electronic transactions which disturbs public order.

3.3. Social media and food security

Food security means that all people can have economic, social, and physical access to good nutritious food so that they can have a healthy and active life [11]. This definition refers to food utilization, access, availability, and stability [2,12]. Utilization means the ability of individuals to meet the quality of their food with healthy and balanced nutrition. Access means someone who has the ability to get food effectively in various sources such as markets to meet their needs. Availability means individuals and households that have enough food sources in accordance with their economic and social needs. Stability means individuals and households that are able to provide food for a long period of time and can have foods that contain healthy nutrients.

In the context of food utilization, access, availability, and stability, the Indonesian government issues e-government. E government or E gov is the government's strategy in utilizing information and communication technology in the digital age. E gov uses information technology to provide services and information to ensure public food security. The Government of Indonesia adopts communication and information technology with a purpose:

3.3.1. *Government to Citizen (G2C)*. G2C aims to improve relations between the community and government to be better in accessing important information.

3.3.2. *Government to Business (G2B)*. G2B aims to foster business relations between business people and the government so that people involved in business can obtain information that facilitates the conduct of their business.

3.3.3. *Government to Government (G2G)*. G2G aims to provide information so that other governments have the ease of carrying out collaborations with other governments.

3.3.4. *Government to Employee (G2E)*. G2E aims to improve the welfare of employees who are within the scope of government institutions.

The implementation of e Gov has a large impact on the process of decision-making and implementation on decisions. One e Gov that has been carried out by the government of South Sulawesi is to make an official web of the Department of Food Security of South Sulawesi Province. The web provides online information about food prices between regions and various other information related to food in South Sulawesi. This website also provides a gallery column containing activities carried out by the government in supporting food security such as seminars, fieldwork and discussions with the public.

The implication of this web formation is that the public has information on how to access resources to support their food security even though they are in conflict areas transparently. Communities in conflict areas can access this website because they have a good WIFI hotspot and a complete digital signature system. The farmers' production process has also increased. Even so the land problem that occurs between smallholders and companies continues according to the rule of law.

4. Conclusion

In this article, we present a way to handle food insecurity through the use of social media, especially e-government. The use of e-government provides benefits for the government in the fields of government to government, government to business, government to employees, and government to citizen. Through e-gov, the public can be transparent about government performance and reduce corruption [13-15]. The government can also do the work effectively, efficiently, and integrated. This research is limited to e-government. There are many activities that have been carried out by the government in supporting food security in conflict areas. For future research it is better to examine other aspects of social media forms in supporting food security in conflict areas.

References

- [1] Holleman C, Jackson J, Sanchez M V and Vos R 2017 Sowing the seeds of peace for food security-Disentangling the nexus between conflict, food security and peace, FAO Agricultural Development Economics Technical Study 2 (Rome : FAO)
- [2] FAO, IFAD, UNICEF W and W 2018 *The State of Food Security and Nutrition in The World: Building Climate Resilience for Food Security and Nutrition* (Fao)
- [3] Nations F (Food and A O of the U 2019 *Indonesia at a Glance* (FAO:Indonesia)
- [4] Srivastava S C and Teo T S H 2008 The relationship between e-government and national competitiveness: The moderating influence of environmental factors *Commun. Assoc. Inf. Syst.* **23** 5
- [5] Tarmizi H 2016 E-government and social media: a case study from Indonesia's capital *J. E-Gov. Stud. Best*
- [6] Statista 2019 Number of Social Network Users in Indonesia from 2017 to 2023 (in millions).
- [7] Moynihan D P 2004 Building secure elections: e-voting, security, and systems theory *Public Adm. Rev.* **64** 515–28
- [8] Melville N, Kraemer K and Gurbaxani V 2004 Information technology and organizational performance: An integrative model of IT business value *MIS Q.* **28** 283–322
- [9] Trottier D and Fuchs C 2014 *Social media, politics and the state: Protests, revolutions, riots, crime and policing in the age of Facebook, Twitter and YouTube* (Routledge)
- [10] Zeitzoff T 2017 How social media is changing conflict *J. Conflict Resolut.* **61** 1970–91

- [11] Kurniadi 2017 Responding Social Conflict in Indonesia (Republika: Indonesia)
- [12] Barrett C B 2010 Measuring food insecurity *Science (80-.)*. **327** 825–8
- [13] Srivastava S C, Teo T and Chandra S 2007 E-Government and Corruption: A Cross-Country Analysis *ICIS 2007 Proc.* **77**
- [14] Cho Y H and Choi B-D 2004 E-government to combat corruption: The case of Seoul metropolitan government *Int. J. Public Adm.* **27** 719–35
- [15] Wong W and Welch E 2004 Does e-government promote accountability? A comparative analysis of website openness and government accountability *Governance* **17** 275–97