# Complexity and Public Policy:
# Network Model of Food Security Policy Implementation
# in Bone Regency

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## Abstract

Complexity and public policy are two things that cannot be separated. Determination and implementation of public policies is a complex process of interaction of all stakeholders loaded with interests, power, information, skills, and other resources. This shows the complexity in public policy that is not possible to be handled by the government alone but needs to involve all other stakeholders. So that to improve policy performance it is necessary to develop a network of all stakeholders in the implementation of public policy. This study aims to develop a network model in implementing food security policy in Bone Regency. This research was carried out in Bone Regency using a qualitative approach. Data sources used are primary data and secondary data. Data collection is done through interviews and observations. The results of this study indicate that the implementation of food security policy has not been effective. This is due to the lack of integrated food programs by all stakeholders. In this case, government agencies each design a food security program individually. Then, the Food Security Council as a network-based organization has not carried out its function in coordinating and synergizing stakeholders to design food programs that can prosper the people. As a result, poverty and food insecurity are still high in Bone Regency.

## Keywords:

Complexity; public policy; network model; food security

## Introduction

In perspective of public administration, public policy is one of the urgent studies, the presence of public policy as a solution to solve public problems. Formulating public policy is not an easy matter. Because it involves many actors. Actors involved in the formulation of public policy are government and non-government. Non-government consisting of NGOs, private parties and political parties or interest groups. The success of a policy will be largely determined by the actors involved in it. Actors not only work up to public policy formulation but are also involved in implementing public policies.

The success of policy implementation is greatly influenced by the relations between actors who work together and exchange resources. Interactions that exist between actors in

implementation studies are known as public policy networks. The public policy implementation network is a study that focuses on shared use of resources by stakeholders and interaction and sharing of resources. The sharing and utilization of resources together shows the efficiency and effectiveness of policy performance.

Network policy implementation is a concept that is currently developing in realizing complex policy objectives. The involvement of Multi actors in the network of public policy implementation cannot be avoided. Public problems that are not possible to be solved by the government themselves, but need to involve non-governmental actors to get involved in the resolution. The inability and limited resources owned by the government caused the need for the non-government sector to get involved,

The process of collaboration between stakeholder actors in organizational networks requires a synergy between actors in this matter, public sector, Private Sector, and interest groups. Collaboration creates interaction between the various actors involved. From the intertwined interactions, it creates dependencies from each actor, because basically these actors have limitations. Dependency between actors will eventually lead to complexity in the collaboration process. Multi actors involved have different backgrounds. different interests, different skills as well as perspectives on different public policy and service issues. (Marin and Myntz 1991; Thompsonet al. 1991; Marsh and Rhodes 1992; Kickert et al. 1997). Differences in perception between actors are common. The objectives of a policy and outcome of a policy can be understood differently by people who evaluate and carry it out, allowing different interpretations to occur, for example the objectives to be achieved in a policy and impact of policy.

Interaction between actors involved with different backgrounds and different interests creates complexity. In fact, complexity in government networks is a natural and can't be avoid. Complexity in returning decisions to complex problems and the interests of multiactors. Complexity in public administration views the complexity of the problem and the many actors who interact with each other, exchange information and resources. This interaction process is very vulnerable to bring up complexity in organizational networks. As a result of the actors involved in the network of organizations originating from different organizations so that they have different backgrounds, different knowledge and skills, information and perceptions of different problems and most importantly have different

interests. Complexity in the Food Security Council in Bone Regency as a network organization involving many actors. Different backgrounds from each government agency, Regency extension team and agricultural extension team, farmer groups and farmer women's groups, as well as other institutions of interest.

The network model in public policy implementation becomes very important. This is based on the fact that stakeholders in implementing public policies have different interests and limited resources both in terms of information resources, human resources and financial organizations (O'Toole, 2003). The collaborative process which involves multiple actors is seen as a system in network of public policy implementation. The public policy implementation network is a study that focuses on the shared use of resources by stakeholder actors.

The implementation phase also requires the cooperation and coordination of several organizations or parts of the organization. O'Toole (2012: 292-293). Collaboration between stakeholders greatly influences the success in public policy implementation. policy implementation cannot run well without inter-organizational cooperation. Therefore, a relationship or interaction between organizations is needed to produce an optimal program or policy in accordance with the objectives of the policy.

One of policy that has always been a global issue is the food security policy. Not only in Indonesia, the issue of food security is also a problem in almost every country. The obligation of each country to meet the food needs of its people requires the government to formulate a policy capable of solving public problems and meeting food needs. Food security policy is the focus of this research, because starting from formulating food security policies to implementing food security policies is very complex.

The main problem in realizing food security in Indonesia for now is related to the level of food demand that is greater than the amount of available supply. The rapidly increasing demand is effect of increasing population, economic growth, increasing people's purchasing power and changing tastes in society. Meanwhile, national food production capacity growth is slow even stagnant due to competition in the use of land and water resources, land use change and stagnant growth in land productivity and agricultural labor. The imbalance between level of demand and level of national production capacity results in a tendency to increase the supply of national food from abroad (import policy). The

existence of this imported food policy is related to efforts to create national food supply stability.

Based on Global Food Security Index / GFSI data that explains that Indonesia's food security has increased from year to year, Indonesia's food security scores are still inferior compared to countries in Southeast Asia such as Singapore, Thailand, and Malaysia Even national food security is below Vietnamese. Indonesia ranks fifth out of nine countries in the Southeast Asian region. Based on the affordability aspect, Indonesia's food security score of 55.2 and ranked 5th in the Southeast Asia region. Then the score from the aspect of availability is 58.2 (ranked 3rd). Then from the aspect of quality and safety, Indonesia only received a score of 34.5 (8th rank) while from the aspect of resilience and natural resources it received a score of 43.9 (9th rank). https://databoks.katadata.co.id/datapublish/2018/11/02/di-asean

High or low national food security is strongly influenced by the condition of food security in a region. Bone Regency as one of the rice barns in South Sulawesi, from the results of the 2018 Food Security Index calculation by looking at aspects of food availability, food affordability, and food utilization aspects based on 9 indicators for the district area. Bone Regency ranks 166 with a score of 77.17 from 412 districts in Indonesia.

The complexity that occurs in the Food Security Council as a network organization is a sure thing to happen. The complexity that arises from the interaction between each actor in the network organization. So that what is possible to overcome complexity is the Network model. The network model in question is a network organization that involves all stakeholders in the expression of opinions and views. In the network model also needs to accommodate all the interests of stakeholders involved in the food security council. So that, the food security council as a network organization is able to produce a program later which is a joint agreement program to be carried out by relevant stakeholders such as the food security service, the agriculture service, the health service and the elucidation team and other stakeholders.

**Methods**

This research was conducted in Bone Regency, Bone Regency is one of the potential food storage areas in South Sulawesi. This research design uses a qualitative approach with

an explanative type case study research strategy. The design and research strategy used aims to obtain in-depth information about the complexities in the network for implementing food security policies in Bone Regency. Determination of informants using purposive sampling techniques. The informants in this study are primary data sources that provide information about conditions and reality and are directly involved in policy implementation. The informants in this study are as follows: a) Chairman of the Farmer Group; b) Chair of Gapoktan; c) sub-district extension team; d) District extension team; e) Head of the Food Security Service; f) Head of the Agriculture Service.

This study uses data collection techniques such as observation, interviews, and documentation. All informants mentioned were interviewed in depth and various documents such as regulations, activity reports related to program implementation were collected to support this research data. This study uses data analysis proposed by Miles and Huberman (1992), covering data reduction, data presentation and drawing conclusions / verification.

## Result and Discussion

Bone Regency is one of the most important food storage areas in South Sulawesi. The area of paddy fields in Bone Regency both using irrigation and non-irrigation is 110,760 ha. Those who use irrigation cover an area of 43,508 ha and non-irrigation area of 67,252 ha. The widest paddy field is in Libureng District with an area of 10,016 ha, then Bengo District with a total area of 7. 148 ha, followed by Dua Boccoe District with a total area of 6,491 ha. The harvested area of rice in Bone District at the end of 2017 was 208,710 hectares while the production was recorded at 1,207,187 tons of dry milled unhusked rice or an average production of 5.78 tons / hectare. The corn harvest area is 76,431 Ha and production reaches 424,445 tons or an average of 5.55 tons / ha, while the soybean harvest area is 6,741 Ha and production is 12,958 tons. Following are the production and productivity of several key food crop commodities in Bone Regency.

**Table 1.**

**Production and Productivity of Main Plant Food Commodities in Bone Regency, 2018.**

| No. | Commodity type | Harvested Area (Ha) | Production (Ton) | Productivity (Kw / Ha) |
|-----|----------------|---------------------|------------------|------------------------|
| 1 | paddy | 208 710 | 1207187 | 57 859 |
| 2 | Corn | 76 431 | 424 445 | 56 120 |
| 3 | Soy | 6,741 | 12 958 | 19 222 |

*Source: Bone Regency in Figures, 2018.*

Bone Regency Food Security Department implements the Community Diversity and Food Security Improvement Program, covering 4 (four) main activities, namely: (1) Development of Food Availability and Handling of Food Insecurity; (2) Development of Distribution and Food Price Stability Systems; (3) Development of Diversification of Food Consumption and Improvement of Fresh Food Safety; (4) Management and Other Technical Support at BKP. The four main activities are basically to continue the previous activities, by perfecting and consolidating in an integrated and coordinated manner, namely: (1) Development of a food independent village in a poor and food insecure area; (2) Management of transient and chronic food insecurity; (3) Community Food Business Development (PUPM) through the Indonesian Farmers Store (TTI); (4) Empowerment of community food reserves and government food reserves; (5) Food Diversification; (6) Stability of staple food prices at producer and consumer levels through the Indonesian Farmers Shop.

Number of farmer groups from all sub-sectors in Bone Regency until 2018 was 5,530 groups, while the number of farmer groups (combined groups of farmers) was 369 groups. The farmer groups are not yet functioning optimally, because so far the growth is still through a program approach. In accordance with Regulation of the Minister of Agriculture No. 82 / Permentan / OT.140 / 8/2013 in 2016 the growth of farmer groups is directed in a participatory manner by paying attention to the aspirations of farmers themselves so that a sense of ownership, leadership attitude, management ability and entrepreneurship is high among their members. Thus the existence of farmer groups can be maintained and developed towards independent agribusiness-oriented economic organizations / institutions. The number of extension workers in Bone District is 308, consisting of 79 civil servants, 139 self-help instructors and 90 THL-TBPP instructors.

Elucidation revitalization policy does not only rely on quantity but also the quality of instructors needed in accordance with demands of the development of Agriculture, Food Crops, Horticulture and Plantation. The capacity of instructors needed is not only related to technical aspects of cultivation (on-farm) but also non-cultivation (off-farm) ) in support of 4 successful agricultural development. Improving the quality of extension workers is also done through education, training in both functional and professional training and agribusiness entrepreneurship training.

**Table 2.**
**Coordination Forum for Food Security Council**

| Cross-Sector Coordination Forum for Food Security Council | | Role |
|---|---|---|
| Sector Working Group EXPERTS | 1. academics<br>2. Experts | 1. Help DKP in collecting, processing, and presenting materials and agenda for policy formulation in the field of food security<br>2. Checked roomy for formulating food security policy<br>3. Menyususn help draft food security policy formulation<br>4. Helping to prepare materials in implementing evaluation and control of food security pamantapan<br>5. Become assistants to empower the secretariat DKP<br>6. Being experts or resource persons for training at the district level<br>7. Being energy advocate for institutional strengthening of food |
| Sector Working Group for Community Empowerment | 1. NGO<br>2. practitioners | 1. Formulate policies in order to encourage community participation in the implementation of food security<br>2. Develop common guidelines Alliance / Scrape Society Movement Food Insecurity<br>3. Doing socialization in the village government and community leaders<br>4. Building Partnerships state / private companies large to scrape food insecurity<br>1. DKP assist in collecting, |

| | | processing, and presenting materials and agenda for policy formulation in the field of food security |
|---|---|---|
| Technical Area Working Group | Office and Related Institutions | 2. Checked roomy for formulating food security policy 3. Helping formulating food security policy corresponding to sectors 4. DKP implement policies formulated in the development of food security activities in accordance with the sector 5. Helping to prepare materials in implementing evaluation and control of food security pamantapan sesusia by sector |

Establishment of a food security council to oversee institutions related to food security policies. One of the goals of the establishment of a food security council as a forum for coordination is by institutions involved in the organization's network. The food security council as a network organization is chaired by regional head in this case the regent as the regional head of Bone regency. Also involved the head of the agriculture department, the head of the food security department, the head of the health department, and other agencies that were related to food security policies. Apart from the government it also involves the non-government sector, namely the Farmers Store, and NGOs and other interest groups.

Based on the research results, it shows that the food security council is not effective yet. This can be seen from the network organization formed not be able to function properly. There is no good partnership process between stakeholders involved in the program. Each agency focuses on their respective programs and is not a program of agreement results within the Food Security Council organization. Meetings by each actors in the Food Security Council organization are also rarely conducted so it is difficult to make a program which is the result of a joint agreement in the Food Security Council Organization.

The non-maximum performance of the food resilience council as a network organization has an impact on the ineffectiveness of food security policies in Bone regency, several programs implemented in the context of improving the quality of meeting food needs are also not running effectively. From the 2018 Food Security Index data by looking at aspects of food availability, food affordability, and aspects of food utilization based on 9

indicators for the regency area. Bone Regency ranks 116th with a score of 77.17 out of 412 districts in Indonesia. For South Sulawesi, Bone Regency ranks 10th out of 24 regency. Food security index scores in South Sulawesi are highest in regency Sidenreng Rappang, Barru and Gowa.

The complexity in food security council can be overcome by having a network model while the food security council as a network organization must be able to accommodate all the interests of the stakeholders involved. Network Model in this case the food security council is not bureaucratic, because the food security council structure is not in the government structure. Furthermore, the network model also requires an understanding of the views and objectives of each actor involved in the food security council so that later the food security council will produce programs to achieve food security. The result of program joint agreement produced by the food security council is carried out by the Office as the leading sector in its implementation.

## Conclusion

The large number of actors involved in organizational networks creates complexity in the network, including in the network implementation of food security policies. Network Model is very important in network policy implementation. The need for collaboration among stakeholders greatly influences success in the public policy implementation network. The network of policy implementation cannot run well without collaboration between stakeholders.

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