

## SUGARCANE AGRIBUSINESS PARTNERSHIP AND FOOD SECURITY: THE ROLE OF WONOLANGAN SUGAR FACTORY IN POLICY IMPLEMENTATION IN DRINGU VILLAGE, PROBOLINGGO REGENCY

**Deistiara Fitrianti**

Universitas Panca Marga  
*fitriantideistiara968@gmail.com*

**Siti Marwiyah**

Universitas Panca Marga  
*marwiyah@upm.ac.id*

**Mastina Maksain**

Universitas Panca Marga  
*mastinamaksin@upm.ac.id*

### Abstrak

Ketahanan pangan menuntut keterlibatan lintas sektor, termasuk peran industri dalam memperkuat sistem agribisnis berbasis komoditas. Penelitian ini bertujuan untuk menganalisis peran Pabrik Gula Wonolangan dalam mendukung implementasi kebijakan ketahanan pangan melalui kemitraan dengan petani tebu di Desa Dringu, Kabupaten Probolinggo. Pendekatan yang digunakan adalah kualitatif dengan desain deskriptif, melalui teknik pengumpulan data berupa wawancara mendalam, observasi, dan dokumentasi. Informan dipilih secara purposif dari unsur manajemen pabrik, petani tebu, serta pihak terkait lainnya. Analisis data dilakukan secara interaktif melalui tahapan reduksi, penyajian, dan penarikan makna. Hasil penelitian menunjukkan Pabrik Gula Wonolangan berperan sebagai aktor strategis dalam implementasi kebijakan ketahanan pangan di tingkat lokal melalui penyediaan input produksi, pendampingan teknis, serta jaminan pembelian hasil panen. Kemitraan yang terjalin memberikan manfaat ekonomi dan kelembagaan bagi petani, sekaligus menjamin stabilitas pasokan bahan baku bagi industri. Praktik ini mencerminkan pola kolaborasi antara sektor industri dan petani yang berkontribusi terhadap penguatan sistem pangan. Di sisi lain, implementasi kemitraan masih menghadapi berbagai kendala, seperti keterbatasan sumber daya petani, fluktuasi harga, lemahnya koordinasi antar aktor, serta tekanan eksternal berupa perubahan iklim dan keterbatasan infrastruktur. Kondisi ini menunjukkan perlunya penguatan tata kelola kemitraan melalui peningkatan kapasitas petani, transparansi hubungan kerja sama, serta integrasi kelembagaan yang lebih efektif. Penelitian ini memberikan kontribusi dalam memperkaya kajian implementasi kebijakan berbasis kolaborasi serta menawarkan perspektif empiris mengenai peran sektor industri dalam sistem ketahanan pangan di tingkat lokal.

**Kata Kunci:** ketahanan pangan, kemitraan agribisnis, implementasi kebijakan, pabrik gula, collaborative governance

### Abstract

Food security requires cross-sectoral engagement, including the role of industry in

**Article History:** Received 17 April 2026, Revised 3 May 2026,  
Accepted 4 May 2026, Available online 5 May 2026

**Copyright:** © 2026. The authors.

This work is licensed under a Creative Commons Attribution-  
ShareAlike 4.0 International License

strengthening commodity-based agribusiness systems. This study aims to analyze the role of Wonolangan Sugar Factory in supporting the implementation of food security policy through partnerships with sugarcane farmers in Dringu Village, Probolinggo Regency. A qualitative approach with a descriptive design was employed, utilizing in-depth interviews, observation, and documentation as data collection techniques. Informants were selected purposively, including factory management, sugarcane farmers, and other relevant stakeholders. Data were analyzed using an interactive model involving data reduction, data display, and interpretation. The findings reveal that Wonolangan Sugar Factory plays a strategic role as a non-state actor in local food security policy implementation through the provision of production inputs, technical assistance, and guaranteed purchase of harvest outputs. The partnership generates both economic and institutional benefits for farmers while ensuring a stable supply of raw materials for the industry. This practice reflects a collaborative interaction between industry and farmers that contributes to strengthening the local food system. At the same time, several constraints remain evident, including limited farmer resources, price volatility, weak coordination among stakeholders, and external pressures such as climate variability and infrastructure limitations. These challenges indicate the need for strengthening partnership governance through capacity building, transparency in cooperation mechanisms, and more integrated institutional arrangements. This study contributes to the literature on collaborative policy implementation and provides empirical insights into the role of industrial actors in local food security systems.

**Keywords:** food security, agribusiness partnership, policy implementation, sugar industry, collaborative governance

## **A. Introduction**

Understanding the role of institutions in the food security system requires a conceptual approach capable of explaining the relationship among actors, policies, and implementation practices at the local level. Within a sociological framework, Soerjono Soekanto (2012) conceptualizes role as a concrete expression of social position manifested through the performance of particular functions and responsibilities.<sup>1</sup> This conceptualization is relevant for interpreting the position of a sugar factory not merely as an economic entity, but as an actor that performs socio-economic functions within the sugarcane agribusiness ecosystem.

In public policy studies, the meaning of this role is closely connected to the concept of policy as purposive action involving various actors in responding to public problems. Anderson (2014) defines public policy as a series of goal-oriented actions involving actors operating within a particular context.<sup>2</sup> This approach demonstrates that policy implementation does not proceed linearly, but is shaped by the dynamics of interaction among actors, the distribution of resources, and the institutional configuration surrounding it.

The policy implementation framework developed by Grindle (1980) provides a more operational analytical foundation through two main dimensions, namely the

---

<sup>1</sup> Soerjono Soekanto, *Sosiologi Suatu Pengantar* (Jakarta: Rajawali Pers, 2012).

<sup>2</sup> James E. Anderson, *Public Policymaking: An Introduction* (Boston: Cengage Learning, 2014).

*content of policy* and the *context of implementation*.<sup>3</sup> The first dimension concerns the substance of policy, including objectives, benefits, and the distribution of resources. The second dimension encompasses the characteristics of the implementation environment, such as actor power, the interests involved, and the capacity of implementing institutions. This approach enables a more comprehensive analysis of how the partnership between sugar factories and sugarcane farmers is carried out in practice.

In line with developments in public administration literature, policy implementation models have shifted toward a collaborative approach that emphasizes multi-actor involvement in decision-making processes and program execution. The concept of collaborative governance affirms that policy success is strongly determined by the quality of interaction among government, the private sector, and society.<sup>4</sup> In the context of sugarcane agribusiness, the partnership between sugar factories and farmers can be understood as a concrete form of such collaborative practice, in which production interests, farmer welfare, and the stability of food supply are brought together within a shared framework.

From the perspective of food security, partnership relations have direct implications for the dimensions of availability and supply stability. Recent literature shows that integration between upstream and downstream sectors in agricultural value chains contributes to increased production efficiency and reduced market uncertainty.<sup>5</sup> At the same time, agribusiness partnerships have the potential to enhance farmers' capacity through access to technology, financing, and market information.<sup>6</sup> These empirical findings demonstrate that partnerships function not only as economic mechanisms, but also as instruments for structurally strengthening food systems.

A number of previous studies provide an empirical foundation that reinforces the relevance of this study. Saptana (2017) shows that partnership patterns in agribusiness can improve farm efficiency and provide market certainty for farmers, particularly when supported by strong institutional commitment.<sup>7</sup> Arifin (2015) highlights the contribution of the agricultural processing industry in strengthening national food security through integration with the production sector.<sup>8</sup> On the other hand, several studies also underscore the existence of unequal bargaining positions between farmers and

---

<sup>3</sup> Merilee S. Grindle, *Politics and Policy Implementation in the Third World* (Princeton: Princeton University Press, 1980).

<sup>4</sup> Chris Ansell and Alison Gash, "Collaborative Governance in Theory and Practice," *Journal of Public Administration Research and Theory* 18, no. 4 (2008): 543–571.

<sup>5</sup> Kirk Emerson, Tina Nabatchi, and Stephen Balogh, "An Integrative Framework for Collaborative Governance," *Journal of Public Administration Research and Theory* 22, no. 1 (2012): 1–29.

<sup>6</sup> Thomas Reardon et al., "Rapid Transformation of Food Systems in Developing Regions," *Agricultural Economics* 52, no. S4 (2021): 3–23.

<sup>7</sup> Giel Ton et al., "The Effectiveness of Contract Farming for Raising Income of Smallholder Farmers in Low- and Middle-Income Countries," *Campbell Systematic Reviews* 14, no. 1 (2018): 1–124.

<sup>8</sup> Saptana, "Kelembagaan Kemitraan Agribisnis dan Dampaknya terhadap Kesejahteraan Petani," *Analisis Kebijakan Pertanian* 15, no. 2 (2017): 89–104.

companies, which may affect the sustainability of partnerships.<sup>9</sup> These varied findings open space for a more critical analysis of partnership practices at the local level.

In the context of this study, the conceptual framework is built through the integration of three main elements, namely institutional roles, policy implementation, and agribusiness partnerships. These three elements are used to examine the dynamics of the relationship between Wonolangan Sugar Factory and sugarcane farmers in supporting food security policy. This approach enables a deeper exploration of how interactions among actors shape patterns of policy implementation at the local level.

To address this research focus, this study employs a qualitative approach with a descriptive design oriented toward an in-depth understanding of social phenomena. The qualitative approach was selected because it is capable of exploring the meanings, perceptions, and experiences of actors involved in the partnership, which cannot be fully explained through a quantitative approach.<sup>10</sup> The research was conducted at Wonolangan Sugar Factory and in Dringu Village, Probolinggo Regency, both selected purposively due to their direct relevance to the object of study.

Informants were selected using purposive sampling by considering the relevance of their roles and involvement in the partnership. The informants included sugar factory management, sugarcane farmers, and other actors related to program implementation. This strategy enabled the researcher to obtain rich and contextual information, thereby allowing a more complete understanding of the dynamics of the partnership relationship.

Data collection was conducted through in-depth interviews, field observation, and documentation analysis. Interviews were used to explore the perspectives and experiences of actors, observation was employed to understand practices as they occurred directly, while documentation served as a supporting data source. Data analysis used an interactive model comprising data reduction, data display, and continuous meaning construction throughout the research process.<sup>11</sup> Data validity was maintained through source and method triangulation, so that the resulting interpretation possessed a high level of credibility. This methodological approach was designed to produce an analysis that is not merely descriptive, but also capable of explaining the relationship among institutional roles, partnership dynamics, and policy implementation in the context of local food security.<sup>12</sup>

---

<sup>9</sup> Bustanul Arifin, *Ekonomi Politik Pangan dan Pertanian* (Bogor: IPB Press, 2015).

<sup>10</sup> Marc F. Bellemare, "Contract Farming: What's in It for Smallholder Farmers in Developing Countries?" *Choices* 33, no. 2 (2018): 1–7; Christopher B. Barrett et al., "Smallholder Participation in Contract Farming: Comparative Evidence from Five Countries," *World Development* 40, no. 4 (2012): 715–730.

<sup>11</sup> John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks: SAGE Publications, 2018).

<sup>12</sup> Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed. (Thousand Oaks: SAGE Publications, 2014).

## B. Results and Discussion

### 1. The Role of Wonolangan Sugar Factory in the Local Food Security System

The role of Wonolangan Sugar Factory (PG Wonolangan) in the local food security system cannot be understood merely as a processing industry entity, but rather as a key actor within the agribusiness structure that connects the primary production sector with the food distribution system. Within this framework, the institutional function of PG Wonolangan reflects the manifestation of role as conceptualized by Soerjono Soekanto (2012), in which institutional position is translated into practices that have direct implications for the socio-economic dynamics of agrarian communities.<sup>13</sup> The activities carried out demonstrate active engagement in supporting the stability of sugar commodity supply, which, within the context of national food policy, occupies a strategic position as both a mass consumption commodity and an industrial input.

From the perspective of policy implementation, the involvement of PG Wonolangan exhibits the characteristics of a *policy actor beyond government*, in which the industrial sector functions as an implementing agent at the local level. Anderson (2014) emphasizes the importance of actors in the policy process, particularly in translating normative objectives into operational practices.<sup>14</sup> The interventions carried out by PG Wonolangan through the provision of superior seeds, technical assistance, and guaranteed purchase of harvest outputs illustrate how food security policy is implemented through partnership mechanisms that are practical in nature.

Furthermore, this pattern of intervention demonstrates alignment with the *content of policy* dimension within Grindle's (1980) framework, particularly in the aspect of benefit distribution and resource support to target groups.<sup>15</sup> Farmers are not merely positioned as raw material producers, but as integral components of a production system strengthened through technology transfer and capacity building. This practice is consistent with the findings of Swinnen and Kuijpers (2019), which indicate that integration between the industrial sector and farmers can enhance efficiency and productivity within agricultural value chains.<sup>16</sup>

In field practice, the role of PG Wonolangan also exhibits characteristics of *embeddedness*, where economic activities are integrated with local social structures. The interactions that occur extend beyond contractual relationships, encompassing processes of learning, technological adaptation, and the formation of collective work patterns among farmers. Contemporary agribusiness literature suggests that such

---

<sup>13</sup> Soerjono Soekanto, *Sosiologi Suatu Pengantar* (Jakarta: Rajawali Pers, 2012).

<sup>14</sup> James E. Anderson, *Public Policymaking: An Introduction* (Boston: Cengage Learning, 2014).

<sup>15</sup> Merilee S. Grindle, *Politics and Policy Implementation in the Third World* (Princeton: Princeton University Press, 1980).

<sup>16</sup> Johan Swinnen and Rob Kuijpers, "Value Chain Innovations for Technology Transfer in Developing and Emerging Economies," *Food Policy* 83 (2019): 1–7

approaches contribute to strengthening community-based production systems, particularly in plantation-based commodities.<sup>17</sup>

Another dimension that reinforces the position of PG Wonolangan lies in its ability to create stability in raw material supply through partnership mechanisms. This stability has direct implications for the sustainability of industrial production while maintaining the availability of sugar in the market. In the context of food security, supply stability represents one of the key indicators determining the sustainability of the food system.<sup>18</sup> The activities undertaken by PG Wonolangan indicate a transformation of industrial functions from merely processing agricultural outputs into becoming an actor that contributes to strengthening the food system as a whole.

## **2. Partnership Benefits from Economic and Institutional Perspectives**

The partnership between PG Wonolangan and sugarcane farmers reflects a configuration of economic relations that generates reciprocal benefits, both at the level of individual farmers and within the broader agribusiness system. From the farmers' perspective, the existence of guaranteed purchase of harvest outputs provides market certainty, which directly reduces the level of farming risk. In the context of agricultural economics, market certainty constitutes an important factor in encouraging farmers to invest in higher-quality production inputs.<sup>19</sup>

Beyond market assurance, access to production inputs and technical assistance creates conditions that support increased productivity. Knowledge transfer occurring through interaction with the factory enables farmers to adopt more efficient cultivation practices. Ton et al. (2018) demonstrate that contract-based partnerships contribute significantly to increasing farmers' income through improvements in productivity and cost efficiency.<sup>20</sup> The pattern observed in Dringu Village reflects a tendency consistent with these findings, particularly in terms of improved harvest quality.

From the industrial perspective, the benefits of the partnership lie in the more reliable availability of raw materials, both in terms of quantity and quality. Continuity of supply becomes a crucial factor in maintaining production stability, especially in industries that heavily depend on agricultural raw materials. This relationship reflects a functional symbiosis that strengthens the position of both parties within the agribusiness value chain. In the perspective of global value chains, such integration is

---

<sup>17</sup> Thomas Reardon et al., "Rapid Transformation of Food Systems in Developing Regions," *Agricultural Economics* 52, no. S4 (2021): 3–23

<sup>18</sup> Food and Agriculture Organization, *The State of Food Security and Nutrition in the World 2021* (Rome: FAO, 2021)

<sup>19</sup> Marc F. Bellemare, "Contract Farming: What's in It for Smallholder Farmers in Developing Countries?" *Choices* 33, no. 2 (2018): 1–7.

<sup>20</sup> Giel Ton et al., "The Effectiveness of Contract Farming for Raising Income of Smallholder Farmers in Low- and Middle-Income Countries," *Campbell Systematic Reviews* 14, no. 1 (2018): 1–124

considered a strategy capable of enhancing the competitiveness of commodity-based industries.<sup>21</sup>

The partnership also produces broader implications for the institutional dimension of farmers. Intensive interaction between farmers and the factory encourages the formation of collective capacity in farm management. Farmers no longer operate individually, but within a network framework that enables information exchange, production coordination, and the strengthening of social solidarity. Saptana (2017) indicates that the success of partnerships is strongly influenced by the quality of farmer institutions, including their ability to manage information and adapt to market changes.<sup>22</sup>

In the social dimension, the partnership contributes to enhancing farmers' adaptive capacity in responding to economic and environmental dynamics. Access to technology and market information enables farmers to respond to changes more quickly and in a more measured manner. This condition generates a gradual transformation in farming patterns, shifting from subsistence-oriented practices toward more structured market-oriented systems. Agricultural development literature positions such transformation as an important indicator in the modernization of the agricultural sector.<sup>23</sup>

The partnership relations that emerge also reveal the potential for strengthening local social structures. Cooperation networks among farmers develop through interactions facilitated by partnership programs, creating collective spaces for sharing experiences and production strategies. This dynamic demonstrates that the benefits of partnership extend beyond economic aspects, encompassing social and institutional dimensions with long-term implications for the sustainability of agribusiness systems.

### **3. Implementation of Food Security Policy within the Partnership Scheme**

The partnership between Wonolangan Sugar Factory and sugarcane farmers in Dringu Village represents a form of policy implementation that operates through non-bureaucratic mechanisms, in which the industrial sector assumes an active role in translating policy objectives into operational actions. Within this framework, policy implementation does not manifest merely as an administrative process, but rather as a dynamic interaction involving negotiation of interests, distribution of resources, and adaptation to local conditions. This perspective aligns with the approach developed by

---

<sup>21</sup> Thomas Reardon et al., "Rapid Transformation of Food Systems in Developing Regions," *Agricultural Economics* 52, no. S4 (2021): 3–23

<sup>22</sup> Saptana, "Kelembagaan Kemitraan Agribisnis dan Dampaknya terhadap Kesejahteraan Petani," *Analisis Kebijakan Pertanian* 15, no. 2 (2017): 89–104

<sup>23</sup> Christopher B. Barrett, Michael R. Carter, and C. Peter Timmer, "A Century-Long Perspective on Agricultural Development," *American Journal of Agricultural Economics* 102, no. 2 (2020): 299–314

Grindle (1980), which positions the context of implementation as a determining factor in policy success.<sup>24</sup>

The partnership practices carried out by PG Wonolangan indicate the internalization of food security policy objectives into production activities and farmer development. The provision of superior seeds and technical assistance functions not only as production support, but also as a concrete effort to enhance farmers' capacity in producing more productive and higher-quality commodities. This intervention illustrates how the *content of policy* dimension, particularly in relation to benefit distribution, is translated into direct support for target groups.

At the same time, the success of implementation is strongly influenced by the *context of implementation*, particularly in terms of power relations and actor capacity. PG Wonolangan acts as a dominant actor with access to resources, technology, and market networks, while farmers occupy a more dependent position on such support. This relationship forms an implementation configuration that is not entirely symmetrical, thereby requiring coordination mechanisms capable of maintaining a balance of interests.

The collaborative governance approach provides a relevant analytical framework for understanding this dynamic. Ansell and Gash (2008) emphasize the importance of dialogue, trust, and shared commitment in establishing effective collaboration.<sup>25</sup> In the context of PG Wonolangan, interactions between the factory and farmers demonstrate relatively intensive coordination processes, particularly in technical production aspects. Assistance activities and routine communication create space for information exchange and adjustment of production strategies at the field level.

Furthermore, this partnership reflects a form of decentralization in policy implementation, in which local actors possess the flexibility to adapt policies to specific regional conditions. Contemporary policy implementation literature highlights the importance of flexibility in program execution, especially in sectors heavily influenced by environmental variables such as agriculture.<sup>26</sup> The practice observed in Dringu Village indicates that local adaptation becomes a key factor in maintaining policy relevance to farmers' needs.

The involvement of farmers as primary actors in production strengthens the legitimacy of policy implementation at the grassroots level. Farmers do not merely function as beneficiaries, but as active participants who determine the success of the program. This reflects a shift in the implementation paradigm from a top-down

---

<sup>24</sup> Merilee S. Grindle, *Politics and Policy Implementation in the Third World* (Princeton: Princeton University Press, 1980).

<sup>25</sup> Chris Ansell and Alison Gash, "Collaborative Governance in Theory and Practice," *Journal of Public Administration Research and Theory* 18, no. 4 (2008): 543–571

<sup>26</sup> Søren C. Winter, "Implementation Perspectives: Status and Reconsideration," in *The Oxford Handbook of Governance*, ed. David Levi-Faur (Oxford: Oxford University Press, 2012), 265–278.

approach toward a more participatory and collaborative model.<sup>27</sup> This dynamic demonstrates that the success of food security policy is highly dependent on the quality of interaction among actors at the local level.

#### **4. Structural and Operational Constraints in the Partnership**

Although the partnership between PG Wonolangan and sugarcane farmers demonstrates significant achievements, field practices reveal the presence of various structural and operational constraints. One prominent issue relates to the limited resources of farmers, particularly in terms of access to capital and technology. This condition affects farmers' ability to optimize the support provided by the factory, resulting in productivity levels that have not yet reached their maximum potential.

Fluctuations in sugar prices in the market also constitute a factor influencing economic stability within the partnership. Price volatility generates uncertainty for farmers, particularly in production planning and farm management. In agricultural economics literature, price volatility represents one of the primary risks faced by plantation commodity farmers.<sup>28</sup> This condition indicates that the partnership has not fully eliminated market risks, despite providing guarantees for the purchase of harvest outputs.

Coordination among actors also represents a challenge affecting the effectiveness of the partnership. Interactions between the factory, farmers, and other involved parties have not been fully integrated into a cohesive coordination system. This fragmentation of communication has the potential to create information gaps, leading to misalignment between farmers' needs and policies implemented at the operational level. Within the policy implementation framework, this condition reflects weak institutional capacity in managing inter-actor relationships.<sup>29</sup>

In addition to internal factors, external pressures also exert significant influence on the sustainability of the partnership. Climate change and weather uncertainty represent variables that are difficult to control, particularly in land-based agricultural systems. Declining productivity due to extreme weather conditions illustrates the vulnerability of production systems to environmental factors. Recent literature emphasizes that the agricultural sector is among the most vulnerable to climate change, thereby requiring more integrated adaptation strategies.<sup>30</sup>

Limitations in supporting infrastructure further complicate partnership dynamics. Inadequate road access and suboptimal distribution facilities affect the efficiency of

---

<sup>27</sup> Kirk Emerson, Tina Nabatchi, and Stephen Balogh, "An Integrative Framework for Collaborative Governance," *Journal of Public Administration Research and Theory* 22, no. 1 (2012): 1–29

<sup>28</sup> Johan Swinnen and Rob Kuijpers, "Value Chain Innovations for Technology Transfer in Developing and Emerging Economies," *Food Policy* 83 (2019): 1–7

<sup>29</sup> Grindle, *Politics and Policy Implementation in the Third World*.

<sup>30</sup> Food and Agriculture Organization, *The State of Food Security and Nutrition in the World 2021* (Rome: FAO, 2021)

transporting sugarcane from fields to the factory. This condition not only increases logistical costs but also has the potential to reduce raw material quality due to delays in processing. From a value chain perspective, logistical inefficiency constitutes one of the key factors hindering the competitiveness of agribusiness products.<sup>31</sup>

Limited access to information and technological innovation also emerges as a relevant issue in this context. Farmers who have not been fully exposed to modern agricultural technologies tend to rely on conventional cultivation methods that are less efficient. This condition reflects a gap in the diffusion of innovation, which should ideally be an integral component of the partnership system. Otsuka et al. (2016) demonstrate that the success of technology transfer is highly dependent on the intensity of interaction between companies and farmers, as well as adequate institutional support.<sup>32</sup>

Within the institutional dimension, differences in interests among actors create potential conflicts that may affect the sustainability of the partnership. Farmers tend to focus on short-term income increases, while the factory prioritizes long-term supply stability. This divergence in orientation requires negotiation mechanisms capable of maintaining a balance of interests without disadvantaging either party. Agribusiness partnership literature indicates that unequal bargaining positions often become the primary source of tension in relationships between farmers and companies.<sup>33</sup>

## **5. Improvement Efforts in Strengthening Sugarcane Agribusiness Partnerships**

Improvement efforts in the partnership between Wonolangan Sugar Factory and sugarcane farmers need to be understood as a process of governance strengthening oriented toward enhancing effectiveness, fairness in relational dynamics, and the sustainability of production systems. Within this context, improvements should not be limited to technical aspects alone, but must also encompass institutional dimensions, coordination among actors, and the strengthening of human resource capacity. Strengthening coordination among stakeholders represents a strategic step with direct implications for partnership effectiveness. More structured interaction between the sugar factory, farmers, and supporting actors enables alignment in production planning, input distribution, and harvest management. Collaborative governance literature emphasizes the importance of communication forums as deliberative spaces capable of facilitating information exchange, conflict resolution, and consensus building.<sup>34</sup> In the

---

<sup>31</sup> Thomas Reardon et al., "Rapid Transformation of Food Systems in Developing Regions," *Agricultural Economics* 52, no. S4 (2021): 3–23.

<sup>32</sup> Keijiro Otsuka, Yuko Nakano, and Kazushi Takahashi, "Contract Farming in Developed and Developing Countries," *Annual Review of Resource Economics* 8 (2016): 353–376

<sup>33</sup> Christopher B. Barrett, Marc E. Bachke, Marc F. Bellemare, Hope C. Michelson, Sudha Narayanan, and Thomas F. Walker, "Smallholder Participation in Contract Farming: Comparative Evidence from Five Countries," *World Development* 40, no. 4 (2012): 715–730

<sup>34</sup> Kirk Emerson, Tina Nabatchi, and Stephen Balogh, "An Integrative Framework for Collaborative Governance," *Journal of Public Administration Research and Theory* 22, no. 1 (2012): 1–29

local context, the establishment of formal coordination mechanisms has the potential to enhance the quality of cooperative relationships and minimize communication fragmentation that has previously posed challenges.

Beyond coordination, improving farmers' human resource capacity constitutes a determining factor in the success of partnership transformation. Technical training, continuous assistance, and access to agricultural technological innovation play a crucial role in increasing productivity and farming efficiency. Otsuka et al. (2016) demonstrate that productivity improvements within partnership systems are highly dependent on the effectiveness of technology transfer and farmers' ability to adopt innovations.<sup>35</sup> In practice in Dringu Village, capacity strengthening can be directed toward the use of superior varieties, more precise land management, and the utilization of information-based technologies.

Another dimension requiring serious attention relates to transparency in cooperation mechanisms, particularly in price determination and benefit distribution. Transparency plays a critical role in building trust between farmers and the factory, which ultimately determines the sustainability of the partnership. Ansell and Gash (2008) position trust as a fundamental prerequisite for effective collaboration, especially in relationships involving actors with unequal positions.<sup>36</sup> Consistent transparency practices can reduce potential conflicts and strengthen the institutional legitimacy of the partnership.

Access to financing also constitutes an important element in improvement efforts. Limited capital often becomes an obstacle for farmers in optimizing production, particularly in the use of high-quality inputs. Integrating partnerships with financial institutions can create opportunities for farmers to obtain more accessible financing. Agribusiness literature indicates that partnership-based financing support has a significant impact on increasing productivity and stabilizing farming operations.<sup>37</sup>

At the system level, innovation in supply chain management represents a strategic approach to improving production efficiency. Digitalization of information, data-based production monitoring, and logistical optimization are among the approaches that can be implemented to enhance agribusiness system performance. Reardon et al. (2021) emphasize that the modernization of agricultural value chains constitutes a key factor in improving commodity competitiveness amid global market dynamics.<sup>38</sup>

---

<sup>35</sup> Keijiro Otsuka, Yuko Nakano, and Kazushi Takahashi, "Contract Farming in Developed and Developing Countries," *Annual Review of Resource Economics* 8 (2016): 353–376.

<sup>36</sup> Chris Ansell and Alison Gash, "Collaborative Governance in Theory and Practice," *Journal of Public Administration Research and Theory* 18, no. 4 (2008): 543–571

<sup>37</sup> Giel Ton et al., "The Effectiveness of Contract Farming for Raising Income of Smallholder Farmers in Low- and Middle-Income Countries," *Campbell Systematic Reviews* 14, no. 1 (2018): 1–124,

<sup>38</sup> Thomas Reardon et al., "Rapid Transformation of Food Systems in Developing Regions," *Agricultural Economics* 52, no. S4 (2021): 3–23

Strengthening partnership institutions can also be directed toward establishing more formal and professional organizational structures. Strong institutions enable clearer role distribution, transparent decision-making mechanisms, and more effective monitoring systems. From the perspective of institutional development, adaptive institutions possess greater capacity to respond to changes in economic and social environments.<sup>39</sup>

### C. Discussion

The analysis of the partnership between PG Wonolangan and sugarcane farmers reveals a strong interconnection between policy implementation theory and agribusiness practices at the local level. Within Grindle's (1980) framework, partnership dynamics reflect the interaction between policy substance and the complex context of implementation.<sup>40</sup> The distribution of resources through the provision of seeds and technical assistance represents the *content of policy* dimension, while the relationship between the factory and farmers reflects the *context of implementation* shaped by power structures and actor capacities.

From the perspective of collaborative governance, this partnership exhibits characteristics of an evolving collaboration, in which interactions among actors have been established but have not yet fully achieved optimal integration. Emerson et al. (2012) emphasize that effective collaboration requires shared motivation, collective capacity, and supportive institutional structures.<sup>41</sup> In the context of PG Wonolangan, these elements are increasingly visible, particularly in the form of technical coordination and sustained cooperative relationships.

On the other hand, the analysis also highlights the presence of unequal bargaining power between farmers and the factory, which constitutes a classic issue in agribusiness partnerships. Barrett et al. (2019) identify that such inequality often arises from disparities in access to information, capital, and market networks.<sup>42</sup> This condition necessitates institutional mechanisms capable of maintaining balanced relationships to prevent partnerships from evolving into exploitative arrangements.

From a value chain perspective, this partnership can be understood as a form of partial vertical integration aimed at improving production efficiency and supply stability. Reardon et al. (2021) demonstrate that such integration has become a prevailing trend in modern food systems, particularly in commodities highly dependent on local raw

---

<sup>39</sup> Johan Swinnen and Rob Kuijpers, "Value Chain Innovations for Technology Transfer in Developing and Emerging Economies," *Food Policy* 83 (2019): 1–7.

<sup>40</sup> Merilee S. Grindle, *Politics and Policy Implementation in the Third World* (Princeton: Princeton University Press, 1980).

<sup>41</sup> Emerson, Nabatchi, and Balogh, "An Integrative Framework for Collaborative Governance."

<sup>42</sup> Christopher B. Barrett, Michael R. Carter, and C. Peter Timmer, "A Century-Long Perspective on Agricultural Development," *American Journal of Agricultural Economics* 102, no. 2 (2020): 299–314.

materials.<sup>43</sup> The practice observed in Dringu Village illustrates how such integration is implemented at the local scale by involving industrial actors and farmers as components of a unified production system.

Moreover, this partnership has implications for the structural transformation of the agricultural sector. The interactions taking place encourage a shift in farming practices from traditional patterns toward more organized and market-oriented systems. Agricultural development literature positions this transformation as a key indicator of modernization within the agribusiness sector, particularly in developing countries.<sup>44</sup>

Another dimension worth examining concerns the role of the state in managing partnerships. In many cases, the success of agribusiness partnerships is closely linked to policy support that creates a conducive environment for collaboration. The state functions as a facilitator that regulates the partnership framework, ensures protection for farmers, and promotes more balanced relationships. This perspective aligns with the concept of network governance, which positions the state as a coordinator within interconnected actor networks.<sup>45</sup>

This analysis demonstrates that the partnership between PG Wonolangan and sugarcane farmers holds relevance not only at the local level but also possesses theoretical significance in understanding the dynamics of collaborative policy implementation within the agribusiness sector. Interactions among actors, resource distribution, and adaptation to local contexts form the key elements shaping the character of food security policy implementation in practice.

#### **D. Conclusion**

The role of Wonolangan Sugar Factory in the sugarcane agribusiness partnership in Dringu Village demonstrates a strategic position as a non-state actor directly contributing to the implementation of food security policy at the local level. This involvement is manifested through the provision of production inputs, technical assistance, and market guarantees that create a more integrated production ecosystem between the industrial sector and farmers. This practice reflects the expansion of industrial functions from merely processing agricultural outputs into becoming part of a collaborative food governance mechanism.

The dynamics of the partnership reveal reciprocal relationships that strengthen production stability while enhancing the economic capacity of farmers. Farmers gain access to resources, technology, and market certainty, while the industrial sector secures a continuous supply of high-quality raw materials. This relationship reinforces

---

<sup>43</sup> Reardon et al., "Rapid Transformation of Food Systems in Developing Regions."

<sup>44</sup> Barrett, Carter, and Timmer, "A Century-Long Perspective on Agricultural Development."

<sup>45</sup> Ansell and Gash, "Collaborative Governance in Theory and Practice."

the structure of the agribusiness value chain and contributes to the dimensions of food availability and stability within the broader framework of food security.

From a policy implementation perspective, this partnership exhibits collaborative characteristics involving intensive interaction between industrial actors and farmers. The implementation process unfolds contextually, shaped by resource distribution, actor capacity, and local environmental conditions. These findings reinforce the relevance of governance-based policy implementation approaches, where policy success is highly dependent on the quality of interaction among actors beyond formal bureaucratic structures.

Nevertheless, partnership practices continue to face several structural and operational challenges. Limited farmer resources, commodity price volatility, coordination constraints among actors, and external pressures such as climate change and infrastructure limitations represent factors influencing implementation effectiveness. These conditions indicate that the partnership has not yet fully addressed the complexity of risks within the sugarcane agribusiness system.

The analysis also indicates that strengthening partnerships requires a more comprehensive approach, particularly in institutional aspects, transparency, and farmer capacity building. The quality of relationships between the factory and farmers constitutes a crucial factor in determining partnership sustainability, especially in the context of unequal access to resources and information. From a theoretical perspective, these findings highlight the importance of integrating policy implementation concepts, collaborative governance, and agribusiness value chain development in understanding the dynamics of local food systems.

## **Reference**

- Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571. <https://doi.org/10.1093/jopart/mum032>
- Arifin, B. (2015). *Ekonomi politik pangan dan pertanian*. IPB Press.
- Barrett, C. B., Bachke, M. E., Bellemare, M. F., Michelson, H. C., Narayanan, S., & Walker, T. F. (2012). Smallholder participation in contract farming: Comparative evidence from five countries. *World Development*, 40(4), 715–730. <https://doi.org/10.1016/j.worlddev.2011.09.006>
- Barrett, C. B., Carter, M. R., & Timmer, C. P. (2020). A century-long perspective on agricultural development. *American Journal of Agricultural Economics*, 102(2), 299–314. <https://doi.org/10.1002/ajae.12078>
- Bellemare, M. F. (2018). Contract farming: What's in it for smallholder farmers in developing countries? *Choices*, 33(2), 1–7. <https://ageconsearch.umn.edu/record/276147>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing*

- among five approaches (4th ed.). SAGE Publications.
- Emerson, K., Nabatchi, T., & Balogh, S. (2012). An integrative framework for collaborative governance. *Journal of Public Administration Research and Theory*, 22(1), 1–29. <https://doi.org/10.1093/jopart/mur011>
- Food and Agriculture Organization. (2021). The state of food security and nutrition in the world 2021. FAO. <https://doi.org/10.4060/cb4474en>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications.
- Otsuka, K., Nakano, Y., & Takahashi, K. (2016). Contract farming in developed and developing countries. *Annual Review of Resource Economics*, 8, 353–376. <https://doi.org/10.1146/annurev-resource-100815-095459>
- Reardon, T., Echeverria, R., Berdegue, J., Minten, B., Liverpool-Tasie, S., Tschirley, D., & Zilberman, D. (2021). Rapid transformation of food systems in developing regions. *Agricultural Economics*, 52(S4), 3–23. <https://doi.org/10.1111/agec.12639>
- Saptana. (2017). Kelembagaan kemitraan agribisnis dan dampaknya terhadap kesejahteraan petani. *Analisis Kebijakan Pertanian*, 15(2), 89–104. <https://doi.org/10.21082/akp.v15n2.2017>
- Swinnen, J., & Kuijpers, R. (2019). Value chain innovations for technology transfer in developing and emerging economies. *Food Policy*, 83, 1–7. <https://doi.org/10.1016/j.foodpol.2018.10.010>
- Ton, G., Desiere, S., Vellema, W., Weituschat, S., & D’Haese, M. (2018). The effectiveness of contract farming for raising income of smallholder farmers in low- and middle-income countries. *Campbell Systematic Reviews*, 14(1), 1–124. <https://doi.org/10.4073/csr.2018.2>
- Winter, S. C. (2012). Implementation perspectives: Status and reconsideration. In D. Levi-Faur (Ed.), *The Oxford handbook of governance* (pp. 265–278). Oxford University Press.