

Bridging Silos in Network Governance with Information and Communication Technology in Pasuruan District Development Planning

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Abstract

In the policy-making process, from agenda preparation to implementation, network interactions between government and non-government actors are needed to handle complex, uncertain, and conflictual policy problems with the joint efforts, resources, and knowledge of all actors. The concern lies in what implications that "Network Governance" has under the implementation perspectives that have hitherto been considered under government monopoly in the policy process. In government, there are silos which do not communicate with each other between government agencies or organizations. The silo mentality phenomenon makes organizations ignore or fail to understand the main priorities within the organization that influence each other. Task specialization leads to a silo mentality. Previous research, discussion, and empirical information about silos in network governance in developing countries is still lacking because most studies were conducted in developed countries, and not many were related to technology and not local governments. This research seeks to explain how silos in Network Governance exist in local governments and the use of technology to bridge existing fragmentation. This study uses a descriptive method with a literature study research approach sourced from theories relevant to the problem.

Keywords: silo, network governance, ICT, local government

1 INTRODUCTION

In the policy development process, a constellation of actors has been involved, from agenda preparation to implementation. In the policy-making process, network interactions between government and non-government actors are needed to handle complex, uncertain, and conflicting policy problems with the joint efforts, resources, and knowledge of all actors because the state no longer has a "monopoly of power and authority" in the government process. Therefore, the concern lies in what implications this "Network Governance" has for the implementation perspective, which until now was considered under government monopoly in the policy process [1]. The success of implementing a regional government's policies is measured by its ability to meet the needs and welfare of the community, including the fulfillment of comprehensive development carried out with good planning. Development planning is using existing resources to achieve better, more effective and efficient goals [2]. Decisions or policies

made primarily for the benefit of many people will also be influenced by a silo mentality. Where is the danger of a "silo mentality", when one branch of a company or organization makes major decisions without considering important factors in the organization in other structures [3].

The Association of Southeast Asian Nations (ASEAN) has the fifth-largest economy in the world, according to Consumer News and Business Channel (CNBC) (2018). According to International Monetary Fund (IMF) estimates, it has contributed to GDP growth reaching its highest level in five years, at 5.2%. Even though the majority of ASEAN nations have shown excellent economic performance, emerging nations struggle with issues like bureaucracy and shoddy legal systems, which make it difficult for the government to fully meet the demands and interests of the populace [4].

It is imperative that information transmission be improved right away. Information and communication technology (ICT) development necessitates system integration across organizations and ministries. Brunei and Indonesia are two examples that demonstrate how each ministry's passion for advancing ICT in public services is not matched by initiatives to create a shared strategic plan. The disjointed data handling in every ministry also shows coordination flaws. Most ASEAN nations, including Cambodia, Laos, Vietnam, Thailand, and Indonesia, have bureaucracies with silos and incomplete data, which reflects a lack of policy coordination in ICT development. Ineffective software utilization, redundant infrastructure, disjointed data routes, duplication of effort, difficulty integrating data from several agencies, and expensive technology implementation are all results of unclear collaboration across ministries or departments. Because each agency seeks to preserve its authority, power, and interests, the government also has to deal with a silo mentality within the bureaucracy [4].

The development problems that occur in Indonesia are based on regional government programs which often fail to achieve their goals, either partially or completely. Apart from that, the cause of this happening can be caused by weaknesses in the activities of preparing planning documents which usually occur in the organization environment: (a) the influence of individual or group interests so that planning leads to the desired thing, not on what is necessary; and (b) the minimum number of human resources who have competence in development planning. Then added with less accurate data and information; there are difficulties in ensuring consistency between development planning (programs/activities) and budget allocations; and the control and evaluation system is not optimal [5].

Whether as teams inside horizontal operations or as vertical divisions, "silo work" is a common occurrence in many organizations. As a metaphor for the division between various organizational divisions that affect customer outcomes, innovation, effectiveness, and performance, the term "silos" refers to silos of elements that divide one type of element from another [6]. In government, there are several silos, most of which do not communicate with each other between government agencies or organizations. The silo mentality phenomenon makes organizations ignore or fail to understand the main priorities within the organization that influence each other. Silo mentality as a result of the long-standing bureaucratization process then creates several obstacles and becomes a bureaucratic pathology that hinders the reform process [3,7,8].

The problem in Bureaucratic Reform in Indonesia is sectoral egoism between ministries, institutions and regions. This issue is frequently known as silo mentality. At the beginning of 2021, there were still more than 100 regencies or cities in Indonesia that had not implemented

the Bureaucratic Reform program at all, as added by Mahfud MD as Coordinating Minister for Political, Legal and Security Affairs. There were 59 regencies or cities that had not implemented reforms procedural bureaucracy at the end of 2021. Indonesia's Ease of Doing Commerce (EoDB) is still underneath Malaysia, Thailand, and indeed Vietnam in 2016-2019. This is because Indonesia's venture competitiveness within the ASEAN locale is weak. Another stressing marker is the corruption perception index, showing no significant changes. The 2022 Perception Index value is 3.80, a decrease (0.03 points) compared to the 2021. The ultimate pointer that can be utilized to survey the quality of Indonesia's bureaucracy is the Government Viability List (GEI), which is still not great, to be specific 65.38% in 2021, in spite of the fact that there is ceaseless advancement [9].

In the Pasuruan Regency Regional Government, full public information disclosure has not yet been implemented or it could be said that reluctance to share information to support regional development policies will reduce productivity and decrease individual morale because in Pasuruan Regent Regulation Number 3 of 2013 concerning Guidelines for Information and Documentation Management in the Government Environment Pasuruan Regency and Pasuruan Regent Regulation Number 31 of 2021 concerning Electronic-Based Government Systems of the Regional Government of Pasuruan Regency in the articles of the regulation do not include the consequences and process flow for reluctance to share information (silo mentality) so that this reluctance will be detrimental and hinder the planning of and achieving performance.

Indicators of a country's success in the human development process can be seen through the Human Development Index (HDI). HDI clarifies how citizens advance in earning, health, and education. The minimum HDI happens to the Health Service and the Education Service. In this case, Indonesia in general and Pasuruan Regency in particular experience a decrease in people's welfare, particularly in education and health [9].

Government and governance are not the same thing. On the other hand, if we think of new public governance (NPG) as a collection of practices, we can take into account institutional dynamics, systemic, organizational, or social actions, political backing, resource coordination, or the creation and application of strategic policies. The five basic components of NPG as a framework are network governance, contract governance, administrative governance, public policy governance, and socio-political governance. The degree of coordination of public policy is a measure of network governance. This includes coordination within government to solve community problems with an emphasis on citizen participation. Better coordination and collaboration is needed [10–13] through network between government, commerce, and society [14]. In the Network Governance view, interaction, interdependence and negotiation of a complex set of actors are common place and as important as formal structures. This is in contrast to policy implementation as something that is hierarchical and limited to the state's organizational structure [1].

The importance of local communities as "place takers" and their function "in meeting the needs that most drive people's attachment to and satisfaction with the areas in which they live" make it crucial to comprehend local governance [15]. Global risk measurement, its distribution among public administration entities for sharing responsibilities, control of resources and interaction at different levels of government, transparency, and accountability are made possible by the combined concepts of digital governance and administration, network governance, and anti-crisis management [16]. ICT is transforming public sector administration and service

delivery in this age of digital government. For example, it is increasingly replacing paper-based processing and delivery with next-generation technology to serve citizens and promote new forms of citizen-state interaction [17]. There is at least some justification for appreciating how technology may be used to advance good governance, which is about using technology to enhance public service delivery, public involvement, and institutional respect in a state. According to the idea of e-governance, this phenomena can be interpreted as the application of several ICTs [18].

One major obstacle to local governments' joint efforts to advance efficient local governance is fragmentation within and between jurisdictions [19]. Organizational silos are defined in management literature as mental barriers that make isolation, separation, and compartmentalization difficult [20]. Organizations can assign responsibility and accountability in a hierarchical manner and effectively manage huge numbers of employees by using silos. But it can also result in silos, where departments, teams, and organizations are reluctant to work together or exchange information, expertise, and skills with other areas of the same company [6,21].

In previous research, discussion and empirical information about silo mentality in network governance in developing countries is currently lacking because most studies were conducted in developed countries and not many were related to technology. Then, previous research on silo mentality was still mostly done by companies and not by local governments [3,4,6,21,22]. This research seeks to explain and provide answers to how silos in Network Governance exist in local governments and the use of technology to bridge existing fragmentation.

2 RESEARCH METHOD

This study use a descriptive methodology in conjunction with a literature review research technique that draws on theories pertinent to the issue under investigation. Furthermore, the literature provides support for the study's tangible findings. A literature review consists of creating theoretical and methodological contributions on a certain issue as well as assessing or critically analyzing the information, concepts, or findings found in a body of academically focused literature.

3 FINDINGS AND DISCUSSION

"Governance" was combined with the word "Network" rise the meaning of "Network Governance". This infers that governance happens inside and through networks of social, political and economic actors, while good governance alludes to how organization structures advance positive substantive result and public authenticity. Governance shows how a society or group of individuals organize themselves to make decisions [23].

In the structural features of social governance organizations, each agent belonged to a community network. There are government actions providing direction and authority for coordinated crisis management and there is participation of non-governmental organizations (NGO) and companies plus a combination of news media and information technology also makes the release of information in the early, middle stages , and the end of the crisis becomes

more real and smooth. Communication and interaction between subjects has crossed hierarchical boundaries and geographical boundaries. This structure is not rigid and unchanging, but has a special elasticity. Under the constraints of internal factors or the application of external pressure, the hexagonal frame can be stretched horizontally, vertically and diagonally [24].

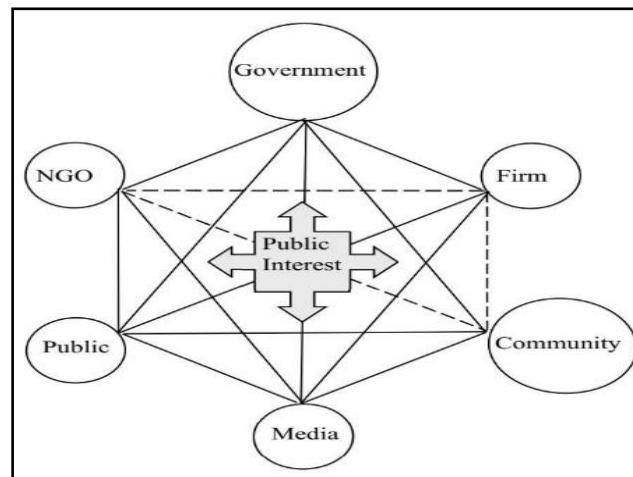


Figure 1: Network Type Power Structure and Its Elasticity [24].

Building consensus through network governance appears to be a means of generating resources and support in order to address significant social issues and deliver worthwhile public services. This indicates that although consensus is beneficial in and of itself, there is a significant deficiency of consensus in the network environment. The literature seems to agree on two constitutive features of networks that are causally related and distinguish them from other forms of governance. The first relates to equal involvement between actors, where actors can consist of public, private and community actors (structures), including individuals, groups, organizations and organizational groups. Then second talks about a non-hierarchical way of coordination (process) or interaction [25–30]. Network Governance occurs in networks of public and non-public actors, and relation between groups [26]. The differences that emerge in network governance are presented in Table 1.

Table 1: Differences in Network Governance

Contribution	Public policy	Company or corporate policy
Network actors	Overseas (international)	Domestic (national)
Institutions and network structures	Formal	Informal
Network system	Open	Closed

Source: Elaborated by the researchers

In order to move the relationship between the state and civil society in a more participatory direction, network governance seeks to increase integration and horizontal coordination. Thus, networks and collaborations beyond organizational boundaries are important tools for policymaking, and the government takes on the role of a relationship facilitator [31]. In the governance paradigm, implementation exists, but like in the NPM paradigm, it is done in a hidden form. The governance paradigm focuses on new "horizontal" modes of governance in the form of network management, while the latter is an externalized system in which governments act jointly with various public and private actors [1].

Successful network governance depends on many aspects, including effective and sustainable communication. Parameters of network governance include improving communication, resolving issues that arise during collaboration, developing common goals, distributing tasks between both parties, evaluating collaboration, and creating shared learning. [32]. As social media, ICT, and top-down multi-channel communications systems have grown in popularity, government branding strategies have become more essential and horizontal patterns of identity construction in public areas. Formal strategic communication is in competition with new forms of communication in the networked society [33].

Table 2: Network Governance Characteristics

Indicator	Information
Function	<ul style="list-style-type: none"> a. To obtain information and gain an understanding of the situation. b. Able to influence the strategic behavior installed in network entities. c. Can help managers and stakeholders to increase the effectiveness of responses to ecological and social change.
Actor	<ul style="list-style-type: none"> a. Central Government and/or Regional Government. b. Private. c. NGO. d. Community. e. Public.
Force distribution structure	<ul style="list-style-type: none"> a. Horizontal. b. Intermediary network.
Mechanism	<ul style="list-style-type: none"> a. Coordination. b. Control. c. Negotiation. d. Openness.

Indicator	Information
Key Factors	<ul style="list-style-type: none"> a. Trust. b. Complex or non-complex size. c. Leadership. d. Technology.

Source: Elaborated by the researchers

The degree to which public policy coordination is ensured and includes intra-government cooperation, including the significance of non-governmental players in public policy formulation, was used to evaluate network governance. Simultaneously, there is a change in the way public services are delivered locally as public managers become aware of their function as facilitators, which means that network governance must start and create participatory mechanisms for public service delivery [10].

Cooperation might be less beneficial if alliance coordination issues are underestimated, both real and hypothetical. Digital platforms can be used to successfully establish governance structures by coordinating the activities of various stakeholders. Digital platforms should also create mechanisms to suitably bind opportunistic conduct and improve openness and accountability in network governance [34]. Coordination in a networked mechanism was characterized as the level of effort put forth by team members to manage group resources and the degree to which team members' work activities make sense and are cohesive. Work activities in a well-coordinated organization are complementary to one another and focused on a single objective without fragmentation or duplication of effort. Organizations must match certain coordinating methods with their tasks [35].

Since governments are now concentrating more on employing electronic and digital tools for governance, technological advancements have altered operations all over the world, including governance models. By attempting to interact with citizens via digital platforms, government agencies have modified their digitalization plans to incorporate e-governance procedures and enhance the delivery of public services [36].

Based on monitoring and evaluation results in 2022, the National SPBE Index is 2.34 on a scale of 5 in the sufficient category. This achievement has exceeded the annual target set for 2022, namely 2.30. Then, based on a survey of the implementation of e-Government in various countries by the United Nations (UN) in 2022, Indonesia is ranked 77th out of 193 countries. This achievement increased 11 places from 2020 which was ranked 88.

In order to better monitor particular demographic groups, local governments want to employ network governance networks to gather first-hand information and get a better grasp of the local situation. Over time, network governance has evolved into a more formalized fundamental management system that organizes citizen engagement and mass mobilization, coordinates different governmental levels and branches, and oversees cooperation between state and non-state actors and groups [37].

In the Pasuruan Regency Regional Government, there are still regional personnel and/or officials who have not implemented public information disclosure or can be said to be reluctant

to share information to support regional development policies. Then there are inconsistencies in the data reporting for Fiscal Years 2021 and 2022 regarding the contents of the report. Then there is a problem presented in the Pasuruan Regency Government report for 2021 and 2022, namely that the use of information technology in government services, promotion of regional potential and dissemination of information to the public and business world is not optimal; the offices have not prepared sectoral planning documents such as ICT planning in accordance with document compliance in the Electronic-Based Government System; and the implementation of the intra-government network system within the Pasuruan Regency Regional Government is still not optimal because each organizations still has its own internet service network. This is supported by data from the 2021 report that in Public Information Service Activities, the percentage of organizations that have implemented public information disclosure is still 35%. Then the percentage of integrated organizations informatics applications in 2021 will still be 70%, while in 2022 it will fall to 67%. Then the number of organizations served by internet access in 2021 will still be 37 out of 65 organizations so the percentage is only around 57% of organizations, whereas in 2022 the number of organizations served will only be 39. This is also apparent when the value of the Electronic Based Government System Index from the assessment results of the Ministry of State Apparatus Empowerment and Bureaucratic Reform in 2019 was worth 2.39 or fair, in 2020 it was worth 3.13 or good. 2021 is worth 2.39 or enough. This means that there has been no increase in the index assessment or it has decreased. Then the data on the percentage of fulfillment of archival information network node management in 2021 is still 25% and in 2022 it will actually be 15%. Then the number of provision of archival information service facilities is still only 10 units and in 2022 it will actually be 0. The lack of optimal use of information technology in government services, promotion of regional potential and dissemination of information to the public and business world is one of the problems that can influence regional policy making.

The occurrence of various problems and phenomena, in this case the reluctance to share public information (silo mentality) for the planning process and achieving performance, shows that in the public sector, cross-border information is increasingly important [38] where this is related to the network governance perspective where the application of network governance is a form of operational management through strategic alliances and collaboration with various interdependent public and private actors, based on the level of shared goals and exchange of resources, information and expertise, guided by public policy [32]. Network Governance primarily seems to be a method of building consensus, then mobilizing resources and creating support to solve serious social problems or provide public services [25–30].

In the Pasuruan Regency Medium Term Development Plan for 2018-2023, there are problems, including that regulations between ministries are often not in harmony, making it difficult for the Pasuruan Regency Government to apply existing regulations; then there is no integration between E-Planning, E-Budgeting and E-Sakip so that harmonious planning has not been realized; and cross-sector coordination is still not yet integrated.

A silo mentality is a state in which systemic thinking and a broader organizational perspective are lacking in a team or group. Employees who unconsciously treat the company and those in other departments and divisions as component objects might thus be characterized as having a silo mentality [22].

Long-term organizational performance can be enhanced and human resource deployment patterns altered via e-service delivery. Crucial continuous improvements are required to be credible because the advantages of better electronic service delivery methods are probably going to materialize in a different or future fiscal year than the years in which such expenses are incurred. ICT infrastructure has the potential to significantly reduce a nation's fiscal capacity and administrative efficacy [39].

Close coordination and collaboration between participants are made possible by digital technology, and platforms can be used to improve relationships within a value network. When it comes to digital architectures like platforms, ICT can offer bridges (i.e., "web-based and mobile solutions") to promote accountability, transparency, and interaction among participants in these "informal networks," reducing the amount of room for opportunistic behavior concerning common interests [34].

4 CONCLUSION

Public services using information and communication technology in the Pasuruan Regency Regional Government have been carried out. This is proven by the assessment of the Electronic Based Government System Index from the assessment results of the Ministry of State Apparatus Empowerment and Bureaucratic Reform and the use of electronic applications in the planning and budgeting process. Despite the lack of integration of electronic planning and budgeting, this is already progress for local governments so that it can provide convenience. This also shows that the characteristics of Network Governance already exist, although within it there are still silos where coordination and collaboration are hampered by the lack of integration of the entire implementation of government in electronic applications. The existing obstacles affect governance so that the results of activity implementation reports have not yet reached peak conditions, making these activities still at an early stage and still in the development stage.

Pursuing cross-cutting values and goals has proven crucial. However, silos in governance can be an obstacle in networking mechanisms such as coordination activities between sectors in planning and budgeting in a government system that is more relationship-oriented. When these values are aligned, it is possible to unite actors, nodes, flows, and networks into stronger—denser and more connected—networks of relationships. However, competing values and power dynamics hinder the cross-sectoral interactions that are the goal of the relationship. Power is proven to be an important relational dynamic in the convergence of government systems. Silos in this paper have proven to be an important dimension that must be overcome to further strengthen governance network relationships.

It is possible that many regions, such as in this case Pasuruan Regency, still depend on outdated methods of implementing government so that it will be difficult to achieve sustainable regional development. Dependence on the current government system is a challenge that needs to be overcome by regions in order to organize planning governance effectively.

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