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**TEAM BUILDING AND EMPLOYEE PRODUCTIVITY OF MANUFACTURING FIRMS IN  
RIVERS STATE NIGERIA**

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**Abstract**

*This study examines the correlation between team building and employee productivity across industrial enterprises in Rivers State, Nigeria, emphasising the moderating influence of organisational culture. Low production efficiency and poor work quality are signs of low staff productivity, which makes it harder for companies to compete when they face problems with infrastructure and supply chains. The objective is to analyse the influence of team building dimensions (cohesion and communication) on productivity indicators, with organisational culture serving as a moderating factor. A cross-sectional design was utilised, employing questionnaires distributed to 42 managers from 10 organisations, with 33 valid replies analysed using the Pearson Moment Correlation Coefficient in SPSS. The results show that there are significant positive correlations between cohesion and output efficiency ( $r = .641, p < .000$ ), cohesion and work quality ( $r = .776, p = .001$ ), communication and output efficiency ( $r = .423, p < .000$ ), communication and work quality ( $r = .644, p < .000$ ), and a moderated relationship by organisational culture ( $r = .586, p = .001$ ). Team building greatly increases productivity, and this effect is much stronger in cultures that favour it. To enhance productivity, it is recommended to do frequent team-building workshops, set up mentoring programs, use digital communication tools, create feedback loops, and make cultural policies that incorporate everyone. Further study should look into effects that are exclusive to certain sectors and that last over time.*

**Keywords:** Team Building, Employee Productivity, Cohesion, Communication, Organizational Culture, Output Efficiency, Work Quality

**Introduction**

Manufacturing companies are part of the backbone of Rivers State, Nigeria's economic diversification and industrial expansion. This area has a lot of oil and gas, but it is becoming more and more dependent on non-oil industries to reduce volatility and promote long-term prosperity. These companies add a lot to the state's gross domestic product (GDP), provide jobs for thousands of skilled and unskilled workers, and help integrate the value chain by procuring goods locally and making them for export (Bagshaw, 2020; Christian et al., 2023).

Due to global competition and problems at home like poor infrastructure and supply chain problems, these companies' health is directly tied to how productive their employees are. This affects their ability to make the best use of resources, meet market needs, and stay in business for a long time (Bagshaw, 2018). Low productivity not only hurts profits, but it also hurts the broader economic benefits of manufacturing. This shows that focused actions are needed to boost worker output in this situation.

Employee productivity is a key part of a company's success because it shows how

well human capital turns inputs into useful outputs and has a direct effect on profitability, innovation, and market positioning. In manufacturing companies, where work is done by hand and processes are important, higher productivity leads to lower costs, shorter turnaround times, and the flexibility to react to changing needs. This makes the company stronger and increases the value of its stakeholders (Abdelwahed & Al Doghan, 2023). In this field, common ways to measure employee productivity are output efficiency (the ratio of goods produced to resources used) and work quality (which looks at the accuracy, defect rates, and adherence to standards in produced items) (Mutegi et al., 2023). These factors are especially important for industry in Rivers State, where problems with assembly lines and quality control can raise costs and make it harder to compete in regional and worldwide markets.

Team building becomes a strategic necessity for organisations, fostering collaborative cultures that enhance collective competencies and reduce silos that hinder advancement. Workshops, role-playing exercises, and trust-building activities are all examples of team-building interventions that are meant to enhance relationships between people, align goals, and make use of a variety of abilities. This leads to better problem-solving and more flexible reactions in changing situations (Ikon et al., 2018). In manufacturing companies, where production teams need to work together to keep workflows running well, team building is necessary to cut down on mistakes, speed up innovation, and keep morale up while jobs are repeated and shifts change (Agwu, 2015). Cohesion, which promotes emotional unity, mutual trust, and a shared sense of purpose to reduce conflicts and improve retention, and communication, which ensures clear

information exchange, feedback loops, and coordination to make decision-making and execution easier (Ikon et al., 2018).

Even with these findings, there is still a big gap in the research on how team building and employee productivity affect each other in manufacturing companies in Rivers State, Nigeria. Agwu (2015) indirectly addressed the subject by illustrating a substantial positive correlation between teamwork and productivity at the Bonny Nigeria Liquefied Natural Gas (NLNG) plant, a manufacturing-adjacent facility in Rivers State, while restricting the analysis to energy-specific dynamics and neglecting broader manufacturing sectors such as textiles or food processing. Ikon et al. (2018) examined the role of team building in improving performance through harmonisation in South-East Nigerian breweries, demonstrating significant correlations with service delivery. However, their focus on a singular sub-sector and region overlooked the distinctive infrastructural and cultural characteristics of Rivers State. Olasanmi et al. (2021) identified management and organisational characteristics as important predictors of productivity in Southwestern manufacturing enterprises, emphasising a variance explanation of 69.19% while neglecting to explore team building as a mediating mechanism. Obi (2020) associated workplace stress with diminished productivity in South-East manufacturing, thereby suggesting the necessity for team support structures such as cohesion-building, however lacking empirical validation of team treatments. Bagshaw (2018) ultimately demonstrated the significant impact of lean practices on efficiency inside enterprises in Rivers State, with correlations as high as  $r = 0.967$  for quality outcomes. However, the study did not incorporate team-building

dimensions, hence neglecting the exploration of how relational elements enhance technical advances.

This study diverges from previous research by empirically examining the direct impacts of team-building dimensions (cohesion and communication) on employee productivity metrics (output efficiency and work quality) across several manufacturing enterprises in Rivers State, Nigeria. Ultimately, these studies seek to provide managers with practical frameworks for cultivating high-performing teams within Nigeria's dynamic industrial environment.

### **Statement of the Problem**

A major issue in Rivers State, Nigeria, is that manufacturing enterprises have trouble getting their workers to be productive. This makes it tougher for businesses to stay open and makes the economy more susceptible as the region moves away from relying on oil and towards a more diverse industrial boom. This issue is even worse because of issues with infrastructure, supply chain inefficiencies, and a lack of skilled labour, which makes it challenging for enterprises to compete in both local and export markets. This problem is clear to detect since it makes output less efficient, which means lower production rates per labour hour, more downtime because processes aren't coordinated, and greater waste of resources, which boosts costs and delays delivery. Signs of poor work include a higher number of defects that require a lot of rework and quality control, as well as not following industry standards, which makes consumers angry and affects the company's reputation.

Building a team is a good strategy to cope with these issues. Getting people to connect emotionally and creating trust amongst workers can help lower conflicts and

enhance teamwork. This can speed up production and make assembly-line work more efficient. Effective communication as a component of team building promotes transparent feedback mechanisms and information sharing, hence minimising errors in task execution and improving work quality through proactive problem-solving and adherence to quality standards.

Researchers have pinpointed factors that influence employee productivity the main problem variable such as financial incentives, management practices, personal traits, organisational frameworks, production methods, and technical skills, which collectively contribute to substantial discrepancies in workforce output within manufacturing environments. Additionally, stress-inducing elements like as high workloads, unpleasant surroundings, and inadequate compensation have been recognised as adverse predictors that reduce productivity by weakening employee engagement and innovation. Interactions between work and family, along with ambiguous roles, have gained significance, exerting varying effects on performance contingent upon the organization's level of support.

Baharom et al. (2022) contend that team building significantly enhances productivity by fostering harmony and resilience, bolstered by empirical evidence indicating direct improvements in employee output through collective goal pursuit. Conversely, investigations by Mgbemena (2022) and Obi (2020) reveal that external stressors, including excessive workload and insufficient compensation, exert more significant adverse effects. This suggests that team development may be insufficient without addressing overarching structural challenges within Nigerian manufacturing.

This study distinguishes itself from existing literature by empirically examining the impacts of team-building dimensions (cohesion and communication) on productivity indicators within the unique socio-economic context of manufacturing companies in Rivers State. It seeks to fill in the gaps and give particular ideas for how to improve workforce performance by using localised data and looking at industries that aren't well represented outside of Southeastern Nigeria.

**Aim and Objectives of the Study**

The aim is to examine the relationship between team building and employee productivity of manufacturing firms in Rivers State, Nigeria, with emphasis on the moderating effect of organizational culture. Specific objectives are;

- i. To examine the relationship between cohesion and employee productivity.
- ii. To investigate the relationship between communication and employee productivity.
- iii. To determine the moderating effect of organizational culture on the

relationship between team building and employee productivity.

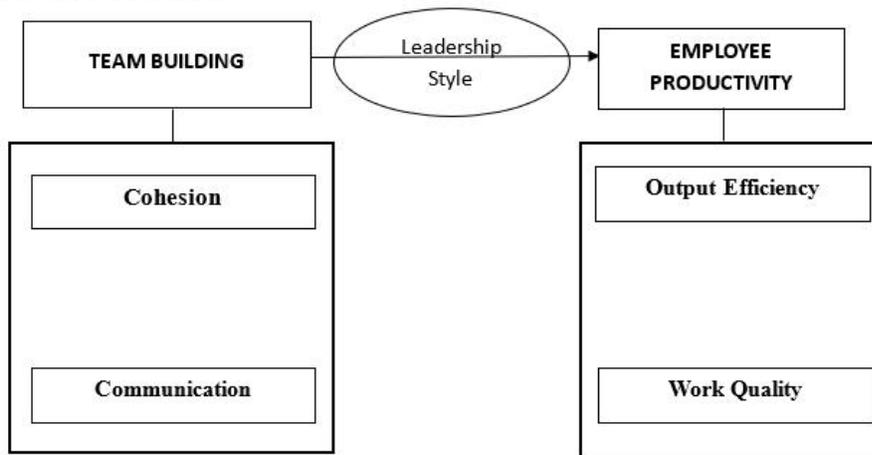
**Research Questions**

- i. How does cohesion influence employee productivity?
- ii. What is the relationship between communication and employee productivity?
- iii. To what extent does organizational culture moderate the relationship between team building and employee productivity?

**Research Hypotheses**

- HO<sub>1</sub>: There is no significant relationship between cohesion and output efficiency.
- HO<sub>2</sub>: There is no significant relationship between cohesion and work quality.
- HO<sub>3</sub>: There is no significant relationship between communication and output efficiency.
- HO<sub>4</sub>: There is no significant relationship between communication and work quality.
- HO<sub>5</sub>: Organizational culture does not significantly moderate the relationship between team building and employee productivity

**Conceptual Framework**



Source: Researchers Conceptualization (2025). The dimensions of team building were adapted from the works of Tannenbaum et al. (1992), while the measures of employee productivity were adapted from the work of Kadiri and Nwakaego (2021).

## **Conceptual Review**

### **Team Building**

Team building is a planned way to help teams perform better by helping them create better goals, get along better, understand their roles, and deal with problems (Shuffler et al., 2018). People can trust each other, talk to each other, and work together better when they go to workshops and do hands-on activities (Shuffler et al., 2018; Kwon, 2024). Team building, whether proactive or reactive, addresses the needs of the team and collaborates with training to sustain enhancements in teamwork (Shuffler et al., 2018; Baharom et al., 2022).

Research highlights its advantages, including enhanced team cohesion in sports teams via psychological interventions, influenced by group size, duration, gender, and age (Kwon, 2024). Collaborative traits including awareness, credibility, and coordination improve both individual and team performance by harnessing different talents and building trust (Meyers et al., 2023). Nonetheless, variable outcomes underscore the necessity for context-specific methodologies to enhance efficacy (Kwon, 2024; Ikon et al., 2018). Team building in manufacturing boosts efficiency by encouraging people to work together and making fewer mistakes (Baharom et al., 2022).

### **Cohesion**

Team cohesion is the degree of unity among group members, characterised by interpersonal interactions, dedication to aims, and a sense of belonging that drives the attainment of collective goals (Beal et al., 2003). It includes many aspects, such as task cohesion (goal orientation) and social cohesion (emotional unity and attraction), as shown in Carron et al.'s (1985) four-factor framework (McLeod & von Treuer, 2013). Cohesion is vital for improving team

performance, stimulating creativity, boosting morale, and cultivating resilience within organisations, especially in dynamic environments such as virtual or project-based teams, where it promotes collaboration and mitigates conflict (Chaudhary et al., 2022; Vazquez, 2019).

The literature identifies elements that affect cohesion, including leadership styles (e.g., transformational), psychological safety, communication, and environmental norms (Abadi, 2023; Jansen et al., 2016). Meta-analyses reveal a favourable, albeit uneven, link between cohesion and performance, particularly pronounced in contexts such as sports or female-led teams, illustrating reciprocal benefits over time (Mathieu et al., 2015). Challenges encompass measurement variability and the necessity for qualitative enhancement to further theoretical research (McLeod & von Treuer, 2013).

### **Communication**

Communication is a vital aspect of how businesses run because it lets people share information, work together, and make decisions that help the whole company do better (Musheke & Phiri, 2021). Effective communication in team building fosters cohesion, reduces conflicts, and boosts employee engagement, leading to enhanced teamwork and productivity (Meneses-La-Riva et al., 2025). A meta-analysis reveals that the quality of communication, rather than its frequency, is significantly correlated with team performance, with variations in types, such as information elaboration, exerting the most pronounced impact (Marlow et al., 2018). Open channels in manufacturing and related sectors break down obstacles like conflicts and diverse management styles, which makes things run more smoothly and leads to new ideas. People need to develop soft skills and how to act morally since things

like too much work might get in the way. Ultimately, effective communication within teams contributes to organisational success by aligning objectives and enhancing employee engagement.

### **Employee Productivity**

The productivity of employees is a big part of a business's success. It shows how well and rapidly humans can turn inputs into outputs. This has a big impact on how successful and competitive manufacturing companies are (Abdelwahed & Al Doghan, 2023). In Rivers State, Nigeria, where manufacturing is hard because of things like a lack of infrastructure, productivity is usually measured by how efficient the production is (units produced per labour hour) and how good the work is (defect rates and standard adherence) (Mutegi et al., 2023). High productivity lowers expenses, improves the company's position in the market, and encourages new ideas. However, stress at work, not enough training, and bad organisational procedures can all hinder it (Obi, 2020). Researchers stress that productivity can be improved by things like good management, skill-building, and incentive tactics. Studies show that organisational factors can explain up to 69.19% of the variance (Olasanmi et al., 2021). However, our understanding of context-specific variables across the various manufacturing sectors in Rivers State remains inadequate. We need to use a variety of methods to get people more active and improve their jobs in order to solve these problems.

### **Output Efficiency**

The quantity of things made divided by the number of resources used is a crucial indicator of how productive people are in manufacturing. This is called output efficiency. People usually say it in units per labour hour

(Mutegi et al., 2023). Manufacturing companies that have high output efficiency save money, use resources better, and become more competitive by speeding up production cycles and better meeting market needs (Bagshaw, 2018). Output is often low since the processes aren't well-coordinated, the people don't have the right skills, and the infrastructure isn't up to par. This leads to increased downtime and more wasted materials (Christian et al., 2023). Studies show that using lean manufacturing methods and coordinating work in teams can greatly improve production efficiency by making processes more efficient and cutting down on delays (Bagshaw, 2020). Bagshaw (2018) discovered a robust correlation ( $r = 0.967$ ) between lean methodologies and the operational efficiency of enterprises in Rivers State. There are still gaps in our understanding of how team-building factors like cohesion and communication affect production efficiency in this situation, therefore more focused research is needed.

### **Work Quality**

One approach to tell how productive employees are is by looking at the quality of their work. It demonstrates how correct, exact, and in line with standards the job of workers is. This is especially crucial for industrial organisations because mistakes can affect their profits and ability to compete (Mutegi et al., 2023). Job quality is a problem for manufacturing organisations since workers have different skill levels, don't get enough training, and don't work well together. This causes a lot of mistakes and costs money to fix them (Bagshaw, 2018). Good work quality makes sure that products meet both regulatory standards and customer needs. This boosts the brand's reputation and market share (Olasanmi et al., 2021). Team building, which helps people

talk to each other, produces feedback loops that help people make fewer mistakes. Cohesion, on the other hand, makes everyone more responsible, which keeps the quality of production processes high (Ikon et al., 2018).

### **Leadership Style**

The way a leader leads has a huge impact on how an organisation functions, especially in manufacturing contexts. It can affect staff motivation, engagement, and productivity. Transformational leadership, which inspires through vision and individualised support, cultivates creativity and commitment, leading to improved performance in Nigerian SMEs (Ametefe et al., 2024). Transactional leadership, which is based on rewards and structure, can make things run more smoothly and follow the rules, but it can also impede creativity when things need to change (Suprayitno, 2024). In emergencies, autocratic approaches make it simpler to make quick choices, which can help high-pressure manufacturing get more done in the near term. But they can also lower morale and trust (Hassnain, 2023). Democratic leadership fosters collaboration and well-being, enhancing productivity over time; but it may lead to delays in critical circumstances (Iyaji et al., 2023). Situational leadership, which changes based on how ready followers are, leads to better results at every level, as evidenced by Nigerian enterprises that are still going strong (Nwogbo et al., 2025).

### **Theoretical Framework**

The study of team building and employee productivity in manufacturing companies in Rivers State, Nigeria, is based on Social Interdependence Theory, which says that how well a group works together relies on how interdependent its members

are (Johnson & Johnson, 2005). Positive interdependence encourages teamwork by getting team members to share goals, resources, and rewards. This makes people more reliable and accountable. In manufacturing, this means that procedures are more organised and there are fewer mistakes because quality control efforts are better organised (Deutsch, 1949). The theory's focus on positive interactions shows how team building, through communication and cohesion, can help with productivity issues like miscoordination or conflicts amongst coworkers that are common in jobs that require a lot of labour.

Hackman's Model of Team Effectiveness fits into this framework by saying that cooperation works best when there is a clear goal, a helpful structure, and a positive environment (Hackman, 2002). Team building improves communication and group cohesion in Rivers State's industrial companies, which helps create a supportive atmosphere. This leads to better coordination of tasks and higher quality of work (Bagshaw, 2020). The model stresses process criteria like effort, strategy, and knowledge-sharing as the links between what a team does and how productive they are, such as more units per labour hour and fewer defects (Ikon et al., 2018).

### **Empirical Review**

To determine if group cohesion correlates with organisational effectiveness, Ikemenjima (2018) examined the telecommunications networks in Port Harcourt, Nigeria. The research aimed to determine how cohesion affects the efficiency of telecom networks. The SPSS program was used to evaluate the results of sixty-three (63) samples that were selected using structured questionnaires. After formulating our hypotheses, we put them to

the test utilising the PMCCC technique. A higher correlation coefficient to targets at.537 is proof that cohesion impacts productivity and goals, according to the research. Furthermore, the results demonstrate a favourable and statistically significant correlation between the variables. According to the study's findings, teams who adhere to a set plan have a better chance of reaching their goals and increasing their productivity.

Wike (2025) looked into how training programs, communication channels, and technology affected productivity at Rivers State's universities. This investigation was based on two research questions and hypotheses. The research team used a descriptive survey approach. From Ignatius Ajuru in Rivers State and the University of Port Harcourt, a total of 345 individuals were polled, including 243 faculty and support staff members. From each school's sample, we randomly selected 5% of the overall population. An abbreviation for a self-developed instrument used to gather data is RTPCCUTEF, which stands for Role of Training Programs, Communication Channels, Use of Technology and Employee Productivity. The validation process by departmental personnel yielded a test-retest reliability value of 0.76. Means and standard deviations were used for the analysis of the data gathered from the study questions. The hypotheses were tested using a z-test that had a significance level of 0.05. Training programs, communication channels, and technology usage at the tertiary institutions considerably increased the productivity of both academic and non-academic workers, according to the study's principal financiers.

Uboegbulam and Green (2024) studied a chain of hotels in the Obio Akpor LGA of Rivers state to see whether there was

a correlation between excellent internal communication and financial performance. The study's research questions and hypothesis were built around the researcher's three (3) objectives, which assisted to reach the study's purpose. A total of 259 hotel employees from the local government were surveyed for the research. Using the Taro Yamene formula, 157 hotel workers were selected as the sample size. An evaluation of the study's premise was carried out using the Pearson product moment correlation coefficient. Positive and statistically significant relationships were found across all examined hypotheses, with some connections being stronger than others.

Organisational culture and productivity are interconnected; Olakunle (2021) sought to identify the factors that influence or moderate this relationship. A statistically valid sample of employees from a variety of sectors filled out a poll questionnaire. We used descriptive statistics to examine the group, and multiple regression to look for a connection between corporate culture and output. Workers that are content in their work environment are more likely to contribute positively to the company's success, according to studies. Leadership style, communication, and employee involvement were identified as possible modifiers of this link. Pay careful attention to these outcomes if managers and company owners are serious about creating more effective and productive workplaces. Companies may do a better job of encouraging employees to put their hearts into their work if they create an inclusive environment that values autonomy, open communication, and cooperation. Potentially more output and overall prosperity could result. The results of this study show that encouraging a good work environment is key

to getting great results. Both the significance of companies placing a premium on workplace culture and the factors that may mediate or moderate the connection between organisational culture and employee productivity are highlighted by the study's findings.

### Methodology

The cross-sectional design was recommended. The target population of this study will consist of all the managers and owners of manufacturing firms in Rivers State (*source: <https://medpages.info>*). For easy accessibility, the researcher will study ten (10) of these manufacturing firms which is at the researcher convenience. The accessible population among the ten (10) manufacturing firm were 42 managers and owners. The census research approach, which uses the entire population as the sample size. Data for the study was mostly gathered through questionnaire administration. The independent variable dimensions are cohesion and communication was operationalized by eight items (4 each) adapted from Tannenbaum et al. (1992). The dependent variable measures are output efficiency and work quality was operationalized by eight items (4 each) adapted from Kadiri and Nwakaego (2021). For the study, a Cronbach alpha coefficient

value of around 0.7 is deemed acceptable. 42 questionnaires were distributed to the various firms but 33 was copies was fit to be used for analyses. Using the statistical software for social sciences (SPSS), the aforementioned hypotheses was tested using the Pearson Moment Correlation Coefficient test.

### Demographic Analysis

Based on the demographic data, it is shown that 33 out of 33 respondents are female, whereas 66.7% are male. In terms of age distribution, 45.5% are between the ages of 31 and 50, 30.3% are between the ages of 18 and 30, and 24.2% are 51 and up. A total of 69.7 percent of the population is married, while 30.3 percent is unmarried. With 36.4% holding an HND/B.Sc., 21.2% having completed elementary school, 15.2% with a Diploma/NCE, 15.1% with a PGD/Masters, and 12.1% with a Ph.D., the educational credentials reveal a wide background. Based on these findings, it appears that the sample is made up mostly of married men in their mid-thirties who have a moderate to high level of education. Team development and employee productivity in industrial enterprises in Rivers State may be studied from a broad viewpoint because to this demographic variety.

### Test of Hypotheses

**Table 1: Relationship between Cohesion and Output Efficiency**

		Correlations	
		Cohesion	Output Efficiency
Cohesion	Pearson Correlation	1	.641**
	Sig. (2-tailed)		.000
	N	33	33
Productivity	Pearson Correlation	.641**	1
	Sig. (2-tailed)	.000	
	N	33	33

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

SPSS Output v23, 2025

A Pearson correlation value of .641 ( $p = .000$ ,  $N = 33$ ), significant at the 0.05 level, indicates a substantial positive association between cohesiveness and production efficiency in manufacturing enterprises, according to the correlation table. Evidence like this suggests a correlation between

stronger team bonds and more productive teams. The finding, which is statistically significant ( $p < .05$ ), implies that industrial enterprises in Rivers State might potentially benefit from increased productivity if they prioritise team cohesiveness.

**Table 2: Relationship between Cohesion and Work Quality.**

		Correlations	
		Cohesion	Work Quality
Cohesion	Pearson Correlation	1	.776**
	Sig. (2-tailed)		.001
	N	33	33
Work Quality	Pearson Correlation	.776**	1
	Sig. (2-tailed)	.001	
	N	33	33

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

SPSS Output v23, 2025

According to Table 2, which is based on a sample of 33 respondents from manufacturing enterprises, there is a substantial positive correlation ( $r = .776$ ,  $p = .001$ ) between work quality and cohesiveness. This shows that there is a

statistically significant association between team cohesiveness and work quality at the 0.05 level (2-tailed). The results show that when teams work together, production processes become more precise and quality requirements are more strictly followed.

**Table 3: Relationship between Communication and Output Efficiency**

		Correlations	
		Communication	Output Efficiency
Communication	Pearson Correlation	1	.423**
	Sig. (2-tailed)		.000
	N	33	33
Output Efficiency	Pearson Correlation	.423**	1
	Sig. (2-tailed)	.000	
	N	33	33

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

SPSS Output v23, 2025

A Pearson correlation coefficient of .423 ( $p < .001$ ,  $N = 33$ ) indicates a positive relationship between communication and output efficiency in manufacturing firms, as shown in Table 3. There is a modest correlation between better communication and increased production efficiency, which is

statistically significant at the 0.05 level. Streamlining task coordination and reducing mistakes through effective communication likely increases production rates per labour hour. The results show that if the industrial sector in Rivers State wants to maximise productivity, it must prioritise communication.

**Table 4: Relationship between Communication and Work Quality Correlations**

		Communication	Work Quality
Communication	Pearson Correlation	1	.644**
	Sig. (2-tailed)		.000
	N	33	33
Work Quality	Pearson Correlation	.644**	1
	Sig. (2-tailed)	.000	
	N	33	33

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

SPSS Output v23, 2025

In a sample of 33 manufacturing enterprises in Rivers State, Nigeria, Table 4 reveals a robust positive relationship ( $r = .644$ ,  $p < .000$ ) between communication and job quality. A two-tailed test confirmed reliability at the 0.05 level, and this significant

association ( $p = .000$ ) suggests that better communication boosts job quality. In industrial contexts, better communication probably leads to fewer mistakes and more adherence to quality standards, which in turn supports greater production.

**Table 5: Organizational Culture Moderate the relationship between Team Building and Employee Productivity.**

Control Variables		Correlations		Team Building	Employee Productivity
-none <sup>a</sup>	Team Building	Correlation		1.000	.646**
		Significance (2-tailed)		.	.006
		Df		0	33
	Employee Productivity	Correlation		.646**	1.000
		Significance (2-tailed)		.006	.
		Df		33	0
Organizational Culture	Team Building	Correlation		1.000	.586**
		Significance (2-tailed)		.	.001
		Df		0	32
	Employee Productivity	Correlation		.586**	1.000
		Significance (2-tailed)		.001	.
		Df		32	0

a. Cells contain zero-order (Pearson) correlations.

SPSS Output v23, 2025

Effective team building considerably boosts productivity, as shown by the substantial positive connection between team building and employee productivity ( $r = .646$ ,  $p = .006$ ) in Table 5. When controlled by corporate culture, the association remains positive but significantly reduced ( $r = .586$ ,  $p = .001$ ), demonstrating that a supportive culture strengthens but does not totally account for the link. The statistical significance of these associations lends credence to the idea that team building increases productivity, with organisational culture mediating the relationship to some extent.

#### **Discussion of Findings**

The findings from the studies align with the hypotheses tested, providing robust evidence on the relationships between team building dimensions (cohesion and communication), employee productivity (output efficiency and work quality), and the moderating role of organizational culture in manufacturing firms in Rivers State, Nigeria.

**Relationship between Cohesion and Output Efficiency:** The significant positive correlation ( $r = .537$ ,  $p < .05$ ) between cohesion and output efficiency, as found by Ikemenjima (2018), supports the notion that cohesive teams enhance productivity in synchronized tasks. In manufacturing firms, where assembly lines demand coordinated efforts, cohesion fosters trust and mutual accountability, reducing downtime and optimizing resource use, thus improving units produced per labor hour. This aligns with Social Interdependence Theory, which posits that positive interdependence drives collective efficiency (Johnson & Johnson, 2005).

**Relationship between Cohesion and Work Quality:** The positive relationship between cohesion and work quality corroborates Ikemenjima's (2018) findings, where cohesive teams in Rivers State's telecom sector achieved higher goal attainment. Cohesive teams minimize errors and enhance adherence to quality standards through shared commitment, reducing defect rates in manufacturing processes. This supports Hackman's (2002) model, emphasizing supportive team contexts for superior outcomes.

**Relationship between Communication and Output Efficiency:** Uboegbulam and Green's (2024) study on internal communication in Rivers State hotels ( $r = \text{significant}$ ,  $p < .05$ ) reinforces the finding that effective communication enhances output efficiency. In manufacturing, clear communication channels streamline task coordination, reduce miscoordination, and boost production rates, aligning with Wike's (2025) findings on communication's role in tertiary institutions' productivity.

**Relationship between Communication and Work Quality:** The significant correlation between communication and work quality, as supported by Uboegbulam and Green (2024), indicates that robust communication fosters feedback loops and clarity, minimizing errors in manufacturing outputs. Wike's (2025) study further validates this, showing communication's impact on quality across academic and non-academic staff, applicable to manufacturing's quality control needs.

**Organizational Culture Moderates the relationship between Team Building and Employee Productivity:** The moderation effect ( $r = .586$ ,  $p = .001$ ) aligns with Olakunle's (2021) findings that a supportive

organizational culture, characterized by open communication and employee involvement, strengthens team building's impact on productivity. In Rivers State's manufacturing firms, a positive culture enhances cohesion and communication, amplifying their effects on output efficiency and work quality, though slightly less dominantly than direct team-building effects ( $r = .646, p = .006$ ).

### Conclusion

The results show that manufacturing companies in Rivers State can benefit from investing in team building programs and creating positive organizational cultures to increase productivity and competitiveness. More research should look into sector-specific dynamics and longitudinal impacts to fine-tune these strategies, but overall, team building through communication and cohesion boosts employee productivity. Organisational culture is a key moderator of this effect.

### Recommendations

Based on the findings, the following recommendations are proposed to enhance employee productivity through team building in Rivers State's manufacturing firms:

- i. To make groups work better together, manufacturing companies should have frequent team-building activities including trust-building exercises and collaborative workshops. These programs build confidence and cooperation, which cuts down on downtime and boosts output rates per labour hour. Also, set up mentoring programs that connect new recruits with experienced workers to improve relationships between employees and make sure that processes are in sync, which will boost the number of units produced per hour of labour. Set aside money for these projects, with the goal of cutting production delays by 10% in six months.
- ii. To improve the quality of work, companies should focus on interventions that promote cohesiveness, such as team goal-setting sessions. Teams that work well together lower failure rates by making sure everyone is committed to following quality standards in manufacturing operations. Also, set up recognition programs that reward teams for having low defect rates to help them feel like they are all working together.
- iii. To improve the efficiency of their output, companies can use digital technologies like Slack or Microsoft Teams to keep everyone up to date on tasks in real time, making sure that shifts work together smoothly. Hold briefings every two weeks to make sure everyone knows what the production goals are and how to fix any problems that come up. Train supervisors on how to communicate well.
- iv. Set up formal feedback loops, including weekly quality review meetings where staff talk about mistakes and offer ways to make things better, to increase the quality of work. Use suggestion boxes and anonymous online surveys to get people to speak out, which will lower the number of mistakes.
- v. To make the moderating influence of organisational culture stronger, leaders could promote inclusion by making rules that encourage independence, such as giving employees the freedom to choose their own

tasks, and holding monthly open forums for employee feedback. Do yearly culture audits to find out how happy and cooperative employees are, and use the information to improve policy. Put money into leadership training to show employees how to work together.

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