

# Policy Analysis and Organizational Establishment of Village Owned Business Entities in Banggai Regency, Central Sulawesi Province

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**Abstract.** The government has done many things in providing services and welfare to the people, most of whom live in rural areas and are still in a cycle of poverty. Therefore, the government's focus is to increase the degree of socio-economic welfare by presenting Village-Owned Enterprises (BUM Desa). This is a form of public interest which is formalized in several state and government regulations in various regions, including in Banggai Regency. In accordance with its authority as the holder of government power, regulation at various levels of government is basically a public policy. The regulation of organizational and policy aspects contained in several state, central and local government regulations is often not based on the principle of good policy. This study aims to identify and elaborate various aspects of the organization and policies contained in all regulations regarding the BUM Desa. The research uses normative juridical methods, literature review and documentation studies. The results of the study indicate that the socio-economic welfare of rural communities as a policy issue has been embodied in Law Number 6 of 2014, Government Regulation Number 43 of 2014, Minister of Village Regulation Number 4 of 2015, Minister of Home Affairs Regulation Number 39 of 2010, and Regional Regulation Number 2 of 2011. There is a relationship structural relationship between the central government as a policy maker at the national level and the local government as an operational policy maker regarding BUM Desa. There are arrangements for several structural and contextual dimensions of the organization as well as policy aspects in these regulations. Regional Regulation Number 2 of 2011 has not been revised in accordance with the current regulations on villages and BUM Desa. There are several policy substances that are considered bad policies because they are unclear, not operational/incomplete, ambiguous and contradictory. This can potentially lead to multiple interpretations among policy implementers when this BUM Desa regulation is implemented at the lowest level of government. It is necessary to improve the substance in several policies regarding the BUM Desa.

**Keywords:** Organization · Policy · Public Policy · Village-Owned Enterprises

# 1 Introduction

People's welfare is a constitutional mandate that must be upheld by state administrators at all levels of government. One of the very fundamental functions of the state as mandated in the Preamble to the 1945 Constitution is to provide welfare to the people. Various policies and programs have been outlined since this country was founded for the welfare of the people who mostly live in rural areas. Great attention from the government from time to time along with the change of government regime has been given, to achieve prosperity. Various state and government regulations in various forms and levels have been established as a form of commitment and seriousness in achieving the ideals of the proclamation of independence.

The realization of the welfare of the people, especially in rural areas, most of whom work as farmers, is in the public interest. Within the framework of a democratic and legal state, the issuance of various state or government regulations relating to the public interest is a public policy. Therefore, the stipulation of the Banggai Regency Regional Regulation (Perda) Number 2 of 2011 concerning Village-Owned Enterprises (BUM Desa), is a concrete form of public policy whose substantive area is socio-economic welfare. This political decision is then an elaboration of several national policies which are political products, among others in the form of a law whose substance is about villages. This is indeed an entry point for the formation of more operational policies, especially at the district level to improve people's welfare.

Therefore, within the framework of a democratic state which, among other things, must provide welfare to the people, then at the district level, regional regulations or regional head regulations are stipulated as operational guidelines for the formation of this BUM Desa. Of course, each region has its own characteristics, so it is very possible to have a unique regulation based on the potential and local wisdom of each region. Therefore, the issuance of regional policies in the form of regional regulations is a strategic factor towards the formation of BUM Desa as a vehicle that can accelerate the realization of the socio-economic welfare of the community.

The beginning of the effectiveness of public policies when implemented, among others, stems from the existence of policies that fall into the category of good policies. Therefore, attention and study of the substance of the policies that have been determined is important and contributes to the development of public policy studies. Policy stakeholders, including academics, can certainly play a positive role in joint efforts to improve existing policies. Intellectual contributions from academics, including through research results, will have a positive impact on the role of implementing BUM Desa policies in each region.

The issuance of the three political and administrative decisions from the political superstructure institution regarding BUM Desa certainly did not come from a vacuum. The involvement of policy actors and institutions, including those in the political infrastructure structure, also contributes to examining village community problems.

This study aims to elaborate on the policy and organizational dimensions with regard to the Regional Regulation Number 2 of 2011, as well as in its relationship to the policy hierarchy with all applicable laws and regulations, regarding or related to the establishment of BUM Desa.

# 2 Methods

This study uses a normative juridical method combined with literature study and policy evaluation. According to Marzuki [1] it is classified as legal research, or normative legal research or library law which is carried out by examining library materials or secondary data [2]. The study of policy content is an important element in policy analysis which is very contributive to the development of policy studies as a whole. The focus of the research is all documents in the form of laws and regulations stipulated by the government at various levels. Based on the object of this study, this type of research is also known as document analysis research or content analysis.

In accordance with the research objectives, what became the focus of the researcher's attention were all forms of political and administrative decisions of state/government agencies at various levels regarding BUM Desa, as well as other documents needed. The documents that are the focus of this research are the Banggai Regency Regional Regulation Number 2 of 2011, as well as other related documents, namely Law Number 32 of 2004, Government Regulation Number 72 of 2005 and Permendagri Number 39 of 2010.

# 3 Results and Discussion

#### 3.1 BUM Desa Profile, Hierarchy and Policy Context

The involvement of state and government institutions in dealing with public issues, including in providing welfare to the community through the establishment of BUM Desa is a realization of the strategic role of public administration in designing and establishing public policies. This factually cannot be separated from public administration and public policy because this is something that is actually felt by the public from the presence of the state. The public feels the role of public administration when state apparatus and instruments are present with concrete actions for the public interest. This is in accordance with Dwight Waldo's opinion that public administration is the organization and management of man and material to achieve the purpose of government [3]. The issuance of various government political and administrative decisions that are oriented towards improving the socio-economic welfare of rural communities, is in line with one of the state's goals in the form of a Village-owned Enterprise establishment policy.

One of the nature and identity of public policy is the aspect of legality in the form of issuing state or government regulations. This is in line with Anderson's opinion that in its positive form based on law and is authoritative [4] and Gerston that the levels of government that address issues [5], In this context, it is clear that regulations regarding BUM Desa are contained in state/government regulations at various levels. Permendagri No. 39 of 2010 and Banggai Regency's Perda No. 2 of 2011 and several regulations that underlie it are the formal legality of public policy. Conceptually, the issuance of various political and administrative decisions as a juridical basis for the establishment of BUM Desa is in accordance with what was stated by Stillman II regarding the existence of law and the implementation of the law as an important attribute of public administration. In terms of interaction with the public as a source of mandate and sovereignty within the state, the presence of this public policy cannot be separated from the public interest

as an essential aspect of public policy. In this context, the content of the administrative regulations relates to the sociological reality that there is still a high will of the rural public to be able to improve their quality of life.

PP Number 72 of 2005 which was issued on December 30, 2005, consisting of 107 articles, revokes and declares that PP Number 76 of 2001 concerning General Guidelines for Village Regulations is no longer valid. Substances relating to BUM Desa are regulated in Articles 78 to 81. The stipulation of Permendagri Number 39 of 2010 on June 25, 2010 which consists of 25 articles, is a regulation that bases its formation on several laws and regulations, including Law Number 32 of 2004 and PP Number 72 of 2005. Banggai Regency Regulation Number 2 of 2011 as a replacement for this Regional Regulation Number 9 of 2006, was enacted on August 14, 2015 and consists of 286 articles. As a legal basis, among others, mentioning Law Number 32 of 2004, Government Regulation Number 72 of 2005, and Permendagri Number 39 of 2010. The existence of these three central government regulations is an initial guarantee for the implementation of policies, because of the inclusion of certain legal bases in one policy product in the region. Strengthen the basis for setting policies at the regional level.

Based on Bromley's [6] view, Law Number 32 of 2004, several other laws relating to BUM Desa and Government Regulation Number 72 of 2005 are at the policy level, further elaborated by the Minister of Home Affairs Number 39 of 2010 which is at the organizational level. In Banggai Regency this is further elaborated in Regional Regulation Number 2 of 2011 which is at the operational level.

In public policy studies, the legality and authoritative aspects for the formation of BUM Desa are attached to the issuance of Law Number 32 of 2004. This is due to the binding power of these regulations as a product of national policy which is stipulated within the national level political superstructure. In addition, it is also in line with what Gerston stated regarding the level of government, as well as an explanation of the principle of hierarchy as regulated in Article 7 paragraph (5) of Law Number 10 of 2004 concerning the Establishment of Legislation. The point is that the grading of each type of legislation is based on the principle that lower laws and regulations must not conflict with higher laws and regulations.

The stipulation of PP No. 72 of 2005 is something that is imperative based on the provisions of Article 216 paragraph (1) of Law No. 32 of 2004. The dynamics of government which is marked by the replacement or amendment of several laws, regulations, regulations, and regional regulations is evidence of a relationship of mutual influence between actors and policy institutions in the political superstructure and the condition of rural communities as a policy environment. This socio-political fact is in accordance with the opinion of Robert Eyestone that public policy is the relationship of a government unit to its environment [4].

Apart from that, the interaction and dynamics of politics-government are in accordance with Dunn's opinion about the Policy System. This public policy expert argues that the Policy System is the overall institutional pattern within which policies are made, involving interrelationships among three elements: public policies, policy stakeholders, and policy environments [7]. The issuance of Law No. 32 of 2004 and several other laws related to rural areas, Government Regulation No. 72 of 2005, Permendagri No. 39 of

2010, and Banggai Regency Regulation No. 2 of 2011, and because the content is about the public interest, it is a form of public policy.

Political decisions as a result of a long political process and administrative procedures in this political superstructure are evidence of feedback on the policy environment. Until now, as stated by the Head of the Community Empowerment Service and Village Government of Banggai Regency, Amin Jumail, that of the 291 existing villages, only 265 villages have formed BUM Desa [8]. Sociologically, in the reality of the implementation of the BUM Desa policy, interactions and responses emerge in the life of rural communities. This can be seen as the realization of democracy in rural life because of control, openness and public participation in every policy set by the government. This often comes to the fore, especially when the policy is directly related to state/government services for the future of its socio-economic life. In practice, of course, when some of these regulations are implemented, they can have implications for the policy environment, in the form of the level of community welfare.

Based on Dunn's opinion about the public policy system regarding BUM Desa, the existence and role of the central government is as a policy maker which is one of the elements of policy stakeholders. According to the inherent authority as the people's mandate, he plays a role in forming laws, government regulations and ministerial regulations as a policy maker. At the lower level, the district government is positioned as a policy implementer as well as a policy maker according to the characteristics of the region. Another element of the policy stakeholders who are in the political infrastructure order is the village BUM manager and community members who play a policy target role.

In many countries, especially those that are still in the stage of building various infrastructures, especially in the fields of politics and government, the domination of the state at various levels of government is inevitable when the issue of the welfare of rural communities arises. This is in line with what was stated by Michael who emphasized the central role and presence of the state in the formation of public policy. Public policy whose process has gone through a series of stages, including in society which is then determined in accordance with government authority, will not be implemented without state apparatus and instruments. The state has various means of making policy decisions, implementing them at the operational level, and using various instruments to make them happen [9].

The position and role of stakeholders when establishing the policy for establishing a BUM Desa is very large. They consist of policy actors in the political superstructure as well as actors in the political infrastructure order. They consist of state/government officials, presidential institutions, legislators, local government bureaucrats as well as actors in the community, including entrepreneurs/business actors, all of whom have their own element called policy stakeholders. The role and participation of various policy actors outside the state/government domain in the formation of public policy, is in line with Anderson's opinion, even though its finalization in the form of policy legitimacy remains with the authority of state/government actors. This is part of the political system in which one of the elements is public officials, who are in the legislature and executive. In the political sociological context, there is a relationship of mutual influence, between political-administrative decisions regarding the development of BUM Desa as a form of public policy and policy stakeholders in various fields of national and state life.

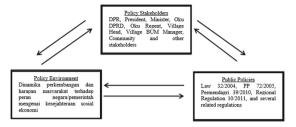


Fig. 1. BUM Desa regulations in the policy system.

Likewise, there is a reciprocal relationship between BUM Desa policies and the policy environment, including the socio-cultural conditions of the community. Huruta et al., argued that social capital is needed from within the community as a foundation for the development of a new unit within the village-owned enterprises [10]. Community motivation and participation in supporting BUM Desa is very important for economic growth [11]. Schematically, this can be seen in the following Fig. 1 [7].

Based on Bromley's opinion [6], conceptually it can be said that the enactment of Law Number 32 of 2004, several related laws, and Government Regulation Number 72 of 2005 are at the policy level, while Permendagri Number 39 of 2010 is at the organizational level. At the operational level, there is the Banggai Regency Regional Regulation Number 2 of 2011. In practice, there will be various interactions and responses from rural community members when the policy is implemented. This is part of the dynamics of public policy that takes place in policy implementers, namely BUM Desa managers and community members as policy targets. Within the framework of democracy, of course there is a means to articulate the aspirations of the public and other BUM Desa stakeholders to the village government and BUM Desa managers. As part of this process, especially for policy improvement in the future, the public views that it is necessary to have an objective evaluation of the implementation aspects including input from the stakeholders of this program as a basis for improving future policies. Another aspect that must also receive attention is the evaluation of the substance of the policy, because a good policy is the initial capital for the effective implementation of the policy for establishing BUM Desa.

Based on this, the existence of a domain in the public policy process can be seen in the following Fig. 2 [6].

Based on one of the characteristics of public policy related to the legal aspect, as Anderson stated that every decision or policy made by public officials must be based on law, Banggai Regency Regional Regulation Number 2 of 2011, the juridical basis regarding BUM Desa refers to Law Number 32 In 2004, PP Number 72 of 2005, and Permendagri Number 39 of 2010. In addition, it is also based on several other regulations related to the establishment of BUM Desa, including Law Number 33 of 2004 concerning Financial Balance between Central and Regional Governments, and PP Number 72 2006 concerning Villages.

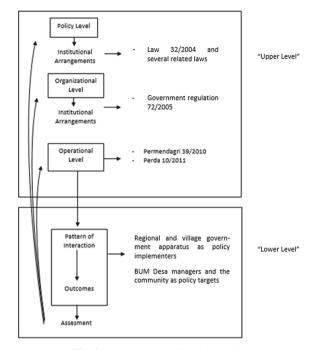


Fig. 2. BUM Desa policy hierarchy.

# 3.2 Substance of Policy for Establishing BUM Desa

The issuance of state and government political decisions both at the political and administrative levels related to the formation of BUM Desa does not take place from a vacuum. This is an indirect process, because through a long series of stages, which take place both in the political infrastructure and the political superstructure, take and give, negotiation, compromise and other activities occur. In addition to the role of policy institutions, it also involves various government resources and policy actors. The issue area that is debated in the public sphere regarding the formation of BUM Desa is inseparable from what is called a policy issue. Gerston suggests that issues that appear on the public agenda, actors who present, interpret, and respond to those issues, resources affected by those issues, and institutions that deal with issues [5]. Practically, this policy issue is implied in the preamble "Considering" Regional Regulation Number 2 of 2011 concerning increasing people's income and community economic business activities. Finalization in the form of the validity of this policy takes place on the authority of the legislative and executive institutions. The existence of a policy or program legitimacy with its stipulation by applicable laws and regulations according to the level of government, is in line with what Gerston said about policy actors and levels of government, that the levels of government that addresses issues [5].

The existence of a goal to be achieved by the birth of a particular public policy is an important thing as stated by Anderson is the existence of a decision or action that is aimed at. Therefore, this can be studied from the formulation of the aims, objectives and organizational structure of this institution, as stated in several state/government regulations. The purpose of establishing BUM Desa according to Article 2 of Regional Regulation Number 2 of 2011 is to increase people's income, both those that develop according to local customs/culture, as well as economic activities that are submitted to be managed by the community through government and local government in accordance with the applicable laws and regulations.

From the perspective of the public interest as the essence of public policy, the existence of arrangements regarding the aims and objectives of this government regulation is very important. This is in accordance with Anderson's opinion that one of the concepts of public policy is purposive or goal oriented action rather than random or chance behavior is our concern [4]. The affirmation of the objectives stated in the Regional Regulation Number 2 of 2011 became the basis for implementing policies in the regions when setting more operational policies. Relevant to the goals of this organization, Robbins suggests that the organization is a consciously coordinated social entity, with a relatively identifiable boundary, that functions on a relatively continuous basis to achieve a common goal or set of goals [12]. Similarly, Narayanan and Nath [13] define it as an arena where human beings come together to perform complex tasks so as to fulfill common goal(s).

With regard to the regulation of BUM Desa in Article 213 paragraph (1)) of Law Number 32 of 2004 it is only stated that a village can establish a village-owned business entity in accordance with the needs and potential of the village, whose formation is guided by the laws and regulations, and can make loans according to the regulations. Legislation. There is only one article regarding BUM Desa, but it is not specifically related to its organization, so it is not so easy to become a reference for regional policy makers. This should be regulated even though it does not have to be in detail, so that it becomes a reference when translated into more operational policies. This is because it relates to management aspects that can contribute to achieving the goals of establishing a Village BUM. Ridwan argues that professional governance with reference to the guidelines for its formation based on laws and regulations is a prerequisite for the running of the organization [14].

Several aspects of the BUM Desa organization appear as regulated in several regulations. Talcot Parsons as quoted by Narayanan and Nath mentions that there are four types of organizations, namely production organizations, political organizations, integrative organizations, and pattern maintenance organizations. It was further stated that production organizations are organizations that make things or products [13]. Based on the purpose of its establishment, BUM Desa can be categorized as a production organization, because it provides something that is beneficial to the community, especially in rural areas. This is in accordance with the provisions of Article 1 Number 15 of Regional Regulation Number 2 of 2011, which relates to the boundaries/definitions of BUM Desa. Based on the characteristics of the organization as stipulated in several government regulations, including this regional regulation, it is clear that this BUM Desa is classified as a business organization.

BUM Desa as referred to in Article 79 paragraph (1) of PP Number 72 of 2005 is a village business managed by the village government, whose management consists of the village government and the community in accordance with the provisions of Article 79 paragraph (3). This affirmation is important that this organization is part of the

government's efforts to provide flexibility to the village government through productive economic activities, which ultimately can have an impact on socio-economic welfare for the community. With regard to its main activity, BUM Desa is inseparable from the notion of business. This is in accordance with what was stated by experts, including Boone and Kurtz that business consists of all profit-seeking activities and enterprises that provide goods and services necessary to an economic system [15]. With more emphasis on the existence of an organization, Griffin and Ebbert argue that business is an organization that provides goods and services that are then sold to earn profits [16].

Based on the Banggai Regency Perda Number 2 of 2011 Article 4 that the BUM Desa management organization is separate from the village government organization, whose composition as referred to in Article 5 paragraph (1) shall at least consist of advisors or commissioners and operational executives or directors. This advisor or commissioner is held ex officio by the village head as regulated in Article 5 paragraph (2). One of the characteristics of this institution as a separate structure from the village government organization, is a very important affirmation. This fortifies the possibility of conflicts of interest and guarantees that there will be no overlap in the management of BUM Desa. In addition, ideally apart from these two organizational elements, there is an organizational unit that focuses on monitoring the running of the business managed by the operational executive, not overlapping with that carried out by the advisor.

Conceptually, the analysis of the organization will deal with aspects of duties, authorities, obligations and responsibilities. As stated in Article 7 paragraph (1) of Regional Regulation Number 2 of 2011, the advisor or commissioner has the task of supervising and providing advice to operational executives or directors in carrying out village business management activities. His authority as referred to in Article 7 paragraph (2) is to ask for an explanation from the operational executive or directors regarding the management of village businesses.

There should be a single use of the term in the arrangement of this BUM Desa organizational unit, namely not using the term "advisor or commissioner". The inclusion of terms like this can potentially have various interpretations for policy implementers when they have to solve problems operationally. Another reason is because the two terms give diametrically different meanings of tasks and functions. The task of giving advice is more towards the process of giving consideration, advice, and advice. This is different from the task as a commissioner which is more towards providing supervision to the performance of operational executives or directors. The more appropriate term to use is advisor, in addition to being in accordance with the existing government level at the village level, which is considered less proportional when it comes to using the commissioner's diction. This is because the term is generally used for organizational units at higher levels of government, at least at the district level. The same applies to the use of the term "operational executive or board of directors", which should use a single organizational terminology to minimize the emergence of different and even conflicting interpretations when this policy is implemented. Therefore, the more appropriate term to use is operational implementer, in accordance with the level of government structure in which this organization is located.

There are provisions that are incomplete, namely Article 8 of Regional Regulation Number 2 of 2011 does not regulate the duties and authorities attached to operational

executives or directors, whereas in Article 7 there are arrangements for authority possessed by advisors or commissioners. Conceptually, the operational authority as the operating core is very important in carrying out the mandate of government regulations to provide welfare to the community. The provisions of Article 8 only regulate the accountability of operational executives or directors. The existence of operational implementers who provide services and services to the community is one of the important elements in the organization. This is in accordance with what Henry Mintzberg stated that the operating core, namely employees who perform the basic work related to the production of products and services [12].

This regional regulation minimally regulates the duties, authorities, obligations and responsibilities of each element of the BUM Desa institution. In fact, the affirmation of regulation on these aspects is very important for the quality of a government regulation as a concrete manifestation of public policy. This is in line with the opinion of James G. March and Herbert A. Simon regarding several characteristics of organizations as quoted by Henry, including that organizations are purposeful, complex human activities, have specialized and limited goals, are characterized by sustained cooperative activity, provide services and products. to their environment, and are dependent upon exchanges with their environment [17]. Dewi and Didik's research states that the factor inhibiting the implementation of BUM Desa policies among others bureaucratic structure, policy standards and objectives [18].

### 4 Conclusion

The welfare of rural communities is one of the public problems which later becomes a policy issue. Through a process that is in the order of political life, after being discussed in various stages in the order of infrastructure and political superstructure, it is determined to be a public policy, including the formation and management of BUM Desa. There is a relationship between public administration, public policy and the establishment of BUM Desa as one of the substantive areas of public policy. As a product of political and administrative decisions, public policies concerning or related to BUM Desa in Banggai Regency include Law Number 32 of 2004, and several related laws, Government Regulation Number 72 of 2005, Minister of Home Affairs Regulation Number 39 of 2010, and Banggai Regency Regional Regulation. Number 2 of 2011 shows that there is a leveling in the overall public policy order. The recommendation is that there needs to be improvements to several incomplete and unclear policies, which are for effective policy implementation.

#### References

- 1. Marzuki, P.: Penelitian Hukum. Prenadamedia Group, Jakarta (2015).
- Soekanto, S., Mamudji, S.: Penelitian Hukum Normatif. Suatu Tinjauan Singkat. PT RajaGrafindo Persada, Jakarta (2015).
- 3. Rosenbloom, D.: Contemporary Public Administration. McGraw-Hill. Inc., New York (1994).
- 4. Anderson, J.:: Public Policy-Making. Holt, Rinehart and Winston, New York (1978).
- Gerston, L.N.: Public Policy Making. Process and Principles. Third Edition. E Sharpe, New York (2010).

- Bromley, D.W.: Economic Interest and Institution. The Conceptual Foundation of Public Policy. Basil Blackwell Inc, New York (1989).
- 7. Dunn, W.: Public Policy Analysis: An Introduction. Prentice-Hall International, Inc, London (1981).
- Hanya 13 BUMDES Aktif di Banggai, https://banggairaya.id/hanya-135-bumdes-aktif-dibanggai/, last accessed 2020/11/20.
- 9. Michael, E.: Public Policy: The Competitive Framework. Oxford University Press, South Melbourne (2006).
- Huruta, A.: The Development of Village Owned Enterprises: Lesson Learned from Ponngok Village. J. Masyarakat, Kebud. dan Polit. UNAIR. 33, (2020).
- 11. Mulianingsih, H.: Peran Badan Usaha Milik Desa Dalam Mendukung Pengentasan Kemiskinan Desa. J. Regist. 4, (2022).
- 12. Robbins, S.P.: Organization Theory: Structure, Design, and Applications. Prentice-Hall International, Inc, Englewood Clifft New Jersey (1990).
- 13. Narayanan, V. K., Nath, R.: Organization theory. A strategic approach. Irwin, Boston (1993).
- 14. Ridwan, Z.: Urgensi Badan Usaha Milik Desa Dalam Pembangunan Perekonomian Desa. Fiat Justisia. J. Ilmu Huk. 8, (2014).
- Boone, L.E., Kurtz, D.L.: Contemporary Business. Thomson South-Western, Mason, USA (2006).
- 16. Griffin, R.W., Ebbert, R.J.: Business. Perason Education International, New Jersey (2006).
- 17. Henry, N.: Public Administration and Public Affairs. Prentice-Hall International, Inc, London (1989).
- 18. Dewi, F., Didik, G.: The Implementation of Village-Owned Enterprises Policy in Womogiri Regency. J. Nataraaja L Kaji. Ilmu Adm. Negara. 08, (2020).

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