

## **ADAPTATION AND SOCIAL MOBILITY STRATEGIES IN FACING INDUSTRIALIZATION IN RURAL COMMUNITIES**

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### **Abstract**

The ongoing industrialization process will certainly influence the dynamics of rural community life. As a basic prerequisite for industrialization, the transfer of land from agriculture to industry causes changes in various dimensions of people's lives. The absorption of workers, especially from outside the region, also gives rise to new communities in rural areas which increasingly add to the complex patterns of social relations that are being built. In responding to the industrialization process, society develops trust, strong interactions between members, as well as new norms or rules that indicate a type of bridging social capital. The basic principle of social capital is that only groups of people who have a set of social and cultural values that appreciate the importance of cooperation can progress and develop on their own. Bridging social capital owned by rural communities produces adaptive capacity. The forms of adaptive capacity developed are flexibility to maintain the sustainability of the rural industrialization process. In the next stage, this adaptive capacity becomes a supporting capacity in facing social change.

**Keywords:** Strategy, Adaptation, Social Mobility, Industrialization

### **INTRODUCTION**

Indonesia is currently one of the countries that is heading towards the development of industrial revolution 4.0, so that all changes that occur must be able to be adapted by citizens as a whole (Purwanto, 2023). It can also be called the era of modernization, where all aspects of human life have been reached by technology and change cannot be stopped (Amiraslani & Dragovich, 2023). The economic aspect is no exception, where many changes have occurred in this aspect. If previously the economic activity of buying and selling was carried out face to face between the seller and the buyer, the seller offered directly, the buyer could check the goods directly, using conventional bargaining methods and so on, but now it has undergone changes by following the changing times that have occurred (Adamseged & Kebede, 2022). Based on this, the changes that occur are a consequence of

developments in the current era, this cannot be avoided, because human life cannot be separated from economic life, giving rise to a pattern of society that must adapt to change.

Industry is a change in economic development from rural and agricultural areas to an industrial sector that produces goods and services. This economic development will ultimately lead to structural transformation, which is a process of shifting the growth of the production sector from initially relying on the primary sector (agriculture) to the secondary sector (industry) and the service sector (Cerni et al., 2023).

Industry includes all businesses and activities in the economic sector that are productive. Industry is a process that carries out activities to change basic goods mechanically, chemically, or by hand so that they become semi-finished goods or finished goods, in this case including industrial service activities and assembly work (Atance et al., 2024).

Industrialization is considered the only shortcut to improve the prosperity of a country more quickly than without going through this process. With that in mind, almost all countries in the world have and are currently pursuing this industrialization strategy, with several characteristics that differ from one country to another. Because of the parallelism between the course of development and the industrialization strategy, in its journey it can be said that the meaning of development is almost identical to industrialization so that the two are inseparable (aliakbari et al., 2023).

The process of industrialization can change social behavior in society, both to a negative and positive realm. One of the impacts of industrialization is that it can cause deviant behavior in teenagers which is caused by social changes that occur in society (Boateng, 2024).

The ongoing industrialization process will certainly influence the dynamics of rural community life. As a basic prerequisite for industrialization, the transfer of land from agriculture to industry causes changes in various dimensions of people's lives. The absorption of workers, especially from outside the region, also gives rise to new communities in rural areas which increasingly add to the complex patterns of social relations that are being built. Changes do not only occur physically through development projects, but also changes in work relations, types of community livelihoods, changes in the social structure of society, social mobility and patterns of social relations (Javeed, 2023).

The response of rural communities to industrialization can be identified from the typology of social capital they possess. In this context, social capital

will reflect the character of society in facing industrialization. Identification of social capital is very important to measure the extent to which the industrialization process is accepted or not by rural communities. The typology of social capital at the next stage will determine what forms of adaptive capacity the rural community has in facing the industrialization process (Pavez, 2022).

## **RESEARCH METHOD**

The study in this research is qualitative with literature. The literature study research method is a research approach that involves the analysis and synthesis of information from various literature sources that are relevant to a particular research topic. Documents taken from literature research are journals, books and references related to the discussion you want to research (Earley, M.A. 2014; Snyder, H. 2019).

## **RESULT AND DISCUSSION**

### **Adaptation Strategy**

#### **A. Understanding Adaptation**

According to Gerungan's explanation, adaptation is a form of changing oneself according to the environment as well as adjusting oneself (Fadhil et al., 2023). There are two definitions of adaptation: the first is auto plastic self-adjustment (auto means self, plastic means form), and the second is allo plastic self-adjustment (allo means other, plastic means form). Therefore, there is a difference between adjustment which means passive, where a person's behavior is influenced by the environment (Wang et al., 2023). Next, adjustment means active, where a person's behavior influences the environment. In this case, an individual can make an adjustment by changing the individual self to suit the environment or influencing the environment to suit the individual self. The environment in question includes socio-cultural conditions and the surrounding natural environment.

An individual can be said to be socially adapted if he/she reacts effectively within the individual's capacity to social reality, so that healthy social relationships are established. The process of self-adjustment carried out by a person, through the process of learning to understand, understanding, and trying to do something that is desired by his environment. In fulfilling needs, an individual always desires balanced conditions so that his/her desires can be fulfilled in accordance with the

norms or rules in society that are currently in force (Ali, 2022). This means that individuals establish relationships by reacting effectively to the social environment. An individual perceives, comprehends, and tries to create something desired with his environment. The desire in question is to fulfill individual needs. In this case, an individual habituates by interacting, completing and analyzing life in his environment.

#### B. Adaptation Strategy

Adaptation strategy is human behavior in allocating resources to face challenges in accordance with the social, cultural, economic and ecological environment, explains Marzali in his book. In general, adaptive strategies are action plans that people take, either explicitly or implicitly, consciously or unconsciously, in response to various internal and external variables (Auci & Coromaldi, 2022). This means that it can be concluded that adaptation strategies are carried out from within or outside the individual in order to respond or adapt to their environment.

Meanwhile, Bennett defines adaptation strategies as behavior or activities that humans prepare to meet the minimum needs they need and to overcome the problems they face (Zhu et al., 2023). This means that a form of adaptation strategy is carried out through planned behavior or actions in the process of adjusting to the new environment. There are three parts to adaptation, adaptive behavior, adaptive strategy and adaptive processes. This division is based on Bannet.

First, behavioral adaptation, in this case as time goes by, behavior continues to change. In defending themselves against the environment, an individual or group carries out behavior based on the path in their environment. Apart from that, an effort will experience changes in actions in adapting carried out by individuals.

Second, tactical adaptation is a change that occurs in the environment by adapting to the behavior that will be carried out. It is very important for an individual or group to adapt to their environment, so that they will experience changes in the surrounding environment that require a solution. Various problems faced by individuals can be used as ways that individuals will act. Therefore, an individual or group needs to carry out checks so that they can survive in their environment and be in the right position.

Third, process adaptation is the division of levels into individuals and groups in an adaptation process. In overcoming obstacles in the environment, using one's own abilities is an individual direction. Because

individuals have the goal of satisfying needs by obtaining the desired resources in their environment. Meanwhile, groups lead to the use of adaptive methods to survive in life (Chen et al., 2023).

### **Strengthening Bridging Social Capital**

In responding to the industrialization process, society develops trust, strong interactions between members, as well as new norms or rules that indicate a type of bridging social capital. The basic principle of social capital is that only community groups that have a set of social and cultural values that appreciate the importance of cooperation can progress and develop on their own (Asmael & Dupuy, 2022). Bridging social capital, which is inclusive and outward looking, is a manifestation of efforts to find joint answers in solving problems, especially poverty and economic backwardness faced by groups, by utilizing the networks owned by individuals in the group. Bridging social capital reflects the character of village communities that are open, have flexible networks, are tolerant and accommodating to accept changes, especially regarding the ongoing industrialization process.

Bridging social capital will pave the way for the rural economy to develop more quickly with the ability to create strong networks, mobilize wider resources and develop more varied reciprocity models (Faranda et al., 2023).

### **Adaptation Capacity**

In the next process, bridging social capital owned by rural communities produces adaptive capacity, including (Shahid, 2023):

- a. Cooperation
- b. participation of all elements of society
- c. use of technology according to community needs
- d. principle of mutual care
- e. modification of institutional structure
- f. modification of rules or norms
- g. the ability to mobilize collective resources within group members.

The forms of adaptive capacity developed are flexibility to maintain the sustainability of the rural industrialization process. In the next stage, this adaptive capacity becomes a supporting capacity in facing social change.

Adaptive capacity can also be called a capability that concerns various physical, institutional, social, economic resources, facilities, personal skills and collective attributes such as leadership and management that a community

has to manage disasters (Cosa, 2023). The amount of adaptive capacity will determine the ability of a system to adapt, that is, modify or change its characteristics or behavior to be able to overcome actual or anticipated stress.

Adaptation is different from adaptive capacity, where adaptation is an adjustment in the behavior and characteristics of a system that increases its ability to overcome external stress, or a response to a stressor (Bamdad, 2022). Adaptation is also not the same as coping, because coping mechanisms are more in the form of a number of short-term responses to situations that threaten the livelihood system and often take the form of emergency responses in abnormal seasons.

Meanwhile, adaptation strategies relate to variables such as cultural values that require more time to change, the way individuals, households and communities change their productive activities and modify local rules and institutions to secure their livelihoods (Amadou & Yacob, 2023).

Adaptation is a manifestation of adaptive capacity shaped by social, cultural, political and economic forces (Qiu et al., 2022). These forces are not separate from each other but are interconnected. Some adaptive capacity comes from the community such as strong kinship networks that can absorb stress, the presence of local leaders, communication channels in the community, and the community's ability to organize themselves and some also comes from more general economic and socio-political systems such as the existence of subsidy programs from the government (Petrenko & Viriutina, 2024).

### **Forms of Adaptive Capacity**

#### **1. Collaboration**

In responding to the ongoing industrialization process, rural communities are developing synergistic cooperation patterns. The cooperation that is built is not only symmetrical, namely between local residents, but also with migrant residents and also with companies. Cooperation between residents is driven by a strong desire to advance the rural economy by taking advantage of the ongoing industrialization process. Meanwhile, forms of cooperation with migrant residents are carried out, for example, in the form of providing housing or rental services for workers from outside the area, building buying and selling facilities or semi-permanent markets; and cooperation to build village order and security. Meanwhile, cooperation with companies is carried out in the context of complementing each other's interests.

2. Participation of all elements of society

The presence of several large companies in rural areas received a very positive response from the community. One important aspect of the success of the industrialization process is active community participation. This active participation is part of the community empowerment process in their respective capacities to improve village economic progress. Participation taken by the community can take the form of labor; housing service providers; food and beverage service providers; transportation service providers; land service providers, and so on.

3. Utilization of technology according to community needs

The industrialization process cannot be separated from the use of technology, both technology related to industrial practices and information technology. Awareness of the importance of utilizing and using technology appears to be emerging from rural communities as a mechanism for adapting to accelerated social change.

4. The principle of mutual care

The principle of caring for each other is carried out in relation to efforts to maintain a conducive environmental atmosphere. The principle of mutual care is also carried out in the context of managing the ownership of resources or assets owned by each.

5. Modification of institutional structure

Modification of the institutional structure is carried out by adjusting the structure both within the scope of the local government bureaucracy (village government) and the structure within social organizations or communities with the aim of building synergy and cooperation with new companies in rural areas.

6. Ability to mobilize collective resources within group members

The ability to mobilize collective resources is demonstrated by responding to various consequences arising from the industrialization process, including providing industrial land, providing workers' housing, providing semi-permanent market facilities; as well as organizing new social communities (Borde et al., 2022).

### **Efforts to Overcome the Impact of Industrial Areas in Rural Areas**

The development of industrial areas causes changes in the social and economic aspects of rural communities. Over a long period of time, village communities were only focused on one type of livelihood, this caused many villages to lag behind. The government's policy regarding the expansion of

industrial development in rural areas certainly provides new employment options for rural communities. The existence of industry can often also stimulate the progress of other sectors, one of which is the availability of facilities and infrastructure (Kim, 2023). The development of industrial areas in rural areas is usually accompanied by the construction of roads and other infrastructure. With the advancement of facilities and infrastructure, it certainly makes it easier for village communities to carry out their daily activities.

Apart from having a positive impact, the existence of industrial areas in rural areas can also have negative impacts if they cannot be managed well. The negative impact that often occurs is environmental pollution. The existence of industry, if not managed properly, often results in water, air and soil pollution which is dangerous for living creatures around the industrial area. Production activities in very large quantities will certainly produce large amounts of waste. Without adequate waste management capacity, the waste will of course absorb into the soil and cause soil pollution which can affect groundwater quality (Bala & Singhal, 2023). Apart from that, activities originating from production machines produce air pollution, large amounts of air pollution will certainly have a very bad impact on the health of rural communities. This makes us aware that it is very important to carry out sustainable planning in industrial areas in rural areas, so that villages can develop through industry without experiencing the negative impacts mentioned previously.

The state, through Law Number 40 of 2007 concerning Limited Liability Companies, article 74, states that each company that carries out business activities in fields related to resources is obliged to carry out Social and Environmental Responsibility. Social and Environmental Responsibility is an obligation for companies in return for the use of natural resources around the company's environment and the impact that companies have on industrial activities carried out in the community (Gontareva, 2023).

To support company activities in industries that are environmentally responsible, the International Operational Standard (ISO) also issues technical instructions for implementing Social and Environmental Responsibility to be carried out by companies (ISO 26000). Through ISO 26000 and regulations provided by the state, industrial companies that carry out corporate activities can reduce the impact of industrial activities that are detrimental to the environment and society so that negative impacts can be eliminated in corporate activities, both social and environmental. Industrial areas are able to

support the development of the surrounding villages through optimal management (Bermann, 2023).

## CONCLUSION

Something new entering society certainly requires time and an adaptation process. In that case, the adaptations carried out certainly have differences, sometimes they can be fast and sometimes they are slow. These differences are influenced by the conditions in society before the new thing came into play. The development of industrial areas causes changes in the social and economic aspects of rural communities. Over a long period of time, village communities were only focused on one type of livelihood, this caused many villages to lag behind. In responding to the industrialization process, society develops trust, strong interactions between members, as well as new norms or rules that indicate a type of bridging social capital. The basic principle of social capital is that only groups of people who have a set of social and cultural values that appreciate the importance of cooperation can progress and develop on their own.

## REFERENCES

- Adamseged, M. E., & Kebede, S. W. (2022). Are Farmers' Climate Change Adaptation Strategies Understated? Evidence from Two Communities in Northern Ethiopian Highlands. *SSRN Electronic Journal*, Query date: 2024-07-07 14:17:59. <https://doi.org/10.2139/ssrn.4131983>
- Ali, A. (2022). Adaptation Diffusion Strategy Over Wireless Fading Channels. *2022 International Conference on Smart Applications, Communications and Networking (SmartNets)*, Query date: 2024-07-07 14:03:31. <https://doi.org/10.1109/smartnets55823.2022.9994028>
- aliakbari, masood safari, poodineh, mohammad reza, & azadpour, mohammad. (2023). Drought and rural communities: Strategies to deal with its consequences (Case study: Border Rural of Zahedan Township). *Journal of Applied Research in Geographical Sciences*, 23(70), 387–404. <https://doi.org/10.61186/jgs.23.70.387>
- Amadou, Z., & Yacob, Y. A. (2023). Crop–livestock Value Chain Diversification as a Climate Change Adaptation Strategy in Niger. *Handbook of Nature-Based Solutions to Mitigation and Adaptation to Climate Change*, Query date: 2024-07-07 14:03:31, 1–20. [https://doi.org/10.1007/978-3-030-98067-2\\_45-1](https://doi.org/10.1007/978-3-030-98067-2_45-1)
- Amiraslani, F., & Dragovich, D. (2023). A Social Dimension of Adaptation and Mitigation of Climate Change: Empowering Local Rural Communities to Confront Extreme Poverty. *Climate*, 11(12), 240–240. <https://doi.org/10.3390/cli11120240>

- Asmael, N., & Dupuy, A. (2022). *Artificial Recharge of Shallow Alluvial Aquifer as an Adaptation Strategy in the Garonne Valley, France*. Query date: 2024-07-07 14:03:31. <https://doi.org/10.5194/iahs2022-401>
- Atance, I., Santaolalla, E., & Camós, S. (2024). CHANGE AGENTS AND EDUCATIONAL STRATEGIES FACING RURAL DEPOPULATION IN SPAIN. *INTED Proceedings*, Query date: 2024-07-07 14:17:59. <https://doi.org/10.21125/inted.2024.1690>
- Auci, S., & Coromaldi, M. (2022). Agricultural and Biotechnology Patents as an Adaptation Strategy to Climate Change: A Regional Analysis of European Farmer's Efficiency. *Climate-Induced Innovation*, Query date: 2024-07-07 14:03:31, 27–46. [https://doi.org/10.1007/978-3-031-01330-0\\_2](https://doi.org/10.1007/978-3-031-01330-0_2)
- Bala, S., & Singhal, P. (2023). Diversity, Equity, and Inclusion Efforts of Businesses in Rural Areas. *Advances in Human Resources Management and Organizational Development*, Query date: 2024-07-07 14:13:39. <https://doi.org/10.4018/978-1-6684-6878-4>
- Bamdad, K. (2022). Cool Roofs: A Climate Change Mitigation And Adaptation Strategy For Residential Buildings. *SSRN Electronic Journal*, Query date: 2024-07-07 14:03:31. <https://doi.org/10.2139/ssrn.4287231>
- Bermann, C. (2023). Perspective Chapter: Energy Poverty in Rural Areas – A Contribution to the Development Strategies Debate. *Rural Areas - Development and Transformations [Working Title]*, Query date: 2024-07-07 14:13:39. <https://doi.org/10.5772/intechopen.112262>
- Boateng, J. K. (2024). Climate change adaptation practices in two rural communities in Ghana. *Sustainable Community Development in Ghana*, Query date: 2024-07-07 14:17:59, 226–244. <https://doi.org/10.4324/9781003366041-16>
- Borde, B., Léna, P., & Lescarmontier, L. (2022). Education as a Strategy for Climate Change Mitigation and Adaptation. *Handbook of Climate Change Mitigation and Adaptation*, Query date: 2024-07-07 14:03:31, 3089–3113. [https://doi.org/10.1007/978-3-030-72579-2\\_149](https://doi.org/10.1007/978-3-030-72579-2_149)
- Cerni, J., Rhee, J., & Hosseinzadeh, H. (2023). Challenges and strategies to improve the provision of end-of-life cancer care in rural and regional communities: Perspectives from Australian rural health professionals. *Australian Journal of Rural Health*, 31(4), 714–725. <https://doi.org/10.1111/ajr.13001>
- Chen, J., Cui, G., & Shen, S. (2023). An Polymorphic Firefly Algorithm with Self-Adaptation Strategy for Process System Heat Integration. Query date: 2024-07-07 14:03:31. <https://doi.org/10.2139/ssrn.4326067>
- Cosa, M. (2023). Business digital transformation: Strategy adaptation, communication and future agenda. *Journal of Strategy and Management*, 17(2), 244–259. <https://doi.org/10.1108/jsma-09-2023-0233>
- Earley, M. A. (2014). A synthesis of the literature on research methods education. *Teaching in Higher Education*, 19(3), 242-253.

- Fadhil, S., Zaher, H., Ragaa, N., & Oun, E. (2023). *A Modified Differential Evolution Algorithm Based on Improving a New Mutation Strategy and Self-Adaptation Crossover*. Query date: 2024-07-07 14:03:31. <https://doi.org/10.2139/ssrn.4359637>
- Faranda, D., Alberti, T., & Coppola, E. (2023). *Attributing Venice Acqua Alta events to a changing climate and evaluating the efficacy of MoSE adaptation strategy*. Query date: 2024-07-07 14:03:31. <https://doi.org/10.5194/ems2023-26>
- Gontareva, I. (2023). *Mechanisms of technological knowledge transfer in the context of smart specialization in rural areas*. *Rural Areas and Development*, Query date: 2024-07-07 14:13:39. <https://doi.org/10.61517/rad/2023/18.0500>
- Javeed, Dr. S. (2023). *Climate Change and Sustainable Rural Livelihoods: Constraints and Adaptation Strategies*. *Dec 2022 - Jan 2023*, 31, 15–27. <https://doi.org/10.55529/jeimp.31.15.27>
- Kim, sungroul. (2023). *Comparison of the Air Change Per Hour Measured in the Urban, Rural, and Industrial Areas of South Korea: K-IOP Study*. Query date: 2024-07-07 14:13:39. <https://doi.org/10.2139/ssrn.4604018>
- Pavez, I. (2022). *Digital Access and Experiences Among Communities of Practice in Rural Schools: Strategies to Counterbalance the Digital Divide*. *SSRN Electronic Journal*, Query date: 2024-07-07 14:17:59. <https://doi.org/10.2139/ssrn.4139304>
- Petrenko, N., & Viriutina, K. (2024). *Development Strategy of the KKSSL: Destructive Factors of Influence, Adaptation to War and Ways of Post-War Reconstruction*. *Strategy Development of Libraries*, Query date: 2024-07-07 14:03:31. <https://doi.org/10.20535/2024.306045>
- Purwanto, P. (2023). *Adaptation and Changes in Rural Economic Activities: A Local Community Perspective on the Role of Rural Infrastructure*. *Rural Development for Sustainable Social-Ecological Systems*, Query date: 2024-07-07 14:17:59, 25–44. [https://doi.org/10.1007/978-3-031-34225-7\\_3](https://doi.org/10.1007/978-3-031-34225-7_3)
- Qiu, M., Babbar-Sebens, M., & Ostfeld, A. (2022). *Design and Operation of Agricultural Water Distribution Systems as Hard and Soft Climate Change Adaptation Strategy*. Query date: 2024-07-07 14:03:31. <https://doi.org/10.26226/m.634060663701db4fe3530507>
- Shahid, Z. (2023). *AWARENESS FOR BETTER ADAPTATION STRATEGY DEVELOPMENT FOR CLIMATE CHANGE IMPACTS IN PAKISTAN*. *Pakistan Journal of Science*, 67(4). <https://doi.org/10.57041/pjs.v67i4.414>
- Snyder, H. (2019–). *Literature review as a research methodology: An overview and guidelines*. *Journal of business research*, 104, 333–339.
- Wang, K., Zheng, L., Qin, M., Zhang, W., Deng, X., Tong, S., Cheng, H., Huang, J., Zhong, J., Zhang, Y., & Qiu, P. (2023). *Aberration correction for multiphoton microscopy using covariance matrix adaptation evolution*

strategy. *Chinese Optics Letters*, 21(5), 51701–51701.  
<https://doi.org/10.3788/col202321.051701>

Zhu, Y., Ai, J., Xue, W., Wu, L., Guo, D., & Hu, M. (2023). *An Active Multi-Target Domain Adaptation Strategy: Progressive Class Prototype Rectification*.  
Query date: 2024-07-07 14:03:31. <https://doi.org/10.2139/ssrn.4673937>