

## Autopoietic system: New perspective in the development communication study

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### ABSTRACT

**Background:** Understanding the concept of development communication is necessary. The study of development communication has grown and tends to be dynamic in Africa and Asia. Any communication modifications are crucial, and they can serve as the starting point for the development history. **Purpose:** The research aimed to develop a new perspective for studying development communication. **Methods:** The research used a qualitative approach. It analyzed the evolution and history of concepts that developed in the study of development communication in Africa and Asia. The data were collected through a review of literature from various journals, books, and other publications relevant to development communication studies in Africa and Asia. The researchers used a literature review as a methodology, considering that knowledge production is getting faster. Besides, the researchers complemented the study on development communication among Micro, Small, and Medium Enterprises (MSMEs) in Indonesia's context. **Results:** The study showed that development communication is most relevant to developing countries such as Africa and Asia. Based on the best practice of MSME in DIY, the autopoietic system by Niklas Luhmann is essential as an innovative perspective in development communication study. The autopoietic approach emphasizes that the system will produce its components self-creation to reduce complexity. It consists of communication, evolution, and differentiation, which build up the autopoietic system. **Conclusion:** The logic of the autopoietic system, which negates humans, is still challenging to build awareness of communication significance as the core of development communication, not the actors. **Implications:** This idea suggests the impact of advancing communication studies, particularly future communication studies development.

**Keywords:** Autopoietic; development communication; MSMEs; new perspective; communication

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## INTRODUCTION

The growth of development communication is dynamic, from modernization and community-centered development to participatory communication to alleviate problems at the grassroots. The increase in information technology also influences the dynamics of its development. The evolution of development communication studies began in the 1960s in Western countries, especially Africa. African nations need to catch up with the development of other countries in the world. The downturn occurs due to their leadership culture, which tends to be arbitrary, and in responding to this condition, communication is believed to be a relevant solution to overcome the problems.

Development communication practices are directed at building a leadership culture that takes sides with the people and suppresses poverty. Local community participation at all levels either individual, regional, national, or international is essential (Servaes & Servaes, 2021). On this basis, a participatory communication approach has been set as a two-way information sharing. Its principles involve dialogue, advocacy, participation, and purpose. Dialogue refers to two-way communication between stakeholders. This is why information is essential for people to participate in the decision-making that affects their community lives entirely (Fliert, 2015).

Apart from Africa, development communication is also developing in Asia. Considering the large population, studying development communication in Asia presents a complex challenge. Asia is divided into five central regions based on economic development levels: East Asia, South Asia, Southeast Asia, the People's Republic of China, and Japan. For example, studies in Thailand, one of the Southeast Asian countries, show community involvement and participation based on understanding specific contexts (Nuttavuthisit et al., 2015).

In Africa and Asia, ICT developments heavily influence the development of communications and economic growth (Evans, 2019). Some evidence shows that ICT in Africa helps sectors in the African continent meet the necessities of society to achieve a better life,

including public infrastructure, governance, accountability, civil society, entrepreneurship, and economic activity (Etoundi et al., 2016).

Studies in Asia show that ICT is crucial to developing both developed and developing economies, such as China's One Belt and One Road (OBOR), which has significant potential in several fields. It may help develop technological trade and economic cooperation in Asia (Latif et al., 2017). However, ICT adds new complications in Asia because inequalities remain exist. Several countries, such as Japan, Korea, Singapore, Taiwan, and Hong Kong, dominate ICT mastery. However, it is undeniable that many Asian countries should develop ICT access and utilization for social change.

To date, the trend of communication research has been dominated by qualitative approaches, while quantitative approaches are rarely used (Adiprasetyo, 2022). In this context, some research on development communication has been conducted, for example, participatory communication in disasters by Bakti et al. (2023) and the use of applications and websites for environmental communication and mitigation (Meidina & Murfi, 2024).

Furthermore, there are few literature studies on the development of communication from a system perspective. The majority focus on functional differentiation, essential to deal with social complexity in water management in Southeast Asia. A system approach can solve the main problems related to cross-border coordination (Djanibekov et al., 2016). In addition, the health study Volgger et al. (2015) shows that the governance of the health sector, including the programs, personnel, and communication channels, can be examined using system theory. System theory offers a set of standards to analyze and assess progress in the health domain.

Other studies are related to social worker issues regarding poverty, marginalization, and unemployment, which can be identified with inclusion and exclusion in the Luhmann approach. This study emphasizes society as a comprehensive social system that includes all communication. This concept accurately explains the complexity of social worker issues (Schirmer & Michailakis, 2015).

Based on the literature study, some research

used development communication from a social systems approach in different circumstances. This study is complemented by empirical examples of MSMEs development in the Special Region of Yogyakarta (DIY), Indonesia. DIY represents Indonesia as a developing country with all the complexities. The poverty rate in DIY is 11.49%, exceeding the national average of 9.57% (Humas DIY, 20/1/2023). The case study also shows forms of system differentiation in responding to stimuli during the development of digitalization in the MSMEs sector.

The challenge is to find a new perspective on development communication study, which can be used in Africa and Asia. Therefore, the current research presents an autopoietic perspective. This approach is an alternative innovation in development communication studies. The autopoietic system provides a system based on its ability to respond to complexity.

The research is structured as follows: (a) A comprehensive literature review on the concepts and history of development communication in Africa and Asia; (b) A description of development communication with an emphasis on the autopoietic perspective by Niklas Luhmann; (c) The overview of the relevant studies in Indonesia's MSME context.

This research is expected to improve the contribution of the autopoietic method in development communication study. It provides a fresh framework for future development communication study. This research used a theoretical framework to give a fundamental analysis to answer research problems.

**Development Communication Studies:** In general, development communication is a process of improvement for modern society. Development communication emerged when developed countries began to support the transfer of technology and communication to developing countries. It is produced as part of a programmatic effort to change social conditions. Describing the history of development communication theory, including its origins, evolution, and paradigms, tends to adopt a Westernization and colonial perspective as a US and European contribution complemented by peripheral ideas from other world regions – Latin America, Asia, and Africa (Barranquero,

2017).

The evolution of developed communication is characterized by mass media, which places the public as an audience influenced by the transmitted messages. The communication model that underpins the initial development is the Sender-Message-Channel-Receiver (SMCR). This model has subsequently drawn much criticism for strengthening the receiver role through a feedback process. Development communication promotes changes through several procedures involving dialogic and media communication. This study's interdisciplinary nature is exceptional since it is a powerful instrument for cross-sectoral research.

The challenge in the study of development communication is the failure to distinguish the field of communication, especially between the field of development communication, corporate and mass communication. This lack of clarity also impacts the application of the theory, methods, and techniques used. This initial concept becomes the basis for understanding the further growth of development communication, especially in Africa and Asia.

**Social System Theory:** The autopoietic approach was born from the concept of 'society of society is communication,' which is the basic idea of Niklas Luhmann's social system theory. Niklas Luhmann is the most prominent sociologist of the 20th century. Luhmann builds a theory of society and describes it accurately and adequately, including its principle dynamics in the field of social systems (Meyer, 2015).

Luhmann developed social systems theory due to dissatisfaction with contemporary approaches, especially those related to society. Furthermore, he describes the theoretical basis with a framework on modern society as a complex communication system that differentiates itself horizontally into a network of interconnected social subsystems. Each system reproduces recursively based on the system operation, observation, and environment. However, everything they observe is characterized by unique perspectives and differences with which they specifically use their observations (Luhmann, 1995).

Niklas Luhmann's systems theory emphasizes that social systems do not consist of actors or actions. Communication is a

fundamental key to understanding systems theory. For Luhmann, the social world is formed through communication and only through communication. In this sense, the world is communication. Only communication is related to communication. It is quite a radical step because it excludes people from the social system (Albert, 2016).

The Luhmann concept places human actors as the environment. Society is communication, and communication is also communication. Systems theory describes social phenomena without explicitly considering the role of individuals. Communication is not sent and received (not transmitted). Communication is a continuous result of a communication process that develops over time and is a process that creates a system more sensitive to problems in dealing with the surrounding environment (Wahyuni, 2019). For Luhmann, humans are sensors in the system environment, and they are inside, not outside the social system. Systems theory would be useless to the subject, and humans could not be the measure or standard of society. Luhmann emphasizes process (communicative) rather than people.

Luhmann's social system theory raises the concept of the society of society as communication, also known as social system theory. In principle, society is a world community because every communication can be connected with every other communication (Albert, 2016). The concept of "the society of society is communication" describes the fundamental features of all social systems, such as economics, law, religion, art, science, and sociology (Nashihuddin, 2019). Communication is the essential element that drives society. The autopoietic system is departing from this concept.

The autopoietic system began with biologists' ideas, Chilean Humberto Maturana and Francisco Varela, in the 1960s and early 1970s. An autopoietic system reproduces its elements through elements of the system. The autopoietic system is adaptable and forces the system to continually develop new components to survive. In this instance, the system produces and reproduces to prevent halt or extinction.

Autopoietic systems work to produce and replace not only their structures but also

everything used as a unit within the system (Durand, 2017). Through autopoietic, a system creates elements by utilizing materials within and its environment (Wahyuni, 2019). The system can only differentiate itself and its components. It generates a description and a distinction between the system and the environment. The autopoietic system consists of communication, evolution, and differentiation components, each with a different dimension. The function of social systems theory is the production of communication in society, and each system establishes a legitimate reality.

## RESEARCH METHOD

This is qualitative research, which allows researchers to make certain assumptions. The researchers choose a fundamental belief paradigm to guide the action (Creswell, 2018). Besides, qualitative research tends to occur in the natural world and views social worlds as holistic and complex (Marshall, 2016). In this approach, the researchers used complex reasoning.

The research unit of analysis is the evolution and variety of concepts that have developed in the study of development communication in Africa and Asia: (a) An overview of development communication studies in Africa and Asia; (b) An autopoietic perspective on development communication and its implementation.

This study employed secondary data, consisting of literature related to development communication studies in Africa and Asia. Data analysis used literature studies. The researchers used a literature review to describe development communication studies in Africa and Asia.

Literature review is a methodology that considers the production of knowledge in different fields of study, which is getting faster at an extraordinary speed. This makes it challenging to keep up with the latest research so that the literature review is relevant (Snyder, 2019). The literature review integrates relevant studies to identify problems in the field (Torraco, 2016). It was implemented to provide a framework for establishing the importance of research and as a basis for comparing results with other findings (Creswell, 2018).

The data analysis phase began with gathering related literature, such as journals, books, and other publications. The data collection stage was choosing and producing material to analyze and comprehend social contexts, phenomena, individual and group experiences, and the associated processes of meaning-making based on field data.

The researchers selected, considered, and read literature to analyze the novelty of the concept as a new finding from the perspective of development communication. After that, researchers drew conclusions. The final phase was verification and findings to understand the meaning, regularity, patterns, explanations, causal flows, or propositions. This research is concerned with concluding a new perspective in the development communication study.

## RESULTS AND DISCUSSION

Development Communications in Africa: The study of development communications began in the 1960s. Africa is the second largest continent in the world. The area of the African

continent is about one-fifth of the Earth's total surface. Africa experienced considerable economic development during the 20th century. While this provides many benefits, it also creates several problems. Africa is also rich in mineral resources such as coal, petroleum, natural gas, uranium, radium, thorium, iron ore, chromium, cobalt, copper, etc.

According to IMF data, only a few countries on the African continent belong to the category of developed countries. Africa as a whole remains a developing region. Agriculture is the leading sector of the economy in most countries (Pristiandaru, 10/02/2022). Regarding economic and technological development, Africa is quite behind other areas, and almost all dimensions of development are much lower than those of different regions (Eunice Annan-Aggrey et al., 2021). It is also made worse by the fundamental issues with leadership, which has a propensity for autocracy and is even closely associated with the culture of executive corruption regarding its leadership traits. Inevitably, the traditions in Africa lead to ongoing suffering and poverty. Figure 1 shows the African continent.

Departing from the sluggishness



Source: <https://www.worldatlas.com/webimage/countrys/af.htm>, 2024

Figure 1 Africa Continent

experienced by Africa, communication is an entry point for solving existing problems. It is a bridge of development. The planned communication flow will determine the direction and speed of dynamic growth.

Participation is a crucial aspect of communication involvement in development. Participation and active involvement of the community are the strength of development. Communities are also responsible for preparing their future. Participation is considered the right concept to call development and communication. At this stage, it becomes a pioneer in participatory communication. It reflects that sustainable social change is only possible with the full participation of the community.

Participatory communication is the basis for saving Africa's downturn. However, the backwardness experienced still requires further solutions (Okaka, 2016). The following research places communication campaigns to improve the Africans' mindset of Africans. This action is hoped to bring up a better leadership spirit with the characteristics of anti-corruption, anti-greed, poverty alleviation, and self-respect and dignity.

The targets of the communication campaign include (a) building a service philosophy as the right leadership style; (b) building a positive self-image and self-confidence; (c) changing Afro-pessimism (a negative view of Africa) to Afro-optimism (good hope for Africa); (d) building the values of honesty, diligence, and excellence; and (e) managing independent actions in making decisions in the field of politics or government.

This target leads to changes in behaviors and decision-making so that Africa reaches their development goals. The strategy determines a careful communication channel for face-to-face, public, mass, and people's media. Folk media comprises theatre, stories, songs, folk dances, ballads or songs, and pantomimes. They are rooted in African culture, norms, and values. This medium has excellent potential to be used in campaigns to change Africans' attitudes and behaviors.

Furthermore, there are efforts to increase the role of development communication in Africa through community-based media. Local

media, such as community radio, provides access that allows community participation in development. Apart from that, dialogue is also carried out between African, Islamic, and Western civilizations as a basis for realizing peace, which is a vision for the future of Africa. It is further essential to start with every individual's passion for change in Africa. Every individual needs to transform and achieve growth and development in Africa.

Evolution continues, marked by the growth of development communication in Africa, which emphasizes community solidarity over individualistic interests. This study was developed in 1997. This form places a high value on the well-being of individuals and the whole community. Communal solidarities have been represented in everyday life in Africa (Ekanem, 2020).

Developments in the 21st century show that some African countries have succeeded in ICT, such as Nigeria, which has the most significant number of mobile users in Africa. The Nigerian Communications Commission (NCC) stimulates investment to build national infrastructure to increase entrepreneurial activity in Nigeria, including the rural areas.

According to Evans (2019), there are scenarios for developing the future of ICT in Africa, including the introduction of mobile phones. Scenarios are designed as a guideline for stakeholders in making decisions and creating future policies. A further achievement in building this commitment is the development of the national economy through local production capacity and ICT development.

The use of ICT in Africa contributes to socio-economic development. Evans (2019) suggested that the internet and cell phones are communication technologies with a significant impact. ICT plays a role in improving the productivity of SMEs in East Africa. SMEs are central to economic development in Africa as they can significantly reduce unemployment and poverty.

Data in 2000 showed that ICT, both computer & internet and telephone, could increase the competitiveness of SMEs. SMEs are essential for Africa because this sector contributes 40% of GDP and around 60% to 80% of employment (African Business, 05/04/2022). Even now,

ICT is a necessary booster of post-Covid-19 economic growth. The development of the digital economy is expected to help alleviate poverty, inequality, and unemployment. On this basis, infrastructure investment in Africa continues to increase (Nchake & Shuaibu, 2022).

Development Communication in Asia: Historically, the journey of development communication in Asia has been more than half a century since its early initiation in the 1970s. It was pioneered by Nora Quebral. It refers to the art and science of human communication as applied to the rapid transformation of a nation and people from poverty to dynamic economic growth. It enables greater social equality with the fulfillment of human potential (Quebral, 2012). Furthermore, it formulates the definition of development communication as the science of human communication related to the transition of society from poverty in all its forms to dynamic and comprehensive growth that encourages equity and the development of individual potential. Development communication exploits the potential of information and communication to improve the

socio-economic development process.

Information and technology innovation changes the communication process and the media used. Virtually, the mainstream of communication takes place, and new media are applied in the social transformation of society. It has implications for formulating developed definitions, including the emergence of criticism of existing developments. The deregulation and liberalization of the media have shifted the focus from development issues (such as health, education, and the environment) to content that tends to be commercial. Even broadcasting institutions as public services for development communication have also shifted their roles as providers of commercial broadcasting services. This condition occurred throughout Asia in the 1980s until society no longer trusted the impact of development communication.

In addition, the revolution of information and communication technology, especially with the internet and new media, has dramatically influenced development communication, which has become fragmented. The field of development communications finds practical ways to utilize communication technologies



Source: <https://www.worldatlas.com/webimage/countrys/as.htm>, 2024

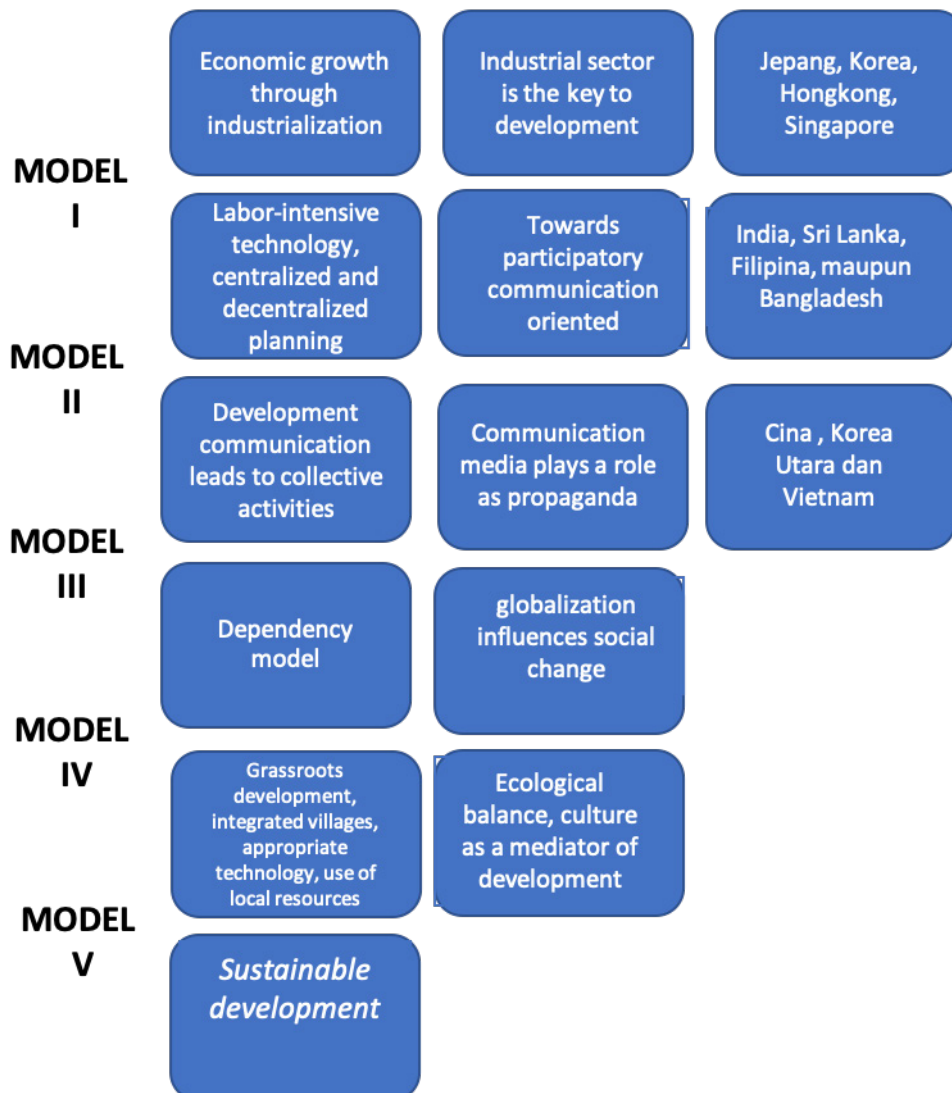
Figure 2 Asia Continent

and media to enhance human development. It is the consequence of technology being more dominating than the development process. The shift from the industrial era to the information age pushed global knowledge to be compared with national development.

ICT in the context of development communication in Asia cannot be positioned as the primary solution for development. However, the dominant presence of ICT in the development process can create a strong alignment between them. Development communication and ICT are the same disciplines, so development continues—participatory approaches as a challenge for solutions to the development communication in Asia in the next period. Figure 2 shows the Asia Continent.

Another study shows that five models are constantly changing fields in Asia (Dissayanake, 2008). It started with the model of economic growth through industrialization. At that time, the industrial sector became the key to the development of modern society. Mass media such as newspapers, radio, and television created a more conducive atmosphere for modernization and industrialization. The first model was developed extensively in Japan, Korea, Hong Kong, and Singapore. This model was influential in the 1950s and 1960s. The model of development communication in Asia is detailed in Figure 3.

In the 1970s, doubts and criticism arose regarding the relevance of this model in India, Sri Lanka, the Philippines, and Bangladesh.



Source: Adopted from Dissayanake, 2008

**Figure 3 Models of development communication in Asia**



Finally, a development communication model was introduced, marked by labor-intensive technology and centralized and decentralized planning. Development communication underlines ways to achieve justice, self-reliance, self-development, and community participation. Culture is an essential factor to consider when implementing development (Servaes & Servaes, 2021). This period also saw a shift in development communication, which was initially more linear in one direction and was two-way oriented towards participatory communication. Information exchange was developed through mass media and interpersonal channels.

The development communication model was more directed at collective activities. Communication media is propaganda for people with particular interests and is widely produced in China, North Korea, and Vietnam. Globalization causes this model to decline and is replaced by a dependency model, which tends to see the interdependence between developed and developing countries. Developed countries are responsible for underdevelopment in left countries until globalization affects social change (Dissayanake, 2008).

Development communication emphasizes development on the grassroots level, integration of village development, use of appropriate technology, productive use of local resources, maintenance of ecological balance, and culture as a mediating force for development. This model is widely adopted among Asian NGOs and is becoming popular in several countries such as India, Sri Lanka, Thailand, the Philippines, Bangladesh, and Nepal. This fifth development communication model is getting stronger with the concept of sustainable development.

**Autopoietic System for New Perspective:** Studies on development communication are encouraged by the rapidly changing nature of many facets of community life. According to the conventional study of communication, the transmitter and receiver of messages are the two key components in information transmission. From the system perspective, communication is not transmitted. Communication negates humans. Society contains communication; only communication can communicate. Individuals are only relevant to the community

as they participate in communication (Ritzer, 2011). Structure and agency exist as a system environment, while the function system drives the system.

Luhmann introduces his thoughts on modern society as an author distinguishes them, a continuous differentiation process happens along with a system. The autopoietic system comprises several functional systems that distinguish between the system and the environment (Luhmann, 1995). The environment is considered to have good potential for the system. This means that environmental changes affect the social system. It will create elements (self-creation) through self-reference and differentiation (self-differentiation) to reduce complexity (Luhmann, 1995; Wahyuni, 2019). In the operation, the system produces and reproduces its reproductive structures. This means that all reproduction depends on the reproduction of concrete elements (Seidl, 2004).

This concept underpins researchers' identification of information processed in the context of development communication.

(1) The system is dynamic. The autopoietic system emphasizes that the system exists because of its complexity. The moving system seeks information from its environment to reach a stable state. System changes will always rely on volatile things that have the authority, or authority keeps the same with something that tends to change quickly, such as actors.

As an illustration, the system is controlled by people, so when the policy changes, it may change, or when people (actors) change, the policy changes too. Luhmann places communication as the main element of the social system. He views changes in the social system and communication as something neutral and has existed throughout the ages. Communication becomes an essential element, not an actor (Ritzer, 2011). Society is considered to exist when individuals communicate, and before they start communicating, individuals are not within society (Lee, 2000). Individuals' communication and participation in society are determined by communication as boundaries. They are not as a whole person, and everything uncommunicated is placed outside the community as an environment.

(2) The complexity of modern society is synonymous with uncertainty. The complexity is part of modern society issues, where the dynamics are full of uncertainties and various changes that seem difficult to prove the truth, especially in the digital era where MSMEs are shown with a shift towards digital platforms. The shift also brings new complexities in HR, infrastructure, network, and other issues. These problems are vulnerable if studied partially so that through the social systems approach, society can map underlying problems, given that the system sees things arbitrarily.

Reflection on the MSMEs Study in Indonesian Context: The autopoietic system as a new approach in the study of development communication is reflected in the description of the MSME sector development in DIY. DIY is one of the provinces responsive to digital transformation in the MSME sector. Moreover, DIY has received support from the government to achieve the targets through GEBER UMKM (Gerakan Indonesia Bersama) under the Ministry of Cooperatives and SMEs of the Republic of Indonesia. Apart from that, DIY is one of five provinces (Jabatabek, West Java, Central Java, DIY, and East Java) that have become the targets of the Indonesian government's strategic program to transform micro-enterprises from informal to formal through Garda Transfumi (*Transformasi Formal Usaha Mikro*).

MSME is a sector that contributes to human development by covering economic and social aspects. To date, MSMEs' contribution to GRDP is 79.6% (Hardi, 2020). In quantity, MSMEs in DIY reached 344,293 businesses in July 2023 (Bappeda.jogjaprov.go.id., 2023). This data is dominated by micro-scale companies, and even national conditions also show data that tends to be the same.

An autopoietic system of information, evolution, and differentiation components is used to identify MSME development. All three components are contingent. The contingency determines the alternatives (which are currently not impossible and may not be necessary). Information selection shows that the meaning-forming system is always contingent. Contingency is a fundamental problem in coordinating selectivity in social and physical systems because it can realize the possibilities

for beyond expected communication. This means communication could follow expectations, and there is a need to take risks. Each choice depends on the alter ego, where both are meaning-forming systems (Baraldi et al., 2021). The alter can accept or reject whatever the ego expresses, but the ego can do the same thing with the alter's communicative steps (Schwanitz, 1995).

As part of the cybernetic tradition, information processing is identified through everything ideal and normative regarding the digitalization of MSMEs. Researchers map the various formal rules that are assumed for the information environment. Apart from that, this research analyzes the literature on issues relevant to the digitization of MSMEs. The variety of information obtained includes (a) electronic transaction, (b) financial transparency, (c) globalization revolution 4.0, (d) efforts to balance the business atmosphere, (e.) government intervention, (f) technological intervention, (g) utilization of digital platforms, (h) the role of digital technology, (i) digital communication restructuring.

In the next stage, the selection of utterances is identified, which begins with mapping the elements that help construct digitalized discourse. The aspects of participation in developing the digitalization of MSMEs are diverse. In the DIY case, the involvement includes the government, State-owned or Regional-owned Enterprises, industrial corporations, media, MSMEs, and universities. The contingencies built into the utterance component at the provincial level, digitization, are digital platforms in the form of marketplaces, cashless payment systems, internet-based single data information, business changes using technology, offline to online changes, and digital media utilization.

The selection of utterances related to the substantive objectives of MSME development includes MSME upgrading classes, digitalization synonymous with consulting "Pojok Konsultasi (the corner for consultation)" institutional roles, and increasing MSME capacity. This contingency is a small part of the narratives regarding the digitization of MSMEs in DIY. Meanwhile, the last communication component results from information selection and utterance, which is understanding. Contingencies tend

to be dominant, which leads to significant technological interventions in building the meaning of digitalization.

The understanding component shows that digitalization necessitates a media literacy mindset, the adoption of internet-based financial services, and addresses the emergence of new inequalities such as limited human resource skills and uneven infrastructure. This description proves how the autopoietic approach effectively and completely explores complex facts.

## CONCLUSION

Development communication is a relevant study for developing countries. In Africa and Asia, development communication studies are significant in bringing about changes for the better, including reducing poverty and improving the socio-economic community.

A new perspective on development communication through the autopoietic system is part of the constructivism paradigm, as an epistemology of social system theory. An autopoietic approach showed ways of thinking about continuous communication in the face of ambiguity, uncertainty, plurality, and possibility. The description of the MSME digital ecosystem development in DIY, Indonesia, reflects the autopoietic system in development communication. The system reproduces communications through its elements to reduce complexity. Each dimension in the autopoietic can identify the problems and dynamics of the MSME system as a whole, and communication is the main element in the system. Throughout developmental evolution, systems respond to stimuli through system differentiation. This component of the autopoietic system ultimately describes the results of system evolution with the characteristics of each case study in reducing complexity.

The logic of Niklas Luhmann's social system, which negates humans, is still a challenge to build awareness of the importance of communication as the core of development communication, not actions and actors. Luhmann offers an innovative, thought-provoking perspective on modern society. The starting point of system theory is that it no longer

assumes that contemporary society can be analyzed successfully because it is principally a collection of individual human beings.

The society of society is communication becomes the basis for developing the concept of development communication. As a new perspective, system autopoietic theory differs from the common definition, which views communication as transmitted. However, from Luhmann's perspective, communication consists of three basic concepts: communication, utterance, and understanding. This definition also accommodates that society is a global society unrestricted by space and time or geographical scale. The case study of developing MSMEs in DIY provinces showed that the system adapts based on self-reference. The system uses information from the environment to respond to the contingent system. This study could build a new perspective that will enrich the basis of analysis in communication science in either Asia or Africa.

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## REFERENCES

- Adiprasetyo, J. (2022). The development of communication research in Indonesia in 2001-2020. *Jurnal Kajian Komunikasi*, 10(1), 105. <https://doi.org/10.24198/jkk.v10i1.35954>

- African Business. (2022). *Unlocking SME potential through the power of emerging technology*.
- Albert, M. (2016). Luhmann and systems theory. In *Oxford Research Encyclopedia of Politics*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228637.013.7>
- Bakti, I., Zubair, F., & Budiana, H. R. (2023). Participatory communication as the key to successful disaster management in Pangandaran district. *Jurnal Kajian Komunikasi*, 11(2), 195. <https://doi.org/10.24198/jkk.v11i2.49785>
- Bappeda.jogjaprovo.go.id. (2023). *Data UMKM (Data of MSME in DIY)*. [https://bappeda.jogjaprovo.go.id/dataku/data\\_dasar/index/107-umkm?id\\_skpd=284](https://bappeda.jogjaprovo.go.id/dataku/data_dasar/index/107-umkm?id_skpd=284).
- Baraldi, C., Corsi, G., & Esposito, E. (2021). *Unlocking Luhmann: A Keyword Introduction to Systems Theory*.
- Barranquero, A. (2017). Rediscovering the Latin American roots of participatory communication for social change. *Westminster Papers in Communication and Culture*, 8(1), 154–177. <https://doi.org/10.16997/wpcc.179>
- Creswell, J.W., C. B. P. (2018). *Qualitative Inquiry & research design: Choosing among five approaches*. In Sage (4th ed.). SAGE Publications.
- Dissayanake, W. (2008). Development communication: Asia. *The International Encyclopedia of Communication*. <https://doi.org/10.1002/9781405186407.wbiecd022>
- Djanibekov, N., Van Assche, K., & Valentinov, V. (2016). Water governance in central Asia: A luhmannian perspective. *Society & Natural Resources*, 29(7), 822–835. <https://doi.org/10.1080/08941920.2015.1086460>
- Durand, F. (2017). Evolution, reproduction and autopoiesis. *HTS Teologiese Studies / Theological Studies*, 73(3), 1–8. <https://doi.org/10.4102/hts.v73i3.4726>
- Ekanem, S. A. (2020). The place of individual rights in communal Africa. *International Journal of Humanities and Innovation (IJHI)*, 3(2), 74–78. <https://doi.org/10.33750/ijhi.v3i2.72>
- Etoundi, R. A., Onana, S. F. M., Eteme, A. A., & Ndjodo, M. L. F. (2016). Special issue on ICT for Africa development: An introduction and framework for research. *The Electronic Journal of Information System in Developing Countries*, 76(1), 1–11. <https://doi.org/10.1002/j.1681-4835.2016.tb00551.x>
- Eunice Annan-Aggrey, Elmond Bandaoko, & Godwin Arku. (2021). Localising the sustainable development goals in Africa: implementation challenges and opportunities. *Commonwealth Journal of Local Governance*, 24, 4–23. <https://doi.org/10.5130/cjlg.vi24.7739>
- Evans, O. (2019). Information and communication technologies and economic development in Africa in the short and long run. *International Journal of Technology Management & Sustainable Development*, 18(2), 127–146. [https://doi.org/10.1386/tmsd\\_00002\\_1](https://doi.org/10.1386/tmsd_00002_1)
- Fliert, E. van de & Thomas. (2015). *Interrogating the theory and practice of communication for social change*. Palgrave Macmillan.
- Hardi, A. T. (2020). *Penggerak ekonomi di DIY, 76% dari Sektor UMKM*. <https://mediaindonesia.com/nusantara/331683/penggerak-ekonomi-di-diy-76-dari-sektor-umkm>
- Humas DIY. (2023). AHH Tertinggi Di Indonesia, Kemiskinan DIY Masih Menjadi PR
- Latif, Z., Yang, M., Pathan, Z. H., & Jan, N. (2017). Challenges and prospects of ICT and trade development in Asia. *Human Systems Management*, 36(3), 211–219. <https://doi.org/10.3233/HSM-171780>
- Lee, D. (2000). The society of society: The grand finale of Niklas Luhmann. *Sociological Theory*, 18(2), 320–330. <https://doi.org/10.1111/0735-2751.00102>
- Lee, D. (2000). The Society of Society: The Grand Finale of Niklas Luhmann. *Sociological Theory*, 18(2), 320–330. doi:10.1111/0735-2751.00102
- Luhmann, N. (1995). *Social Systems* (John

- Bednarz, Jr & Dirk Baecker (ed.). Stanford University Press.
- Marshall, C. and G. B. R. (2016). *Designing qualitative research* (Sixth). Sage Publication, Inc.
- Meidina, A. P., & Murfi, A. (2024). Environmental communication and disaster mitigation by mobile application and website. *Jurnal Kajian Komunikasi*, 12(1), 60–79. <https://doi.org/10.24198/jkk.v12i1.53996>
- Meyer, S., B. G. dan P. W. (2015). Niklas Luhmann: Social systems theory and the translation of public health research. In *The Palgrave Handbook of Social Theory in Health, Illness, and Medicine* (pp. 180–186). Palgrave Macmillan. <https://doi.org/10.2307/j.ctvw1d575.26>
- Nashihuddin, W. (2019). *Penerapan sistem autopoietic Niklas Luhmann dalam kegiatan komunikasi ilmiah pustakawan. February*. <https://doi.org/10.13140/RG.2.2.26924.21127>
- Nchake, M.A., & Shuaibu, M. (2022). Investment in ICT infrastructure and inclusive growth in Africa. *Scientific African*, 17, e01293. <https://doi.org/10.1016/j.sciaf.2022.e01293>
- Nuttavuthisit, K., Jindahra, P., & Prasarnphanich, P. (2015). Participatory community development: evidence from Thailand. *Community Development Journal*, 50(1), 55–70. <https://doi.org/10.1093/cdj/bsu002>
- Okaka, W. T. (2016). *Communication for Sustainable Development Goals in Africa. December*, 2–3.
- Pristiandaru, D. L. (2022). *Daftar negara maju dan negara berkembang di Afrika (List of Developed Countries and Developing Countries in Africa)*. <https://internasional.kompas.com/read/2022/02/10/220100470/daftar-negara-maju-dan-negara-berkembang-di-afrika>.
- Quebral, N. (2012). *Development communication primer*. Southbound.
- Ritzer, G. (2011). *Sociological theory* (8th ed.). McGraw-Hill.
- Schirmer, W., & Michailakis, D. (2015). The Luhmannian approach to exclusion/inclusion and its relevance to Social Work. *Journal of Social Work*, 15(1), 45–64. <https://doi.org/10.1177/1468017313504607>
- Schwanitz, D. (1995). Systems theory according to Niklas Luhmann: Its environment and conceptual strategies. *Cultural Critique*, 30, 137. <https://doi.org/10.2307/1354435>
- Seidl, D. (2004). Luhmann's theory of autopoietic social systems. *Ludwig-Maximilians-Universität München Munich School of Management*.
- Servaes, L., & Servaes, J. (2021). Participatory communication for social change. In *Handbook of Communication and Development* (pp. 120–141). Edward Elgar Publishing. <https://doi.org/10.4337/9781789906356.00015>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Torraco, R.J. (2016). Writing integrative literature reviews. *Human Resource Development Review*, 15(4), 404–428. <https://doi.org/10.1177/1534484316671606>
- Volgger, M., Mainil, T., Pechlaner, H., & Mitas, O. (2015). Health region development from the perspective of system theory – An empirical cross-regional case study. *Social Science & Medicine*, 124, 321–330. <https://doi.org/10.1016/j.socscimed.2014.05.004>
- Wahyuni, H. I. (2019). Ecological communication in information society: reflections on Niklas Luhmann's thought in understanding ecological & disaster issues in Indonesia. *Jurnal Komunikasi: Ikatan Sarjana Komunikasi Indonesia*, 4(1). <https://doi.org/10.25008/jkisk.v4i1.270>