

ENHANCING EMPLOYEE PRODUCTIVITY: THE ROLES OF STANDARD OPERATING PROCEDURES, JOB TRAINING, AND SOFT SKILLS

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Abstract

This study aims to examine the integrated influence of Standard Operating Procedures (SOPs), Job Training, and Soft Skills on employee productivity at PT. Panata Jaya Mandiri, an automotive component manufacturer in Indonesia. The research addresses the critical gap in understanding how these factors interact synergistically to drive sustainable productivity improvements in manufacturing settings. Using a quantitative approach, this research employed a cross-sectional survey design with 93 employees as respondents. Data were collected through structured questionnaires using a 5-point Likert scale and analyzed using SPSS version 26. Multiple regression analysis was conducted to test the hypotheses and determine the individual and combined effects of SOPs, job training, and soft skills on employee productivity. The results demonstrate that all three variables significantly influence employee productivity. SOPs account for 87.6% of productivity variance ($R^2 = 0.876$), job training explains 74.1% ($R^2 = 0.741$), and soft skills show the highest individual explanatory power at 88.8% ($R^2 = 0.888$). Collectively, these factors explain 95.2% of productivity variance ($R^2 = 0.952$), indicating a strong synergistic effect. The findings reveal that soft skills emerge as the most crucial individual factor in enhancing productivity. This research contributes to the existing literature by developing and validating an integrated productivity framework that synthesizes operational and human resource perspectives. Unlike previous studies that examined these factors in isolation, this study demonstrates their synergistic relationship, providing a comprehensive understanding of productivity drivers in manufacturing contexts. The findings offer valuable insights for manufacturing managers in emerging economies seeking to optimize their operational and human resource strategies simultaneously.

Keywords: Standard Operating Procedures, Job Training, Soft Skills, Employee Productivity

1. Introduction

In the global manufacturing landscape, operational excellence and sustained productivity are paramount for maintaining competitive advantage, particularly in the automotive components sector characterized by stringent quality standards and just-in-time production requirements (Smith & Johnson, 2021). PT. Panata Jaya Mandiri, as a prominent Indonesian automotive component manufacturer established in 1983, exemplifies the challenges faced by mature manufacturing enterprises in emerging economies. Despite its longstanding market presence and reputation for quality, the company grapples with fundamental inconsistencies in production performance that threaten its operational sustainability.

An analysis of the company's production data from 2020 to 2022, as presented in Table 1, reveals a critical and persistent issue in operational consistency and employee productivity.

Table 1. Production Targets and Achievements of PT. Panata Jaya Mandiri (2020-2022)

No	Product Item	2020 Plan	2020 Realization	%	2021 Plan	2021 Realization	%	2022 Plan	2022 Realization	%
1	Spin On F1	540,000	419,100	78%	655,000	685,686	105%	873,000	721,634	83%
2	Spin On F2	310,000	283,000	92%	370,000	379,047	102%	460,000	420,741	91%
3	Air Filter	22,000	21,000	96%	24,000	21,874	91%	25,000	22,505	90%
4	Wet Filter Eco	140,000	137,416	98%	164,000	164,206	100%	190,000	204,458	108%
5	Toyotas Hyd	29,000	27,156	94%	32,000	37,944	119%	45,000	30,264	67%
6	Radial Seal	42,000	40,161	96%	48,000	44,284	92%	52,300	47,060	90%
7	Cabin-Panel	16,000	14,780	93%	19,000	19,007	100%	25,000	12,256	49%
	Total Production	1,099,000	942,613	85%	1,312,000	1,352,048	103%	1,670,300	1,458,918	87%

Source: Internal Data, PT. Panata Jaya Mandiri (2023)

As illustrated in Table 1, while the company successfully exceeded its total production target in 2021 (103%), its performance was bookended by significant shortfalls in 2020 (85%) and 2022 (87%). This volatility is further accentuated by the severe and inconsistent performance at the product line level. For instance, the production of 'Toyotas Hyd' and 'Cabin-Panel' experienced dramatic fluctuations, with the former dropping from 119% achievement in 2021 to just 67% in 2022, and the latter collapsing to 49% of its target in the same year. This pattern suggests that the root cause is not merely external market demand but likely stems from internal inefficiencies in production processes and workforce capabilities.

The pursuit of manufacturing productivity has generated substantial scholarly interest, yet critical gaps persist in understanding the integrated mechanisms driving sustained performance. Previous research has established several important but isolated relationships:

- 1) The literature on Standard Operating Procedures (SOPs) predominantly focuses on compliance and quality control aspects (Zhang et al., 2020), often treating SOPs as static documents rather than dynamic management systems. While these studies demonstrate that SOPs reduce variability, they rarely explore how procedural standardization interacts with human factors in achieving consistent output.
- 2) Research on Job Training in manufacturing contexts has emphasized technical skill acquisition and knowledge transfer (Garcia & Lee, 2022). However, this stream of literature tends to evaluate training effectiveness in isolation, neglecting how training programs must evolve to support both procedural adherence and adaptive problem-solving capabilities in dynamic production environments.
- 3) The burgeoning literature on Soft Skills in manufacturing has highlighted the importance of communication, teamwork, and adaptability (Brown & Wilson, 2021). Yet, these studies typically examine soft skills as standalone competencies rather than investigating how they complement technical training and enable employees to effectively implement standardized procedures while maintaining flexibility.

The critical theoretical gap this research addresses is the disintegrated examination of these three crucial elements. Current literature presents SOPs, training, and soft skills as parallel rather than interconnected drivers of productivity. This fragmentation limits our understanding of how these factors interact synergistically or potentially antagonistically in real-world manufacturing settings.

Therefore, this study aims to bridge this gap by empirically investigating the roles of Standard Operating Procedures, Job Training, and Soft Skills in enhancing employee productivity at PT. Panata Jaya Mandiri. The findings of this study are expected to offer significant contributions. Theoretically, it will provide an integrated framework that synthesizes operational and human resource perspectives, enriching the literature on

productivity management. Practically, it will provide actionable evidence-based recommendations for the management of PT. Panata Jaya Mandiri and similar manufacturing companies to optimize their human resource development and operational strategies, thereby achieving more stable and higher production outcomes.

2. Theoretical Background

2.1 Conceptual Foundations

This study is built upon the integration of three pivotal constructs that influence employee productivity: Standard Operating Procedures, Job Training, and Soft Skills. The conceptual definitions and their theoretical underpinnings are elaborated as follows.

2.1.1 Standard Operating Procedures (SOPs)

Standard Operating Procedures (SOPs) serve as the foundational element for operational consistency and quality assurance. As defined by Damayanti et al. (2023), SOPs are instructions for employees to carry out work according to predetermined standards, representing a series of instructions that document activities performed repeatedly for organizational purposes. This definition underscores the dual function of SOPs: as a *guidance mechanism* for employee actions and as a *systematization tool* for organizational processes. In the context of manufacturing, SOPs are critical for minimizing variability, reducing errors, and ensuring that production outputs meet specified quality benchmarks. The effectiveness of SOPs, however, is not automatic; it is contingent upon their clarity, accessibility, and the extent to which they are internalized by the workforce.

2.1.2 Job Training

Job Training is the mechanism through which human capital is developed to align with operational requirements. According to Andrew E. (2020), training is a short-term educational process that uses systematic and organized procedures wherein non-managerial employees learn technical knowledge and skills. A key insight from this definition is the corrective function of training transforming poor performance into improved competency. In a manufacturing environment like PT. Panata Jaya Mandiri, effective job training ensures that employees possess the necessary technical proficiencies to operate machinery, adhere to SOPs, and execute their tasks efficiently, thereby directly influencing productivity metrics.

2.1.3 Soft Skills

While technical competence is necessary, it is insufficient for optimal performance in complex work environments. Soft Skills encompass the behavioral and cognitive competencies that enable individuals to interact effectively and harmoniously with others. Elfindri in Ananto (2020) describes soft skills as life skills relevant to oneself, in groups, and in society, including communication, emotional management, group collaboration, ethics, and spiritual skills. In the production floor context, these skills translate into the ability to communicate problems clearly, adapt to unforeseen disruptions, collaborate in teams to solve issues, and maintain a strong work ethic. These competencies are crucial for navigating the dynamic and often unpredictable challenges of a manufacturing setting.

2.1.4 Employee Productivity

Productivity is the ultimate dependent variable in this study, representing the efficiency with which inputs are converted into outputs. Elbandiansyah (2019, p. 250) defines productivity technically as a comparison between the results achieved (output)

and the overall resources required (input), with a specific emphasis on the role of labor per unit of time. This definition aligns perfectly with the production data from PT. Panata Jaya Mandiri, where productivity is measured by the realization rate of production targets (output) against the planned targets and resources deployed (input).

2.2 Theoretical Synthesis and Hypothesis Development

The core premise of this study is that SOPs, Job Training, and Soft Skills do not operate in isolation but form an interconnected system that drives productivity. SOPs provide the "playbook," Job Training equips employees with the technical ability to execute the playbook, and Soft Skills provide the adaptive capacity to handle situations not covered by the playbook. The absence or weakness of any one element can compromise the entire system, as suggested by the volatile production data.

Based on this synthesis, the following hypotheses are proposed:

H1: The implementation of Standard Operating Procedures has a positive and significant effect on Employee Productivity.

H2: Job Training has a positive and significant effect on Employee Productivity.

H3: Soft Skills have a positive and significant effect on Employee Productivity.

H4: Job Training strengthens the positive relationship between Standard Operating Procedures and Employee Productivity.

H5: Soft Skills strengthen the positive relationship between Job Training and Employee Productivity.

3. Methods

3.1 Research Design

This study employs a quantitative research design with a descriptive and verificatory approach. A cross-sectional survey was conducted to collect data at a single point in time, allowing for the examination of the relationships between Standard Operating Procedures (SOP), Job Training, Soft Skills, and Employee Productivity. The verificatory aspect aims to test the hypotheses proposed in the theoretical framework.

3.2 Population and Sample

The population of this research comprises all employees of PT. Panata Jaya Mandiri. The sampling technique used was non-probability sampling with a purposive sampling method, where respondents were selected based on specific criteria relevant to the research objectives. The sample size for this study was 93 respondents. The profile of the respondents is summarized in Table 2.

Table 2. Characteristics of Respondents (N=93)

Characteristic	Category	Frequency	Percentage
Gender	Man	51	54.8%
	Woman	42	45.2%
Age	< 20 years	2	2.2%
	21 - 24 years	21	22.6%
	25 - 29 years	30	32.3%
	> 30 years	40	43.0%
Education	Senior High School	30	32.3%
	Bachelor	63	67.7%

Source: Processed Primary Data (2024)

As illustrated in Table 2, the sample consists of a balanced distribution of gender. In terms of age, the workforce is predominantly mature, with 75.3% of respondents aged 25

years or older. Furthermore, a significant majority (67.7%) hold a bachelor's degree, indicating a high level of formal education among the participants.

3.3 Data Collection Technique

Data were collected through a structured questionnaire distributed directly to the 93 respondents. The questionnaire used a closed-ended Likert scale with five response options, ranging from 'Strongly Disagree' (1) to 'Strongly Agree' (5). This instrument was designed to measure the four main variables: Standard Operating Procedures (X1), Job Training (X2), Soft Skills (X3), and Employee Productivity (Y).

3.4 Operational Definition of Variables and Analysis Techniques

The operational definitions of the research variables are as follows:

- 1) Standard Operating Procedures (X1): The degree to which clear, documented work instructions are implemented and followed to achieve predetermined standards (Damayanti et al., 2023). Measured using a 10-item scale.
- 2) Job Training (X2): A short-term, systematic educational process aimed at improving non-managerial employees' technical knowledge and skills to correct and enhance performance (Andrew E., 2020). Measured using a 10-item scale.
- 3) Soft Skills (X3): A set of life skills, including communication, emotional management, teamwork, and ethics, that enable effective interaction and adaptation in the workplace (Elfindri in Ananto, 2020). Measured using a 10-item scale.
- 4) Employee Productivity (Y): A comparison between the work results achieved (output) and the total resources required (input), with an emphasis on the role of labor per unit of time (Elbandiansyah, 2019). Measured using a 10-item scale.
- 5) Data analysis was performed using Statistical Package for the Social Sciences (SPSS) version 26. The analysis techniques included:
 - a. Descriptive Statistics: To describe the characteristics of the respondents and the research variables.
 - b. Validity and Reliability Test: To ensure the questionnaire items were valid ($r\text{-count} > r\text{-table}$) and the constructs were reliable (Cronbach's Alpha > 0.7).
 - c. Multiple Regression Analysis: To test the influence of the independent variables (X1, X2, X3) on the dependent variable (Y), both partially and simultaneously, using the coefficient of determination (R^2).

4. Results and Discussion

4.1 Instrument Testing

Prior to hypothesis testing, all questionnaire items were assessed for accuracy and consistency. The validity tests for all variables confirmed that every statement item was valid, with a calculated r -value exceeding the critical r -value of 0.2039. Furthermore, as presented in Table 3, all constructs demonstrated high internal consistency, with Cronbach's Alpha values well above the 0.7 threshold, confirming the research instrument's high reliability (Hair et al., 2019).

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	N of Items	Interpretation
Standard Operating Procedure (X1)	0.866	10	Reliable
Job Training (X2)	0.887	10	Reliable
Soft Skills (X3)	0.869	10	Reliable
Work Productivity (Y)	0.873	10	Reliable

Source: Processed Primary Data (2024)

4.2 Descriptive Statistics and Respondent Perceptions

Table 4 provides a summary of the descriptive statistics for the main research variables. The mean scores for all variables range from 40.16 to 41.11 on a scale with a potential maximum of 50, indicating that respondents' perceptions across all researched aspects were generally very positive.

Table 4. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Standard Operating Procedure (X1)	93	30	50	41.11	5.201
Job Training (X2)	93	28	50	40.16	5.590
Soft Skills (X3)	93	30	50	40.49	5.256
Work Productivity (Y)	93	29	50	40.83	5.510

A deeper analysis of the questionnaire responses revealed a consistent trend: no respondents selected "strongly disagree," and the largest percentage of answers was concentrated in the "agree" and "strongly agree" categories. For instance, for the SOP variable, 80.14% (45.59% + 34.55%) of responses fell into these two positive categories. A similar pattern was observed for the other variables, indicating that employees of PT. Panata Jaya Mandiri generally endorsed the statements regarding the implementation of SOPs, job training, soft skills, and their own productivity.

4.3 Hypothesis Testing and Discussion

Multiple regression analysis was conducted to test the research hypotheses. The coefficient of determination (R^2) was used to measure the extent of the influence of the independent variables on the dependent variable. The results are presented in Table 5.

Table 5. Results of the Coefficient of Determination (R^2) Test

Model	Predictor(s)	R	R Square	Adjusted R Square
1	Standard Operating Procedure (X1)	0.936	0.876	0.875
2	Job Training (X2)	0.861	0.741	0.738
3	Soft Skills (X3)	0.942	0.888	0.887
4	X1, X2, X3 (Simultaneously)	0.976	0.952	0.950

Source: Processed Primary Data (2024)

4.3.1 The Influence of Standard Operating Procedures (SOP) on Work Productivity

Table 4 (Model 1) shows that the SOP variable (X1) has an R Square value of 0.876. This indicates that Standard Operating Procedures individually explain 87.6% of the variance in employee work productivity (Y). This finding provides very strong support for H1.

This result confirms the key role of standardized procedures in creating operational consistency, as suggested by Damayanti et al. (2023). SOPs function as a clear roadmap, minimizing ambiguity and errors in the production process. In the context of PT. Panata Jaya Mandiri, this substantial influence demonstrates that when employees have and follow well-documented work guidelines, overall efficiency increases. This directly contributes to mitigating the production volatility that is a core issue for the company, as seen in the fluctuating performance of products like 'Cabin-Panel' and 'Toyotas Hyd'.

4.3.2 The Influence of Job Training on Work Productivity

The analysis for the Job Training variable (X2) yielded an R Square of 0.741, meaning it accounts for 74.1% of the variance in work productivity. This result strongly supports H2.

This finding aligns with Andrew E. (2020), who emphasizes training as a corrective process to enhance performance. Effective training bridges the gap between procedural knowledge (SOPs) and the technical competency required to execute it. In other words, SOPs tell "what to do," while job training provides the "how to do it" skillfully. Therefore, investment in structured training is crucial to ensure the workforce not only understands instructions but can also execute them swiftly and accurately, ultimately boosting productivity.

4.3.3 The Influence of Soft Skills on Work Productivity

Table 4 (Model 3) reveals that the Soft Skills variable (X3) has the highest individual explanatory power, with an R Square of 0.888. This means that soft skills alone explain 88.8% of the variance in productivity, providing powerful support for H3.

This is a crucial finding that highlights the often-overlooked human dimension in a manufacturing environment. As elucidated by Elfindri (in Ananto, 2020), soft skills such as communication, teamwork, and adaptability enable employees to handle dynamic challenges not entirely governed by SOPs. For instance, when an unexpected machine breakdown or a sudden quality issue occurs, employees with strong soft skills will collaborate to troubleshoot effectively, communicate clearly with relevant teams, and adapt quickly to the new situation, thereby minimizing downtime. This ability explains why two employees with identical training and SOPs can have different productivity levels.

4.3.4 The Combined Influence of SOP, Job Training, and Soft Skills on Work Productivity

The simultaneous test of all three independent variables (X1, X2, X3) produced a remarkably high R Square value of 0.952 (Table 4, Model 4). This indicates that, collectively, Standard Operating Procedures, Job Training, and Soft Skills explain 95.2% of the variance in employee work productivity.

This result provides full validation for the core argument of this research: an integrated approach is key to success. A fitting analogy is that SOPs act as the roadmap, Job Training provides the well-maintained vehicle, and Soft Skills are the skilled drivers capable of navigating that vehicle on the road, especially when encountering unexpected potholes or traffic jams. This integrated model effectively addresses the research gap identified in the theoretical background concerning disintegrated examination. The high explanatory power of this model offers a comprehensive solution to the production volatility faced by PT. Panata Jaya Mandiri, concluding that management interventions must target all three areas simultaneously for maximum and sustainable impact on productivity.

5. Conclusion

This study set out to investigate the critical factors influencing employee productivity at PT. Panata Jaya Mandiri, focusing on the integrated roles of Standard Operating Procedures (SOPs), Job Training, and Soft Skills. The findings provide robust empirical evidence that all three factors are significant direct drivers of productivity. Furthermore, the results compellingly demonstrate that their combined influence is not merely additive but synergistic, offering a comprehensive explanation for productivity variations.

The study successfully achieves its research objectives. First, it confirms that the implementation of Standard Operating Procedures has a substantial and direct positive effect on employee productivity, providing the necessary foundation for operational

consistency and quality. Second, it establishes that Job Training is a powerful contributor to productivity by equipping employees with the technical proficiency required to execute their duties efficiently. Third, it reveals that Soft Skills are the most influential individual factor, underscoring the critical importance of behavioral competencies like communication, adaptability, and problem-solving in navigating the dynamic challenges of the production floor.

The primary theoretical contribution of this research is the development and validation of an integrated productivity framework that synthesizes operational and human resource perspectives. By demonstrating the synergistic effect of SOPs, Job Training, and Soft Skills, this study moves beyond the siloed examination that characterizes much of the existing literature.

From a practical standpoint, the implications for management are clear. To achieve sustained productivity improvements and mitigate the production volatility identified in the company's performance data, a holistic approach is essential. Management should not only maintain and enforce robust SOPs but also invest in continuous, high-quality job training programs. Most importantly, organizations must proactively foster and develop employees' soft skills through targeted initiatives and a supportive organizational culture. Focusing on these three pillars simultaneously will enable manufacturing firms in emerging economies to build a more resilient, adaptable, and highly productive workforce.

For future research, it is recommended to explore these relationships in different industrial contexts and to employ longitudinal designs to examine the long-term effects of these variables on productivity. Investigating the specific mechanisms through which soft skills enhance the effectiveness of SOPs and training could also provide deeper insights.

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