

The Impact of Certification processing time on Compliance among Processed Food Producers in the Greater Kediri Region

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ABSTRACT

This study aimed to examine the association between certification processing time and compliance with Good Manufacturing Practices for Processed Food (CPPOB) among processed food producers in the Greater Kediri Region. A quantitative correlational design was employed. Data were collected from 30 processed food producers within the jurisdiction of the Kediri Food and Drug Monitoring Agency who held CPPOB implementation permits and underwent compliance inspections in 2025. Data were analyzed using Spearman's rank correlation and simple linear regression. The results showed a negative correlation between certification processing time and compliance scores (Spearman's $\rho = -0.411$; $p = 0.024$), indicating a statistically significant association. The regression equation was $Y = 3.594 - 0.274X$, with a regression coefficient significant at the 5% level ($t = -2.131$; $p = 0.042$). These findings suggest that longer certification processing times were associated with lower compliance scores in this sample. However, faster certification processing alone may not be sufficient to ensure compliance with CPPOB requirements. Therefore, certification and licensing policies should be complemented by continuous guidance, technical assistance, and capacity-building programs to support the implementation of food safety standards.

Keywords: Certification time; Good Processed Food Manufacturing Practices; Impact;; Processed food producers compliance

INTRODUCTION

Food is a primary necessity for every human being, and the food industry is a strategic sector for supporting food security, improving public health, and driving national economic growth (Yuarini *et al.*, 2026). To increase the number of business operators, the Indonesian government has promoted ease of doing business through regulatory reforms, particularly those targeting Micro, Small, and Medium Enterprises (MSMEs) (Husna *et al.*, 2025). Statistics on food and beverage service establishments indicate there are approximately 5.28 million such businesses in Indonesia (BPS, 2024); furthermore, data from the Indonesian Food and Drug Authority (BPOM RI) reveals that the number of micro and small enterprises far exceeds that of medium-sized enterprises, large enterprises, and importers registered with the agency. Specifically, there are 1,134 (9.51%) medium-sized enterprises, 990 (8.3%) large enterprises, and 1,139 (9.55%) processed food importers (BPOM, 2025). Given this landscape, the government is striving to improve the business climate by facilitating business operations through the simplification of licensing processes (Asra and Ilham, 2023). To implement this ease of doing business, the government enacted the Job Creation Law, operationalized through Government Regulation No. 5 of 2021, which established the Online Single Submission (OSS) system (Khair *et al.*, 2022). This system simplifies business licensing, accelerates the licensing process, and enhances public service transparency (Martua *et al.*, 2023).

The development of the food industry also faces challenges regarding food safety. According to the Food and Agriculture Organization and the World Health Organization, the implementation of good food production practices is a key factor in ensuring food safety and consumer protection (FSIS USDA, 2024). Business operators who hold business licenses are generally more accessible for government supervision and guidance programs (Annisa *et al.*, 2026). This has the potential to enhance the maturity of business operators in implementing good food production standards (Yulianti *et al.*, 2022). Business operator maturity can be defined as the level of readiness, understanding, and capability of operators to manage production processes systematically and in accordance with applicable standards (Fahlevi and Fauziyyah, 2023). The maturity level of business operators in the context of food production can be assessed through several indicators, including: understanding of food safety regulations, implementation of production standards, documentation of production processes, and commitment to product quality improvement (Marendra *et al.*, 2025). Business operators with a high level of maturity are generally more capable of consistently implementing production standards in accordance with Good Processed Food Production Practices (CPPOB) (Jamhari *et al.*, 2025). To address this, the government has established various food safety regulations, notably through the implementation of Good Processed Food Production Practices (CPPOB) issued by the Indonesian Food and Drug Authority (BPOM, 2021). The objective of implementing CPPOB is to ensure that the food produced is safe for public consumption (Alifansyach, 2024). Key aspects of Good Processed Food Manufacturing Practices (CPPOB) include: quality management; production location and environment; buildings and facilities; production equipment; sanitation and hygiene; production process control; storage and distribution; documentation and record-keeping; product traceability and recall systems; and food labeling and nutritional information (Rosalina *et al.*, 2023). The implementation of CPPOB serves as a crucial indicator within the government's food supervision system, overseen by the National Agency of Drug and Food Control (BPOM) and the BPOM Office in Kediri—which acts as the agency's technical implementation unit for the Greater Kediri area (BPOM Kediri, 2025).

However, previous studies indicate that ease of market entry does not always translate into increased compliance with quality standards, particularly among small-scale enterprises constrained by limited resources and knowledge (Arini, H., 2026). Furthermore, the level of implementation of Good Processed Food Production Practices (CPPOB) among food producers varies (Trisnanto, 2024). This variation is influenced by several factors, notably the level of maturity of business operators in understanding and implementing food safety assurance systems (Pritanova *et al.*, 2020). Consequently, providing guidance and training to enhance the competitiveness of food producers is essential to ensure continuous improvement in management and production performance (Vikasari *et al.*, 2020). Moreover, all business operators and producers—including micro, small, and medium enterprises (MSMEs)—are obligated to uphold this requirement by guaranteeing the quality and safety of the food they produce (Wardanu *et al.*, 2023).

Data on IP-CPPOB certification applications submitted to the Kediri POM Agency in 2025 covered 103 processed food production facilities; of the 78 facilities inspected, 38 were found to comply with Good Processed Food Manufacturing Practices (CPPOB) requirements, while 40 did not. This data indicates that processed food producers within the Kediri POM Agency's jurisdiction have not yet optimally implemented CPPOB aspects in their production processes (BPOM Kediri, 2025). CPPOB implementation by food producers in the Greater Kediri area remains weak due to limited production facilities, low worker knowledge, and a lack of quality control documentation. These conditions lead to risks of cross-contamination and fluctuations in processed food product quality (Sudiyono *et al.*, 2025). Therefore, this

study aims to examine the relationship between the ease of doing business and the maturity level of food producers regarding CPPOB implementation through a statistical correlation analysis—an approach not previously undertaken in this context. This research offers insights into the importance of streamlined business licensing in the food sector, serves as a reference for business operators to improve CPPOB implementation, provides a basis for government policy development regarding food industry guidance, informs considerations for granting the Good Processed Food Manufacturing Practices Implementation Permit (IP-CPPOB) via the OSS RBA system, and offers a realistic overview of the current status of food producers licensed through OSS RBA regarding their compliance with CPPOB requirements (Suniasi, 2025).

In this study, the author classifies the timeframe for obtaining the CPPOB IP certificate in terms of ease of doing business, using the following scoring system: 1) "Very easy" (score of 4) if the period from application submission to receipt of the CPPOB IP certificate is 0 to 30 days; 2) "Easy" (score of 3) if the period is 31 to 90 days; 3) "Difficult" (score of 2) if the period is 91 to 180 days; and 4) "Very difficult" if period is ≥ 180 days (score of 1) if the period is 181 days or longer. Regarding the compliance of processed food producers, the author examines facility inspection data concerning adherence to the CPPOB aspects listed in Form 68. Form 68 is a form developed by the Indonesian Food and Drug Authority (Badan POM RI) to assess food producers' compliance with CPPOB standards (Rohma *et al.*, 2026); the assessment results yield ratings of A (very good), assigned a score of 4; B (good), assigned a score of 3; C (poor), assigned a score of 2; and D (very poor), assigned a score of 1.

METHODS

This study employs a quantitative correlational research design. Quantitative correlational research—commonly referred to simply as correlational research—aims to identify the relationship and degree of correlation between two or more variables (Ibrahim *et al.*, 2018). Correlational research demonstrates how two or more quantitative variables are related to one another (Fraenkel *et al.*, 2012). This study utilizes the Spearman Rank correlation test to examine the relationship between two ordinal-scale variables (Mustofani, 2023) in order to determine whether a relationship exists between Variable X (timing of CPPOB certification) and Variable Y (results of CPPOB aspect inspections). Table 1 presents the criteria used to interpret the strength of the correlation.

Table 1. Guidelines on Degrees of Relationship

Coefficient Interval	Level of Relationship
0.00 – 0.199	Very Weak
0.20 – 0.399	Weak
0.40 – 0.599	Moderate
0.60 – 0.799	Strong
0.80 – 1.000	Very Strong

The primary objective of research is to enhance understanding of significant phenomena by identifying relationships between variables (Ardhaneswari and Suwitra, 2025). Based on the definitions and explanations regarding correlational research design, it can be concluded that quantitative research employing a correlational approach aims to

examine the relationship between two or more variables (Purwanto *et al.*, 2025). In light of this, the researcher selected a quantitative research design with a correlational approach, utilizing a specific dataset: data on processed food manufacturing facilities that hold an IP CPPOB (Good Manufacturing Practices Certification Number) and underwent inspection during 2025, focusing on two research variables. Purposive sampling was employed as the data collection technique. Data analysis involved Spearman Rank correlation, simple linear regression, and the t-test (for significance). This study utilizes two main variables: 1) The Independent Variable (X)—certification processing time—which can be categorized under "ease of doing business" as shown in Table 2 below :

Table 2. Variable X.

Num.	Indicator	Description	Score
1	Very Easy	0 – 30 days	4
2	Easy	31 – 60 days	3
3	Difficult	61 – 180 days	2
4	Very difficult	≥ 181 days	1

2). The Dependent Variable (Y) is the compliance of processed food producers with the implementation of Good Manufacturing Practices for Processed Food (CPPOB). This is determined by inspection results regarding the application of CPPOB aspects—assessed using Form 68—which can be categorized as shown in Table 3 below :

Table 3. Variable Y.

Num.	Indicator	Description	Score
1	A	Excellent	4
2	B	Good	3
3	C	Poor	2
4	D	Very Poor	1

The hypotheses formulated for this study based on the data above are:

H1: Certification processing time has an impact on the compliance of processed food producers.

H0: Certification processing time has no impact on the compliance of processed food producers.

RESULTS

Thirty processed food manufacturing facilities in the Greater Kediri area were selected; these facilities held a Production Permit based on Good Manufacturing Practices for Processed Food and had undergone inspections during 2025. To maintain confidentiality, the names of the processed food manufacturers are represented by letters, and the results obtained are as presented in Table 4 below :

Table 4. Result Study

Num.	Company	Variable X	Variable Y
1	A	3	3
2	B	4	1
3	C	1	3
4	D	4	3
5	E	3	3
6	F	4	3
7	G	4	3
8	H	4	3
9	I	3	3
10	J	4	2
11	K	1	4
12	L	1	3
13	M	1	3
14	N	1	3
15	O	2	1
16	P	4	1
17	Q	4	3
18	R	2	4
19	S	2	4
20	T	4	3
21	U	2	2
22	V	4	2
23	W	4	3
24	X	2	4
25	Y	2	4
26	Z	3	3
27	AA	3	3
28	AB	4	2
29	AC	4	3
30	AD	3	2

Table 5. Correlations Calculation

Correlations				
			VAR00001	VAR00002
Spearman's rho	VAR00001	Correlation Coefficient	1.000	-.411*
		Sig. (2-tailed)	.	.024
		N	30	30
	VAR00002	Correlation Coefficient	-.411*	1.000
		Sig. (2-tailed)	.024	.
		N	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

Table 6. Coefficients Calculation

Coefficients^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	3.594		8.980	<.001
	VAR00001	-.274	-.374	-2.131	.042

a. Dependent Variable: VAR00002

Table 7. Calculation of R-value

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.374 ^a	.140	.109	.79948

a. Predictors: (Constant), VAR00001

The analysis results show a correlation coefficient of -0.411, indicating an impact of certification processing time on business operators' compliance with Good Processed Food Production Practices (CPPOB). Consequently, H1 is accepted and H0 is rejected. The t-test results demonstrate that this relationship is statistically significant, with a calculated t-value of [-2.131] exceeding the t-table value of [2.048] at a 5% significance level. The resulting linear regression equation is $Y = 3.594 - 0.274X$. This indicates that any increase in certification processing time tends to be accompanied by a decline in compliance with CPPOB implementation, albeit on a small scale. These findings suggest that faster certification processes have not been matched by producer readiness to implement CPPOB standards. Therefore, integrating licensing policies with guidance programs is essential to ensure compliance among food producers regarding CPPOB implementation (Prasadi, 2020).

DISCUSSION

The results of this study indicate that accelerating the certification process is a factor that can influence but is not yet a decisive factor in improving compliance with CPPOB standards. These findings can be explained through the perspective of business operator readiness, where the increase in the number of business operators resulting from streamlined licensing is not always accompanied by the readiness to implement complex operational standards such as CPPOB (Panghastuti, Tuti and Sulistiono, 2025).

Previous research indicates that implementing food safety standards requires support in the form of training, supervision, and sustainable quality management systems. Without such support, business operators tend to focus solely on administrative compliance while neglecting technical production aspects (FAO, 2024). Furthermore, the World Health Organization emphasizes that adherence to food safety standards is influenced by the knowledge, attitudes, and technical capacity of business operators. Consequently, ease of doing business that is not accompanied by guidance and support can result in low maturity

levels regarding Good Processed Food Production Practices (CPPOB) (Maisaroh *et al.*, 2025). This aligns with research findings showing that the "ease of doing business" variable contributes only 13.7%, suggesting that other factors play a more dominant role in influencing the maturity of CPPOB implementation among processed food producers; these factors include compliance levels, as well as the knowledge and commitment of producers to maintain product quality in accordance with established standards and to prevent food poisoning outbreaks linked to their products (Roswiana, 2023).

Based on the findings of this study, the author intends to conduct further research using more varied methodologies such as questionnaires, surveys, or self-assessments—and/or employing multilevel correlation analysis to explore the relationship between the ease of doing business and the maturity level of business operators. The author hopes that this study will pave the way for future research closely related to compliance with Good Manufacturing Practices for Processed Food (CPPOB) among food producers, while also serving as a source of inspiration and a literature reference for subsequent researchers.

CONCLUSION

This study concludes that there is an impact—albeit a weak one—of certification processing time on the compliance of processed food producers with Good Processed Food Manufacturing Practices (CPPOB) across 30 selected production facilities. Accelerating the certification process alone is insufficient to improve compliance with food safety standards; it must be supported by producer guidance and capacity building—including outreach, mentoring, training, and the provision of capital and production equipment.

Expediting certification does not automatically enhance compliance with CPPOB standards among processed food producers. Additional efforts are required to align government policies with the actual conditions faced by these producers, thereby increasing their numbers while ensuring optimal CPPOB implementation to improve the health and well-being of the Indonesian people. Recommendations include integrating licensing policies with CPPOB guidance programs; providing continuous mentoring and supervision by the Kediri Food and Drug Monitoring Agency (Balai POM) after producers obtain their CPPOB certification; enhancing training both before and after license applications to monitor compliance with regulations and CPPOB standards; and conducting further research incorporating additional variables. These could include "ease of doing business" factors—such as accessibility, simplified licensing processes, service satisfaction, and knowledge of the licensing procedure—and expanding the "maturity" variable into parameters like the level of understanding regarding CPPOB aspects and responses to supervisory findings, while also employing alternative scientific approaches.

Compliance with regulations among food producers does not emerge overnight; it requires a process, commitment from various stakeholders, resource support, and continuous guidance accompanied by constructive solutions, as well as legal protection and certainty for producers. Such measures are essential to foster a better investment climate and ultimately ensure a healthy and dignified society for Indonesia.

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