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*by* Yuwanto Yuwanto

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## Actors and Network in Policy Implementation of Electronic ID card (E-Ktp) in Semarang City

Rukma Setyabudi<sup>1</sup>, Yuwanto<sup>2</sup> and George Towar Ikbal Tawakkal<sup>\*</sup>

<sup>1,2</sup> Diponegoro University and <sup>\*</sup> Brawijaya University  
For Correspondence-E-mail: george.ikbal@ub.ac.id

**Abstract:** Indonesia had some problems in registering citizen. Even, more than 31 institution released citizen number. Now, they have new policy which integrated all institution in one number. It is called as Electronic ID card (E-KTP). The policy take a new condition, where many institutions must be related each others. The purpose of this research is to understand the process of transforming policy and regulation of E-KTP into detail work plan, its implementation dynamics, role and network of actors-how they communicate and cooperate and the model of its policy. This qualitative research uses observation, interview, and Focus Group Discussion involved the provincial and city agency of population, Central Bureau of Statistics, districts, villages, the Population Data Recording Center, provincial and city education agency, public and private hospitals, police agency and others. The result shows that the regulation is sufficient to guide the implementation of the program. The dynamic of implementation is influenced by internal and external factors and changes in regulations. There are three main policy actors namely the central government, provincial and municipal governments, all of them form a network of policy actors and work together based on two things: bureaucratic structure and cooperation agreement.

**Keywords:** Policy implementation, Electronic ID card, E-KTP, Actor-Network, Semarang City

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### Introduction

Electronic ID card program implementation began in 2010 in the Semarang city. Since then, the program encounters quite a lot of problems that after seven years, the government has not been able to provide electronic ID card to all eligible residents. The electronic ID card is needed as a single official identity for all citizens as well as the primary data source for government program as well as a tool to get access to public services. Before 2010, there were more than 32 institutions who released citizen or resident ID number (Setiadi *et al.*, 2006), such as resident card, family card, passport, driving licence, tax number, etc. They have differing numbers without synergy with one another. This lack of synergy was caused by the absence of data center which results in the absence of coordination between institutions. The main problem was that, they registered manually, so difficult to make the data center. As a note, Indonesia has thousand islands, too large for integrating the data without electronic mechanism. The fact that there were citizens who did not have electronic

ID card, decreased the accuracy level of data use for government programs, and in the other side, there were citizens who cannot access public services.

The electronic ID card uses simple biometric data that identifies every individual based on the attributes attached: 10 fingerprints, iris of two eyes and photo. These traits are automatically saved to the data center at the Ministry of Home Affairs when the data is gathered. Biometric technology in electronic ID card has two functions. First, to ensure the identity of the resident, so that it is not possible for any resident to have two electronic ID cards both with the same or different biodata. When the resident's data is captured, a single ID test will be performed. Ten fingerprints, two irises, and face will be examined, if it is not registered yet, all data will be entered into the data center and an electronic ID card will be printed. If it is registered already, the process will be stopped. The second function of biometric technology is the verification process. This process is to ensure that cardholder is actually the person whose data is printed on the card, and during the verification process, the fingerprint data will be examined using electronic ID card reader.

Electronic ID card's function as a single identity, it cannot be forged, cannot be duplicated, and can be used to access public services from the government. The single number in the electronic ID card will be used as the basis for issuance of a passport, driving license, Taxpayer Identification Number, insurance policies, certificates of land and issuance of other identity documents as specified in Article 13 of Law Number 23/ 2006 concerning Population Administration. The aim of this research is to understand the process of transforming policy and regulation of electronic Identification Number (ID) into detail work plan, its implementation dynamics, the role of each policy actors, the network of actors – how they communicate and cooperate and the model of its policy.

### Theoretical Framework

To understand the various problems that occur in the implementation of electronic ID card policy, it is necessary to conduct an in-depth analysis of the entire process of implementation. It will involve the concept of 'policy network', which has gained in popularity over the last years. It seems to have replaced the concept of corporatism as the fashionable catch-phrase in the study of interest group politics (Waarden, 1992). In political science, the concept of network has been used in metaphorical way (Hanf and Scharpf, 1977; Katzenstein, 1985; Teclio, 1978), as a model of reality. In other side, some scholars used the concept as sociometric network analysis, where detailed concepts, variables and measurement criteria have been developed (Laumann and Pappi, 1976; Knoke and Kuklinski, 1982; Laumann and Knoke, 1987). However, the key dimensions of policy networks are: (1) actors, (2) function, (3) structure, (4) institutionalization, (5) rules of conduct, (6) power relations and (7) actor strategies (Waarden, 1992).

Specifically, the concept is centered on actor. Dente (2014) asserts that in analyzing the policy dimensions and processes we need to identify the actors first. In order to understand what has been and will happen, the first question needs to be asked: "who are the actors?". According to Dente, the actors are the parties who really do the action. Not everyone can be categorized as an actor. Only those who actually perform actions can be defined as actors. How these actors interact is known as an actor-network. In actor-network theory (ANT), an actor is not only human, as inanimate objects such as technical tools are considered actor too. The organization according to actor networking theory is understood as a network of heterogeneous social-actors, technical, and textual, that together form a relatively stable

association or alliance (Law, 1992; 2007). Therefore, the term "actor" in this context can refer to people, machines, systems, and others.

Unlike older approaches that focus more on the role of human actors in policy implementation, actor-network theory as a new approach is used to understand that non-human actors are also an influential factor in policy implementation. Whittle (2008) says this theory in principle places the machine for example at the same level as humans in its contribution to policy implementation. This theory has, for example, been used to analyze safety concerns of construction workers through relationships between regulations and policies, workers, supervision of workers, heavy equipment used and other factors.

Ranerup (2008) used actor-network theory to study the retirement programs in Sweden and concluded that actors (government and non-government), network of actors and technology (internet and decision support system) continuously make negotiation among actors throughout the implementation process and it is known that although technology is important, the role of actors and negotiations between actors also has an impact in policy implementation.

Research on the implementation of electronic ID card policy has been done by some previous researchers but there has been no research using actor-network theory. Kurniati (2013) in her research in Cimahi, West Java concluded that the implementation there runs quite effectively but not optimal, particularly related to the quality of human resources in solving problems arising in the field implementation stage. While Oktamia and Fauziah (2018) concluded that the implementation of the policy of making ID cards in Temanggung has been implemented well according to Edward III model theory which uses four variables namely communication, resources, disposition, and bureaucratic structure.

#### Research methods

The research involved a qualitative approach, through observation, interview and Focus Group Discussion (FGD) as data collection techniques. All regulations issued by central, provincial and municipal governments are reviewed. Interviews and FGDs were conducted involving various institutions, such as the provincial and city agency of population, Central Bureau of Statistics, districts, villages, the Population Data Recording Center, provincial and city education agency, public and private hospitals, police agency and others. To know deeply the policy implementation of electronic ID card, Semarang City was chosen as the research location as it the capital of Central Java so that various interactions both related to central and local government happened.

#### Results and Discussion

The implementation of the electronic ID policy involves three main actors, namely the central government, provincial and municipal governments. The role and the level of involvement of each of these government actors are different. The central government plays a major role in the making of regulations, the provision of funds and data centers and the provision of electronic ID cards. Provincial Governments play a role in supervision and provision of technical assistance and municipal governments have a key role as implementers, including fund provision.

To implement the electronic ID card policy, the central, provincial and municipal governments issue 99 regulations, consist of 91 central government level regulations, two provincial level regulation and 6 city level regulations. These regulations govern all aspects

required for implementing the policy including service, evaluation, and authority of all institutions involved.

Of the seven years of implementation, there are times that these regulation changes i.e. the validity or expiration date of the electronic ID card which was originally 5 years became a lifetime, the transfer of authority to print the electronic ID card from centralized system at the Ministry of Home Affairs to the implementing agency at municipal level and the change in filling the religious column. The change of expiry date creates problems with some public service providers despite a confirmation letter from the Minister of Home Affairs already declare that the date of validity in the electronic ID card printed in the initial period does not affect the card function beyond the applicable period. While the change of card printing authority from the central government to the city level that is not supported with the provision of printing equipment forced the city government to reorganize their budget and the consequences for Population Agency of the Constitutional Court ruling saying that the God Believer has the right to include their belief in the religion column is that they have to replace the old electronic ID card with the new one. From April 1, 2012, when the first electronic ID card was recorded in Semarang to February 2018, 1.116.072 people have been recorded out of 1.230.517 eligible residents for electronic ID card, this means that there is still 9.3 percent of the population who have not yet done the recording.

This result is connected with the implementation dynamics determined by internal and external factors. Internal factors are the conditions occurring within the organization such as lack of cards, shortage of ribbon color and lack of work equipment; while external factors are conditions that occur outside the control of electronic ID card providers such as the lack of awareness of the citizens of the importance of electronic ID card as a single identity number useful for public services improvement, the inability of citizens to come to the recording center due to physical limitations or illness.

The main policy actors in the implementation of electronic ID cards are the central government, provincial and city/municipal governments. The central government's role is regulators, fund provider, electronic ID cards provision and management of the Population Data Center. The provincial government contributed to regional regulations, providing funding as well as supervision and technical assistance; while the city government issues regulations, provide budgets and implements the program. From 2010 - 2017 the budget issued by the central government is almost the same as the city government, the ration with the provincial government is 19: 1.

The central policy actor consists of the President, the Minister of Home Affairs and the Director General of Population and Civil Registration; the provincial policy actors consist of the Governor and Head of Community Empowerment, Village, Population and Civil Registration Office of Central Java Province; and the main actors of Semarang City Government consist of Mayor, the Agency of Population and Civil Registration.

The Data Recording Center (TPDK) located in all 16 districts in Semarang play an important role in the policy implementation of electronic ID card program. TPDK is a facility built in districts/municipalities or sub-districts to conduct recording, processing and updating residents data, including the issuance of ID cards after being examined at central government data center. The presence of TPDK 2012 helped improve the performance of the of Semarang City Population and Civil Registration Office. Every TPDK is equipped with two recording devices.

To understand the implementation of electronic ID card policy, the use of actor networking theory is appropriate as by using this theory research questions can be answered comprehensively. All relevant regulations can be identified by using an actor approach, problems can also be identified proportionally based on the categorization of actors experience the problems. Overall implementation of electronic ID policy requires regulations, executors, tools, and systems, the actor approach is used to understand the whole aspect and how the entire actor functions are adequate because all aspects can be identified well.

In implementing the policies all actors involved formed a network of actors. According to Whittle and Spicer (2008) in sociological interaction, there is no social relation that can be detached from material things and nature as well as social actors. All must include non-human actors within the framework of any sociological interaction. In actor networking theory, the meaning of the actor is not only human, such as technical tools. The organization according to actor networking theory is understood as a network of heterogeneous actors-social, technical, textual, emerging naturally and others-which together form a relatively stable association or alliance (Law 1992). Therefore, the term "actor" in this context can refer to people, machines, systems, and others.

At the field level, the network of policy actors communicates and work together based on two structures: the bureaucratic structure and cooperation agreement. The network of policy actors based on the structure is the inter-actor relationships that are obliged to carry out the service and issuance of electronic ID cards, from the President, the Minister of Home Affairs, the Directorate General of Population and Civil Registration, Central Java Governor, Mayor of Semarang, the Semarang City Population and Civil Agency, TPDK and all 16 districts and sub-district.

While the cooperation agreement-based network is a relation between actors providing and managing resident's data (provider) with agencies that require data access to support the service and publication of some official documents and services. In Semarang City, this network consists of Semarang City Population and Civil Agency as the data provider and the Regional Government Organization (OPD), non-private legal entity and private legal entity in Semarang City as the users.

The implementation of an electronic ID card policy supports the actor-network theory that places human and non-human actors in a relatively equal position. Implementation of electronic ID card policy requires non-human aspects, i.e. equipment, data systems and information technology. Human actors cannot function optimally if non-human actors are not attached and function properly.

Equipment used can be categorized into three groups of processes, namely recording devices, storage devices, and printing equipment. Electronic ID card data recording device consists of DSLR camera (Digital Single Lens Reflex) needed to take pictures of the resident and directly pinned to the electronic ID card as an identifier, finger scan to record the ten, iris recorder for eye recording and LCD Signature used for recording citizen signatures embedded in electronic ID cards. Therefore, it can be concluded that actor-network theory is appropriately used for analyzing policy implementation which requires a contribution from data and information technology system such as on the implementation of electronic ID card policy. Only when the two types of actors are synergized and functioning properly then the implementation of the policy can be done optimally.

The flowchart illustrates the information system for urbanization management, showing the flow of information and resources between different levels of government and various data sources.

**Central Government**

Regulation Funds	Data Center, Cards
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**Provincial Government**

Regulation Funds	Supervision Technical Assistance
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**City Government**

Regulation Funds	Implements
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**Data Sources:**

- Human Resources
- Place
- Data Recording
- District Village
- Residents Data
- Feed Back

**Information Flow:**

- Solid arrows indicate the primary flow of information and resources from Central Government to Provincial Government, and from Provincial Government to City Government.
- A solid arrow points from the City Government back to the Central Government.
- A dashed arrow indicates a feedback loop from the Feed Back source back to the Central Government.
- A solid arrow points from the District Village source to the Residents Data source.
- A solid arrow points from the Residents Data source to the Feed Back source.
- A solid arrow points from the Place source to the Data Recording source.
- A solid arrow points from the Data Recording source to the District Village source.
- A solid arrow points from the Human Resources source to the Place source.
- A solid arrow points from the Data Center/Cards of the Central Government to the Data Recording source.
- A solid arrow points from the Supervision/Technical Assistance of the Provincial Government to the District Village source.
- A solid arrow points from the Implements of the City Government to the District Village source.

The dynamic of implementation occurred along with the changes in external and internal factors. Internal factors are conditions occurred within the government control and external factors are conditions outside the control of the government. The dynamics in program implementation is also affected by the laws and regulations made by the provincial and central governments as every change will affect everything in the field. The main policy actors are central, provincial and municipal governments, each with their specific role: the central government is regulator, funder, administration of national central data and ID cards provider; the provincial government issues regulations, providing funds, technical assistance, and supervision; and the city government issue regulations, provides implementation budget and implements all field level work.

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electronic ID cards: the President, the Minister of Home Affairs, the Directorate General of Population and Civil Registration, Central Java Governor, Mayor of Semarang, the Central Java and Semarang City Agency of Population and Civil Registration up to TPDK in 16 sub-districts. The cooperation-agreement-based network between agencies requires access to residents' data in electronic ID and the Semarang City Population and Civil Registration Agency.

### Practical Implications

Starting from 2018 most of the residents will have their electronic ID card thus the acceleration program for electronic ID card provision with big procurement budget is no longer needed. It would be more appropriate for municipalities to shift program planning in preparing the staff to have skill in evaluation and monitoring the cooperation agreement between institutions. In the near future, the number of cooperation agreement will increase while its utilization is prone to abuse as many organization including private sector can get access to it. The monitoring and evaluation capacity is needed as there will be an increasing data usage by many institutions, this should be anticipated by the local government in the form of increasing their capacity from management of electronic ID card to managing many cooperation agreements, the capacity to identify potential and the misuse of data is required as well.

Given that the constraints of procurement of the ID cards causing prolonged problems at the city level, it is important for the central government to better planning the budgeting and procurement process in order to prevent such things to happen again in the future especially in the areas that do not have good infrastructure access to central government. In Indonesia there are people who hold more than one ID cards, this study found that sanctions for possession of multiple ID cards are only given to the owners, it better to add criminal sanctions and/or fines to apparatus who abuse their authority as per making multiple ID cards is not possible without the involvement of dishonest apparatus.

### Research limitation and future research agenda

This study only collect data during the period of this study, it only captured single moment fact during the study period whereas the implementation of electronic ID card policy begun in 2010 and will continue in the future is recommended that further researchers examines all phases of implementation including the period of full resident's coverage. Accordingly, it can be seen as a description of a policy ranging from regulations, budgeting and human resources, this can then be used as a comprehensive reference for policy planning with multiple focus. Another interesting topic is to conduct a more in-depth research on how the network of actor work together, understand the implication, identify problems and its response. The mentioned research is important as the utilization of data embedded in electronic ID will immensely increase in the near future.

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