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Analysis Of Bottled Drinking Water Productivity At Company XYZ In Bali

Ruth Wenda Sipayung[1], I Wayan Gede Sedana Yoga[2], I Ketut Satriawan[3]

[1]College Student, Department of Agricultural Industrial Technology, Faculty of Agricultural Technology, Udayana University, Bali, Indonesia.
[2,3]Department of Agricultural Industrial Technology, Faculty of Agricultural Technology, Udayana University, Bali, Indonesia.

Correspondence Email : sedanayoga@unud.ac.id

Abstract

XYZ is a company in Bali that is engaged in various product fields, one of which is bottled drinking water. During the operational process, the company faces various challenges such as production fluctuations, machine damage, labor shortages, and defective products, especially in 19-liter gallon bottled water products. These problems have an impact on the company's productivity decline. This study aims to analyze productivity levels using the Production, Organization, Sales, Product, Arbeiter, Capital (POSPAC) method, identify the factors causing the decline in productivity, and develop strategies to improve partial productivity at XYZ. The analysis of the causes of the decline in productivity was conducted using a fishbone diagram, and improvement strategies were proposed to enhance the company's performance. The results of the study show that productivity declined dramatically in certain months. Production productivity in November fell by -1.22%, organizational productivity in July by -8.05 %, sales productivity in December by -17.49%, product productivity in December by -33.95%, labor productivity in September by -32.16%, and capital productivity in December by -57.88%. Factors contributing to the decline in productivity include high absenteeism, employee disputes, machine breakdowns, weak organizational and distribution management, and unstable raw material quality.

Keywords: fishbone diagram, POSPAC method, productivity, partial productivity

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INTRODUCTION

Bottled Dringking Water (BDW) is one of the products that is repeatedly needed, so market demand determines the sales level of a business (Fajariani, 2022). BDW is water that has undergone a treatment process, without the addition of other food substances, is packaged, and is safe for drinking (Regulation of the Minister of Industry of the Republic of Indonesia, Number 96/m-IND/PER/12/2011). According to data from the National Agency of Drug and Food Control (BPOM) in 2020, there were 7,780 BDW products produced by 1,032 companies, with 99.5% of them being domestic products (BPOM RI MD). Productivity is the ratio of output to input (Ishak & Cendani, 2021), where company productivity arises through a series of activities that manage or transform inputs into outputs that have added value.

Regarding productivity measurement, several methods can be used, such as Production, Organization, Sales, Product, Worker, and Capital (POSPAC), Objective Matrix (OMAX), Cobb-Douglas Production Function, and the Marvin E. Mundel approach. In this study, the POSPAC method was chosen to measure partial productivity because of its ability to provide a comprehensive analysis of various aspects of the company (Hanif et al., 2019). POSPAC enables companies to thoroughly understand the factors influencing productivity and is relatively easy to apply because it utilizes existing data (Gatot & Arsy, 2024). In addition, this method helps identify specific problems in each aspect for the development of appropriate improvement strategies (Hanif et al., 2019). Productivity measurement using the POSPAC method includes six main attributes, namely production productivity, organization, sales, product, labor, and capital (Mauluddin & Akbar, 2017). By comparison, the OMAX method measures productivity by integrating productivity criteria into a unified matrix (Maulidah & Utomo, 2023), but it requires the correct determination of criteria and weights (Wibisono, 2019). The Cobb-Douglas method, while useful for analyzing product elasticity to capital and labor inputs, is more abstract and requires certain assumptions that may be less suitable for practical analysis compared to POSPAC (Orlando, 2023). Meanwhile, the Marvin E. Mundel method focuses on more specific criteria related to the production process (Tampubolon et al., 2019), but is less comprehensive than POSPAC due to its narrower focus.

During its operations, company XYZ has never measured its productivity. Some of the obstacles faced in the production process include fluctuations in production volume, frequent machine and equipment breakdowns, labor shortages, and defective products. Therefore, it is important to determine the company's productivity level amid these various problems. This study aims to analyze the productivity level using the POSPAC method,

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identify the factors causing productivity decline with a fishbone diagram approach, and develop applicable improvement strategies for company XYZ. The measured productivity aspects consist of production, organization, sales, product, labor, and capital productivity.

LITERATURE REVIEW

Productivity

Productivity is the ratio between output divided by input (Ishak & Cendani, 2021). Productivity is one of the indicators of a company's success in utilizing its resources to produce the targeted products (Setiowati, 2017). Based on its activities, the productivity cycle is known as Measurement, Evaluation, Planning, Improvement (MEPI), which is a closed loop that is interconnected and cannot be separated from one another.Productivity measurement consists of several components that focus on criteria that must be met, which will ultimately impact the final goal of productivity measurement, namely increasing productivity that involves a combination of enhanced effectiveness and better use of available resources (Yilma Goshu et al., 2017).

Production, Organization, Sales, Product, Arbeiter, and Capital (POSPAC)

The POSPAC method, or Habberstad Productivity Wheel, is a measuring tool used to assess and improve productivity in various industrial sectors (Prabowo & Aditia, 2020). This productivity method was first introduced by Habberstad at the 4th World Productivity Congress in Oslo in 1984. The method that can be used in the overall measurement of partial productivity is the POSPAC method. Partial productivity, or single-factor productivity, is usually measured by calculating the ratio of output to input. Productivity measurement using the POSPAC method is applied for partial productivity measurement, which consists of six measurement attributes: production productivity, organization productivity, sales productivity, product productivity, labor productivity, and capital productivity (Mauluddin & Akbar, 2017).

Fishbone Diagram

A fishbone diagram is a visual tool used to identify, explore, and graphically describe in detail all the causes related to a problem. The basic concept of the fishbone diagram is that the fundamental problem is placed on the right side of the diagram or at the head of the fishbone frame, while the causes of the problem are illustrated on the fins and spines (Scavarda et al., 2004). The fishbone diagram method consists of 5M + 1E, namely: Man

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Power, Machine, Method, Material, Measurement, and Environment, which function to categorize the types of root causes into a category (Julianto & Nugroho, 2021).

METHODS

This research was conducted at XYZ company located in Bali. The data used in this research consists of primary data obtained from interviews with company representatives, as well as secondary data sourced from the company's monthly financial statements, research journals, books, and relevant internet sources related to the research topic. Data processing was carried out using the POSPAC method, while the analysis of results and identification of factors causing productivity decline were conducted using the Fishbone Diagram. The measurement of partial productivity focused on the aspects of production, organization, sales, product, labor, and capital.

1. Poductivity Level Calculation

a. Production Productivity Level Calculation

$$\text{Production Productivity} = \frac{\text{Sales Revenue}}{\text{Cost of Goods Sold}} \dots\dots\dots\dots\dots\dots (1)$$

b. Organization Productivity Level Calculation

$$\text{Organization Productivity} = \frac{Value\ Added}{\text{Administrative and General Expenses}} \dots\dots (2)$$

c. Sales Productivity Level Calculation

$$\text{Sales Productivity} = \frac{\text{Gross Profit}}{\text{Direct Costs}} \dots\dots\dots\dots\dots\dots\dots\dots (3)$$

d. Product Productivity Level Calculation

$$\text{Product Productivity} = \frac{\text{Gross Profit}}{\text{Direct Costs}} \dots\dots\dots\dots\dots\dots\dots\dots (4)$$

e. Labor Productivity Level Calculation

$$\text{Labor Productivity} = \frac{\text{Gross Profit}}{\text{Labor Cost}} \dots\dots\dots\dots\dots\dots\dots (5)$$

f. Capital Productivity Level Calculation

$$\text{Capital Productivity} = \frac{\text{Sales Revenue}}{\text{Capital}} \dots\dots\dots\dots\dots\dots\dots\dots (6)$$

g. Value Added Calculation

$$VA = LC + CC + GP \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (7)$$

Note:

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VA = Value Added
LC = Labor Costs
CC = Capital Costs
GP = Gross Profit

h. Productivity Index (PI) Calculation

$$PI = \frac{\text{Productivity in the measurement period}}{\text{Productivity in the base period}} X\ 100\% \cdots\cdots\cdots\cdots\cdots (8)$$

i. Productivity Index Change (PIC) Calculation

$$PIC = \frac{PI\ n - PIo}{PIo} X\ 100\% \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (9)$$

Note:
PIC = Productivity Index Change
PIn = Productivity Index in the n-th period
PIo = Productivity Index in the base period

2. Evaluation of Partial Productivity Measurement Results

Productivity measurements covering the aspects of production, organization, sales, product, labor, and capital form the basis for evaluating results that have experienced a decline. These are then analyzed using a fishbone diagram to identify the factors causing the company's productivity decline.

3. Productivity Improvement Plan

Based on the results of the productivity measurement and the identification of factors causing the decline in productivity, a productivity improvement plan is formulated as a suggestion for the company. Recommendations for corrective actions are focused on the aspects that have been proven to experience a decline in productivity based on the measurement results.

DISCUSSION

The results and discussion cover the measurement of productivity levels, calculation of productivity indices, as well as analysis of changes in productivity indices in the aspects of production, organization, sales, products, labor, and capital. In addition, it includes the identification of factors causing productivity decline and proposed improvement actions that can be taken.

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1. **Partial Productivity Measurement Using the POSPAC Method**

a. Measurement of Production Productivity

The results of the production productivity measurement for XYZ Company from January to December are shown in Table 1 below:

Tabel 1. Result of Production Productivity Measurement at XYZ Company

Month	Production Productivity	PI (%)	PIC (%)
January	1.64	10 0.00	0.0 0
February	1.65	100.74	0.74
March	1.64	99.70	-0.30
April	1.63	99.26	-0.74
May	1.65	100.25	0.25
June	1.67	101.42	1.42
July	1.64	99.84	-0.16
August	1.64	99.95	-0.05
September	1.63	99.23	-0.77
October	1.65	100.22	0.22
November	1.62	98.78	-1.22
December	1.65	100.75	0.75

Source : Data processing (2025)

Based on Table 1, the results of production productivity calculation show that productivity increased in several months, such as June, which recorded the highest PI of 101.42%, indicating the most optimal production efficiency. Conversely, in November there was a decline in productivity with a PI of 98.78% and a PPI of -1.22%, indicating decreasing efficiency and effectiveness. This decline was caused by disruptions in the production process and a decrease in market demand.

Previous research supports that changes in productivity are greatly influenced by the management of production costs and the volume of output produced. According to Fiqih & Ramdhani (2024) and Indrayana et al., (2025), productivity increases when companies are able to suppress costs without reducing quality or production volume,

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while productivity declines are often associated with operational inefficiencies and market fluctuations.

b. Measurement of Organizational Productivity

The results of the organizational productivity measurement for XYZ Company from January to December are shown in Table 2 below:

Table 2. Results of Organizational Productivity Measurement at XYZ Company

Month	Organizational Productivity	PI(%)	PIC (%)
January	144.72	100.00	0.00
February	200.65	138.64	38.64
March	118.04	81.56	-18.44
April	376.40	260.09	160.09
May	235.45	162.69	62.69
June	160.59	110.97	10.97
July	46.23	31.95	-68.05
August	259.36	179.22	79.22
September	681.30	470.77	370.77
October	256.60	177.31	77.31
November	539.87	373.05	273.05
December	132.94	91.86	-8.14

Source : Data processing (2025)

Based on Table 2, the results of the organizational productivity calculation show that productivity increased in most months, such as in September, which reached the highest productivity level with a PI of 470.77% and PPI of 370.77%. This increase indicates that the company was able to generate greater added value with lower administrative costs, which may be due to effective administrative cost control or increased organizational process efficiency. However, in July, the lowest productivity decline occurred, with PI at 31.95% and PPI at -68.05%. This decline indicates an increase in administrative costs not offset by an increase in value added, which may be caused by rising administrative costs or operational disruptions.

Research conducted by Fradinata et al., (2023) shows that effective management of administrative costs and optimization of organizational processes are key factors in

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increasing organizational productivity, as well as maintaining a balance between costs and outputs produced. In addition, according to Juwita et al., (2025), if operational costs, including administrative and general costs, are not controlled, they can reduce organizational efficiency and worsen overall performance.

c. Measurement of Sales Productivity

The results of the sales productivity measurement for XYZ Company from January to December are shown in Table 3 below:

Table 3. Results of Sales Productivity Measurement at XYZ Company

Month	Sales Productivity	PI (%)	PIC (%)
January	3.33	100.00	0.00
February	2.82	84.70	-15.30
March	4.41	132.23	32.23
April	2.90	86.88	-13.12
May	3.35	100.47	0.47
June	3.63	108.82	8.82
July	3.66	109.78	9.78
August	4.18	125.42	25.42
September	3.28	98.36	-1.64
October	4.64	139.24	39.24
November	4.48	13433	34.33
December	2.75	82.51	-17.49

Source : Data processing (2025)

Based on Table 3, the calculation of sales productivity shows that productivity increased in several months, such as in October where productivity reached 4.64 with a PI of 139.24% and PPI of 39.24%. This increase occurred because gross profit increased significantly or sales costs decreased, thereby improving the ratio of gross profit to sales costs, indicating better efficiency in the management of sales costs. Conversely, the lowest productivity decline occurred in December, with productivity at 2.75, PI at 82.51% and PPI at -17.49% from the base month. This decline was caused by a decrease in gross profit that was not offset by a decrease in sales costs, or even an increase in sales costs, causing productivity to decrease.

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According to research by Prayoga et al., (2019), sales costs partially have a significant effect on the company's net profit. This study emphasizes that an increase in sales costs without being offset by an increase in gross profit can hinder sales efficiency and decrease the company's productivity.

d. Measurement of Product Productivity

The results of product productivity measurement for XYZ Company from January to December are shown in Table 4 below:

Table 4. Results of Product Productivity Measurement at XYZ Company

Month	Product Productivity	PI (%)	PIC(%)
January	0.61	100.00	0.00
February	0.47	77.71	-22.29
March	0.56	91.95	-8.05
April	0.51	83.81	-16.19
May	0.53	86.81	-13.19
June	2.00	328.16	228.16
July	0.59	96.67	-3.33
August	0.55	90.69	-9.31
September	0.44	72.95	-27.05
October	0.59	96.51	-3.49
November	0.71	117.37	17.37
December	0.40	66.05	-33.95

Source : Data processing (2025)

Based on Table 4, the results of product productivity calculation show the highest increase in June, with productivity at 2.00, PI at 328.16%, and PPI at 228.16%. This increase was caused by a greater decrease in direct product costs compared to the decrease in gross profit. In particular, direct costs such as wages became a major factor in cost reduction through the implementation of a cash advance system, where part of the employees' salaries were paid in the previous month. This condition caused salary expenses not to be recorded in June, but rather shifted to the previous period. Thus, the expense did not disappear but experienced a shift in the timing of payment recording. Nevertheless, in most other months, such as February – May, July - October, and December, productivity declined due to direct product cost increases not offset by gross

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profit increases, thus the ratio of gross profit to direct product costs decreased. This decrease in productivity is in line with research by Gulo (2023), which found that increased production costs not offset by increased gross profit can hinder production efficiency and decrease company productivity.

e. Measurement of Labor Productivity

The results of labor productivity measurement for XYZ Company from January to December are shown in Table 5 below:

Table 5. Results of Labor Productivity Measurement at XYZ Company

Month	Labor Productivity	PI (%)	PIC (%)
January	0.75	100.00	0.00
February	0.56	74.90	-25.10
March	0.69	91.52	-8.48
April	0.69	92.15	-7.85
May	0.67	89.94	-10.06
June	11.71	1,561.18	1,461.18
July	0.89	118.30	18.30
August	0.65	86.06	-13.94
September	0.51	67.84	-32.16
October	0.76	101.31	1.31
November	0.92	122.38	22.38
December	0.57	76.32	-23.68

Source : Data processing (2025)

Based on Table 5, labor productivity increased in several months, especially in June, with productivity drastically rising to 11.71 with a PI of 1,561.18% and PPI of 1,461.18% from the base month. This increase was due to a significant decrease in labor costs compared to gross profit, thereby greatly increasing the efficiency of labor cost usage. In particular, labor costs such as wages became a key factor in cost reduction by implementing a cash advance system, where part of the employees' salaries were paid in the previous month. This resulted in salary expenses not being recorded in June, but shifted to the previous period. Thus, the expense did not disappear but was shifted in terms of payment recording timing. However, in most other months, such as February - May, August - September, and December, productivity declined with PI below 100% and

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negative PPI. This decline occurred because of an increase in labor costs not offset by an increase in gross profit, thus decreasing the ratio of gross profit to labor costs.

According to Pragiwani et al., (2020), wage costs and labor training costs have a significant effect on labor productivity, with a confidence level of 95%. In addition, effective management of labor costs and improved worker skills have a significant impact on increasing labor productivity and company profitability.

f. Measurement of Capital Productivity

The results of capital productivity measurement for XYZ Company from January to December are shown in Table 6 below:

Table 6. Results of Capital Productivity Measurement at XYZ Company

Month	Capital Productivity	PI (%)	PIC (%)
January	0.39	100.00	0.00
February	0.33	84.65	-15.35
March	0.36	92.54	-7.46
April	0.34	87.47	-12.53
May	0.32	82.89	-17.11
June	0.29	74.22	-25.78
July	0.20	51.22	-48.78
August	0.18	47.40	-52.60
September	0.18	44.98	-55.02
October	0.20	52.40	-47.60
November	0.20	52.53	-47.47
December	0.16	42.12	-57.88

Source : Data processing (2025)

Based on Table 6, the results of capital productivity calculation show that productivity declined throughout 2024, with PI below 100% and negative PPI. This decline was caused by a decrease in sales results not balanced by a reduction in capital, thus the ratio of sales results to capital became smaller. The decline occurred because sales results decreased without a corresponding decrease in capital. In fact, from July to December, capital increased by 45.72% compared to January to June, resulting in a smaller ratio of sales results to capital.

According to Syarifuddin & Yani (2014), poorly managed capital productivity will cause an overall decrease in company efficiency. When an increase in capital is not

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accompanied by an increase in revenue, it leads to resource waste and reduces the company's competitiveness.

2. Identification of Factors Causing Productivity Decline

The following are the results of identifying the factors causing productivity decline in the areas of production, organization, sales, products, labor, and capital.

a. Production Productivity

The decline in production productivity is caused by defective products resulting from negligent employees and machines that do not function optimally. In addition, the decline is due to damaged machines and equipment, increased backwash maintenance costs, unstable availability of gallons, as well as inconsistent raw material quality, as shown in Figure 1.

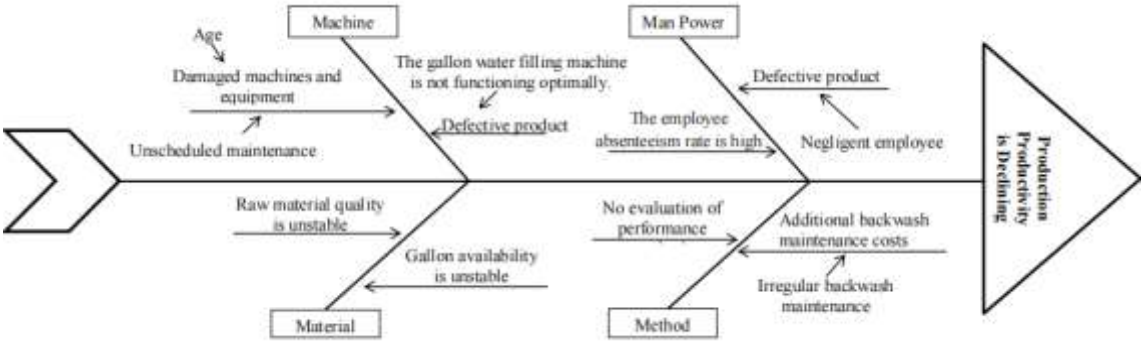


Figure 1. Fishbone diagram of factors causing the decline in production productivity

b. Organizational Productivity

The decline in organizational productivity is caused by a high level of absenteeism, conflicts among employees, lack of performance evaluations, and insufficient productivity monitoring, as shown in Figure 2.

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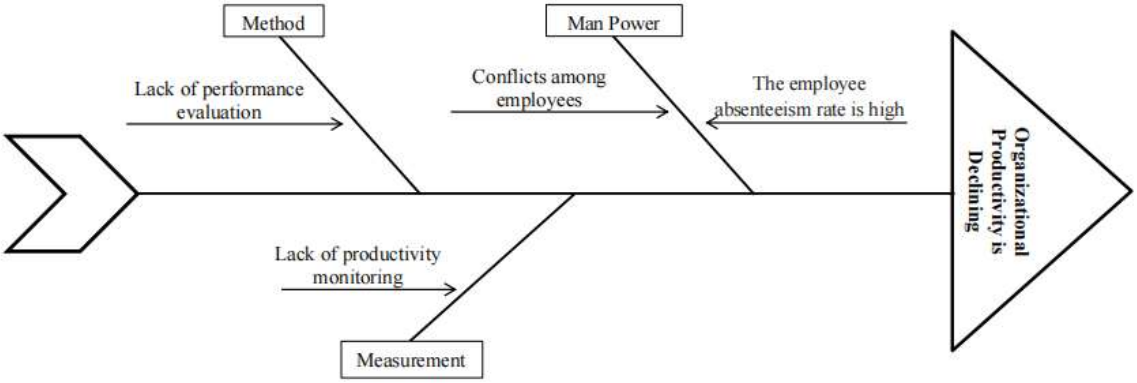


Figure 2. Fishbone diagram of factors causing the decline in organizational productivity

c. Sales Productivity

The decline in sales productivity is caused by inadequate marketing skills, insufficient promotion, the company only waiting for resellers to buy and not selling products directly to the market, unattractive promotional media, product stock not matching demand, changes in market trends, and no increase in the number of resellers, as shown in Figure 3.

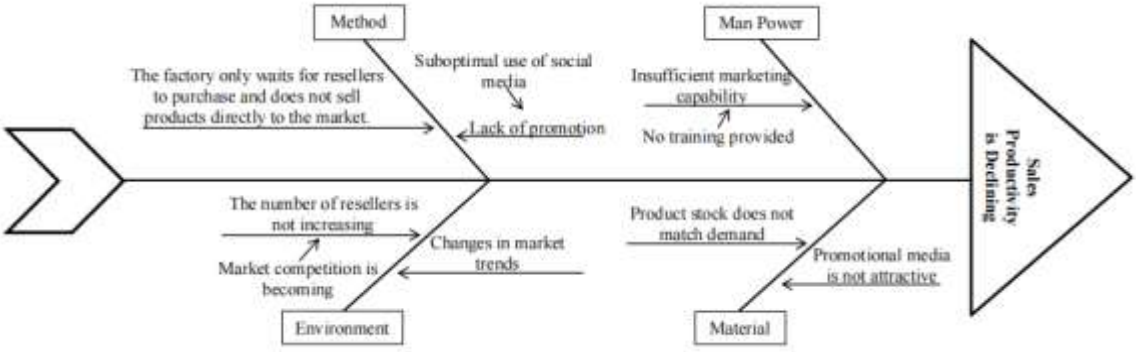


Figure 3. Fishbone diagram of factors causing the decline in sales productivity

d. Product Productivity

The decline in product productivity is caused by defective products due to employee negligence and gallon water filling machines not functioning optimally. In addition,

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productivity declines because of fluctuating production quantities due to unstable gallon availability and market demand, as shown in Figure 4.

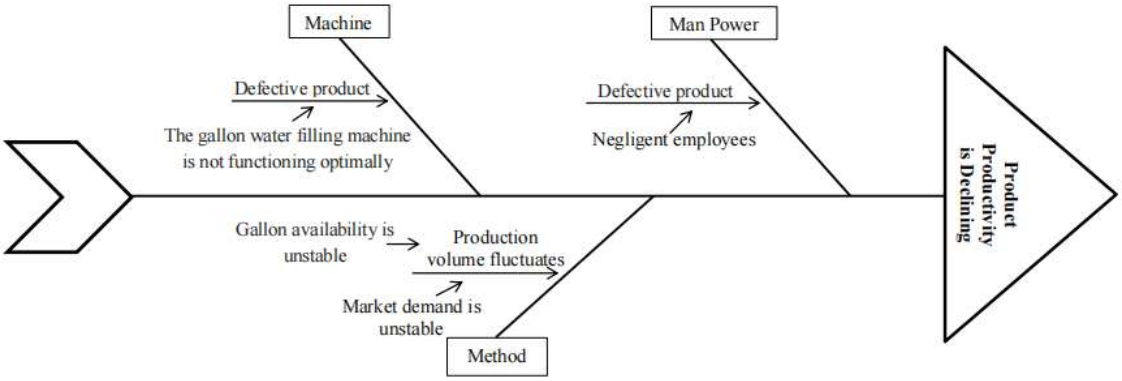


Figure 4. Fishbone diagram of factors causing the decline in product productivity

e. Labor Productivity

The decline in labor productivity is caused by a high rate of employee absenteeism, conflicts among employees, lack of performance evaluations, and insufficient productivity monitoring, as shown in Figure 5.

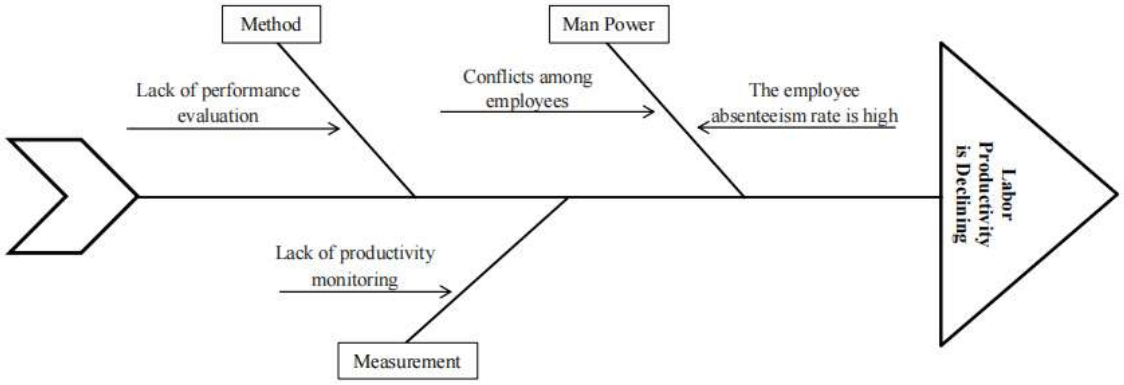


Figure 5. Fishbone diagram of factors causing the decline in labor productivity

f. Capital Productivity

The decline in capital productivity is caused by incompetent fund management, suboptimal expenditures, and lack of cash flow monitoring, as shown in Figure 6.

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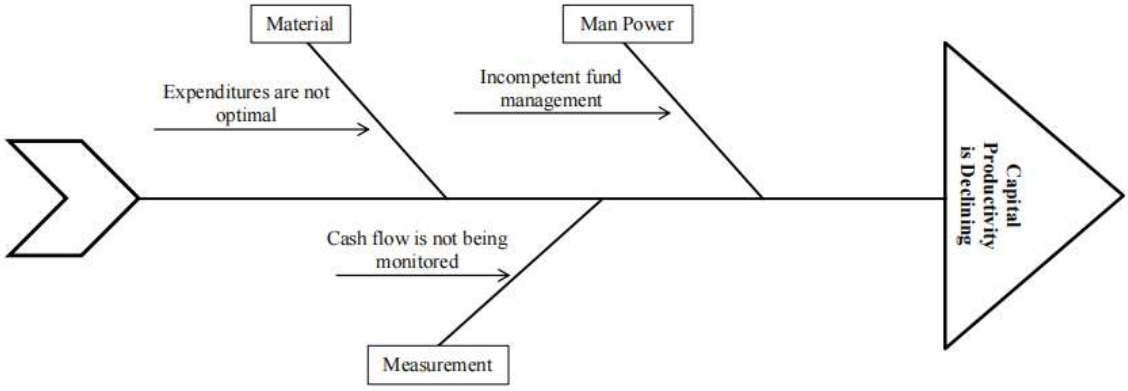


Figure 6. Fishbone diagram of factors causing the decline in capital productivity

3. Improvement Proposals for Increasing Productivity

a. Production Productivity

The following table contains improvement proposals that can be implemented by XYZ Company to enhance production productivity, as shown in Table 7 below:

Table 7. Improvement proposals for increasing production productivity

No.	Problem	Actions for Productivity Improvement
1.	Defective products	Production operators conduct inspections during every production process.
		Provide training and socialization on the importance of work quality and production procedures.
		Repair and maintain the gallon water filling machine.
2.	High employee absenteeism	Implement a clear attendance policy.
3.	Damaged machines and equipment	Carry out daily or periodic maintenance on machines and equipment, before and after use.

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4.	Increased backwash maintenance costs	Emphasize backwash maintenance to be done every three days.
5.	No evaluation of work methods	Conduct regular evaluations of work methods.
6.	Unstable gallon availability	Create a real-time gallon stock monitoring system.
		Conduct regular forecasting of needs.
7.	Inconsistent raw material quality	Perform routine raw material quality inspections.
		Establish clear and written raw material quality standards.

b. Organizational Productivity

The following table contains improvement proposals that can be implemented by XYZ Company to enhance organizational productivity, as shown in Table 8 below:

Table 8. Improvement proposals for increasing organizational productivity

No.	Problem	Actions for Productivity Improvement
1.	High employee absenteeism	Implement a clear attendance policy.
2.	Conflicts among employees	Seek solutions and resolve conflicts fairly.
3.	Lack of performance evaluation	Conduct regular performance evaluations.
		Establish clear and objective assessment criteria.
4.	Lack of productivity monitoring	Set clear objectives and performance indicators.
		Conduct regular interviews on work results and team efficiency.

c. Sales Productivity

The following table contains improvement proposals that can be implemented by XYZ Company to enhance sales productivity, as shown in Table 9 below:

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Table 9. Improvement proposals for increasing sales productivity

No.	Problem	Actions for Productivity Improvement
1.	Inadequate marketing skills	Provide ongoing training to marketing and sales teams on sales techniques, persuasive communication, digital marketing, and product understanding.
2.	Insufficient promotion	Optimize the use of social media.
		Develop engaging and informative promotional content.
3.	Company only waits for resellers and does not sell directly	Form an internal sales team focusing on retail sales.
4.	Unattractive promotional media	Use storytelling in advertisements and content to build emotion and connection with customers.
5.	Product stock does not meet demand	Conduct accurate demand forecasting based on historical data and market trends.
		Build effective communication between sales and production teams to ensure product availability.
		Have strategies for handling demand fluctuations.
6.	Changes in market trends	Conduct regular market research to identify new trends and consumer preferences.
7.	No increase in resellers	Conduct competitor and market opportunity analysis to determine the right marketing strategies and identify potential market segments.
		Take a proactive approach by contacting potential resellers through business contacts, social media, or attending relevant trade shows.

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		Utilize existing networks such as former customers, friends, family, and business relations to invite them to become new resellers.

d. Product Productivity

The following table contains improvement proposals that can be implemented by XYZ Company to enhance product productivity, as shown in Table 10 below:

Table 10. Improvement proposals for increasing product productivity

No.	Problem	Actions for Productivity Improvement
1.	Defective products	Provide training and socialization on the importance of work quality and production procedures.
		Implement a quality inspection system at every stage of production.
		Provide rewards and sanctions to improve employee discipline and motivation.
2.	Gallon water filling machine not functioning optimally	Repair and maintain the gallon water filling machine.
3.	Fluctuating production quantities	Implement a demand forecasting system to adjust production to market needs.
		Create buffer stock of gallons to anticipate supply fluctuations.
		Coordinate between the production team and marketing team for better production planning.

e. Labor Productivity

The following table contains improvement proposals that can be implemented by XYZ Company to enhance labor productivity, as shown in Table 11 below:

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Table 11. Improvement proposals for increasing labor productivity

No.	Problem	Actions for Productivity Improvement
1.	High employee absenteeism	Implement a clear and transparent attendance policy.
2.	Conflicts among employees	Seek solutions and resolve conflicts fairly.
3.	Lack of performance evaluation	Establish a regular and objective performance evaluation system.
		Set clear and objective assessment criteria.
4.	Lack of productivity monitoring	Set clear and measurable performance indicators.
		Provide reports and feedback to employees for continuous improvement.

f. Capital Productivity

The following table contains improvement proposals that can be implemented by XYZ Company to enhance capital productivity, as shown in Table 12 below:

Table 12. Improvement proposals for increasing capital productivity

No.	Problem	Actions for Productivity Improvement
1.	Incompetent fund management	Provide training and competency development for the finance team.
2.	Suboptimal expenditures	Create a detailed and realistic expenditure budget.
		Conduct regular internal audits to identify waste.
3.	Unmonitored cash flow	Prepare detailed cash flow reports.

CONCLUSION

Based on the results of productivity measurement using the POSPAC method, which was applied to six productivity elements production, organization, sales, product, labor, and capital at company XYZ during the period of January to December 2024, the following

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conclusions can be drawn: productivity experienced significant fluctuations throughout 2024. The research findings indicate that productivity in all six elements saw drastic declines in certain months, such as production productivity in November at -1.22%, organizational productivity in July at -68.05%, sales productivity in December at -17.49%, product productivity in December at -33.95%, labor productivity in September at -32.16%, and capital productivity in December at -57.88%.

Factors causing the decline in productivity, as identified through fishbone diagram analysis, include a high rate of employee absenteeism, conflicts between employees, machine breakdowns, weak organizational and distribution management, and unstable raw material quality. Proposed improvements include employee training and motivation, regular maintenance of machines and equipment, increased efficiency in distribution and marketing, as well as better budget management to control costs.

To improve and maintain the stability of the company's productivity, it is recommended that: the company should conduct regular productivity measurements to enhance efficiency and effectiveness across each POSPAC element as a whole. For future research at company XYZ, it is necessary to analyze the proposed improvements, which include product quality inspection and machine repair, strict attendance policies, routine machine maintenance, stock monitoring and demand forecasting, periodic performance evaluation, marketing training and formation of an internal sales team, budget management and auditing, as well as market research and active approaches to increase the number of resellers.

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