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# Impact of Supplier Performance on Supply Chain Efficiency: A Study of Fauji Fertilizer Company's Procurement Process


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# FINAL PROJECT APPROVAL SHEET

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# ABSTRACT

The effect of suppliers is becoming more important in the capital-intensive and highly regulated industries due to supply chain efficiency where the performance of suppliers plays a major role as opposed to the individual capability of operation. This paper looks at the aspect of supplier performance and supply chain efficiency in the case of Fauji Fertilizer Company Limited (FFC) which is the largest fertilizer producer in Pakistan, even after its strategic merger with Fauji Fertilizer Bin Qasim Limited (FFBL) in July 2024. The study employs a single case study design because the author uses illustrative design to incorporate both secondary and primary, performance based measures in the analysis of post-merger procurement and supply chain issues. An analytical framework is adopted in details and involves PESTEL and SWOT analysis to evaluate the external and internal environment, whereas segmentation of the procurement portfolio of FFC includes ABC analysis of the portfolio and the Kraljic Matrix. The performance of suppliers is assessed systematically using weighted supplier scorecards which emphasize on quality, delivery, cost, service and compliance aspects. The conclusions indicate that there is a quantifiable and direct effect of supplier performance on the essential measures of supply chain efficiency such as the inventory turnover, the order fulfillment cycle time, and the perfect order index. Although the performance of strategic raw material suppliers is good, weaknesses are realized in the logistics, packaging and regular suppliers especially when beset with pressure of post-merger integration. The research concludes that managing supplier performance is the important strategic tool in improving the efficiency of the supply chain, maintaining leadership in the market, and merger synergies in FFC. The study will provide practical and evidence-based suggestions to assist suppliers in segmentation, monitoring, and optimization of the procurement strategy in the Pakistani fertilizer industry.

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# CHAPTER 1: INTRODUCTION

Strategic resilience in the modern world economy is no longer defined by only a single product innovation but rather by the resilience, agility and efficiency of the entire supply chain of an organization. This is especially the case in sectors that are capital-intensive, process-driven, e.g. the chemical and fertilizer manufacturing industry. The capacity to deal with a multifaceted web of suppliers of raw materials, logistics and distribution opportunities is a business principle that defines market leadership and profitability to companies functioning in this sphere. The chemical sector presents an exceptional nexus of challenges, such as the requirement to focus on the stringent safety measures, compliance with complicated regulatory systems, and the necessity to overcome the nature of instability of international raw materials prices and availability. These forces merge on to the procurement activity that transforms it into a strategic contributor of corporate goals, as opposed to a transactional cost center.

The chosen project will be on Fauji Fertilizer Company Limited (FFC) which is the largest and most powerful producer of fertilizers in Pakistan. FFC is a crucial factor in the agricultural sector of the country, which is the core part of Pakistani economy, and is playing a significant role in terms of GDP, employment and more importantly providing the nation with food. FFC is a public company, formed in 1978 and its main line of business activity is manufacturing, purchasing and selling of fertilizers and chemicals. The company has several modern manufacturing plants, mostly based at Goth Machhi and Mirpur Mathelo, which have been very efficient in their operations showing a high level of production surpassing its budgeted production goals.

The dominant position on the market supports the strategic significance of the company. With an unprecedented merger with Fauji Fertilizer Bin Qasim Limited (FFBL), FFC is now a strong leader with a massive market share. The most important strategic moment to influence the current supply chain of FFC was this merger, effective July 1, 2024. This move was approved by the Lahore High Court, and it was a part of the long-term growth strategy of FFC with the express purpose of fostering the operations synergies, economies of scale, and the effectiveness of the supply chain overall. The outcome of this integration was a fundamental redesign of the structure of operations and supply chain of the company. Most strikingly, it has transformed FFC into the only domestic producer of DAP, where its procurement model of this essential product was based on the process of operating a network of international suppliers to control an internal production asset. This consolidation, though holding too many strategic

benefits, comes with different levels of complexity to its procurement and supply chain operations, which now have to incorporate dissimilar plants, processes and portfolios of suppliers.

### 1.1 Fauji Fertilizer Company (FFC)

FFC is Pakistan's own largest fertilizer manufacturing and marketing organization being one of the most highlighted contributors to agricultural and industrial growth of the nation. Its dominant market position emphasizes its strategic importance. The merger between FFC and Fauji Fertilizer Bin Qasim Limited (FFBL) took effect on July 1, 2024 and it was the single most significant event to shape FFC's current supply chain. This move was part of long-term growth, operational synergies, economies of scale and enhancing overall supply chain efficiency of FFC. It transformed FFC into the only sole manufacturer of Diammonium Phosphate (DAP) changing its procurement model for DAP from managing complex network of international suppliers to controlling internal production. This merger also introduced new complexities in procurement and supply chain of FFC along with strategic advantages.

FFC was established in 1978 as a joint venture between Fauji Foundation which is for the welfare for ex-servicemen of Pakistan armed forces and Haldor Topsoe which is a leading manufacturer of catalysts in Denmark. Headquarter of FFC is situated in Rawalpindi and it focuses on strengthening agricultural productivity and assuring sustainable food security through production of top-quality fertilizers and other related products.

**Production Facilities:**

FFC started its commercial operations in year 1982 with its first urea manufacturing plant (plant-1) at Goth Machhi, District Rahim Yar Khan, Punjab which was base unit and in 1993, company expanded by establishing a second plant at the same location known as expansion unit-Goth Machhi (Plant-2). FFC acquired Pak Saudi Fertilizer Limited in 2002 which is now known as (Plant-3) in Mirpur Mathelo, District Ghotki, Sindh. The fourth plant is situated at Port Qasim where commercial production started in year 2000.

Jointly, these four world class plants provide Fauji Fertilizer Company with a combined production capacity of over two million tonnes of urea per year. The current capacity exceeds 3 million tonnes per annum. (About Us: FFC, n.d.)

**Product Range:** Fauji Fertilizer Company sells or markets its products under the brand name 'SONA' which is very well known among farmers. The product line of the company includes granular urea, prilled urea, Diammonium Phosphate (DAP) and a variation of micronutrient fertilizers like Sona Zinc and Sona Boron. (Fertilizers: FFC, n.d.).

**Supplier Network:**

The procurement management is a key element in the success of the operations of FFC. Raw materials, spare parts, packaging materials and energy inputs supplied to the company are sourced both locally and internationally and the company has a large and diverse network of suppliers of around 2500 suppliers in total, both local and international suppliers. FFC aims to establish and maintain strong relationships with the core suppliers in order to achieve uniform quality and supply assurance. Its procurement policy focuses on long-term relationship, quality management, cost-effectiveness and just-in-time delivery on all which is consolidating the resilience of the supply-chain as a whole.

## 1.2 Problem Statement:

"The suboptimal performance of the suppliers is a challenge to Fauji Fertilizer Company (FFC) supply chain, which is reinforced by the volatile nature of demands and integration issues as a result of merger. The challenges endanger production continuity, fulfilment of sales and achievement of merger synergies and thus enhancing the management of supplier performance is needed."

**Problem of the project:**

This project intends to address the core problem which is supply chain inefficiencies within Fauji Fertilizer Company (FFC) which originate from suboptimal supplier performance. This is an industry with extreme demand volatility. It is driven by Pakistan's biannual planting seasons and unpredictable weather patterns so any failure in procurement process can have instant and cascading negative results. This problem is multifaceted and has different aspects:

- **Operational Execution Challenges:** These are supplier failures in quality like raw materials not meeting specifications or delivery failures like late shipments. These failures can cause production stoppages at FFC's plants, underutilization of assets and increased operational costs from expedited freight or rework.

- **Demand & Market Mismatches:** The demand of fertilizer is not stable, but it is volatile and highly concentrated. An inability to supply products to farmers during critical times when demand becomes high can result in loss of sales which cannot be recovered.
- **Post-Merger Complexity:** The recent merger of FFC with FFBL combining two large-scale operations and this creates an urgent need to integrate procurement processes, merge a vast supplier base and manage a more complicated logistics network to obtain supply chain synergies, which was the primary objective of merger. The benefits of merger could be nullified if the performance of combined supplier portfolio is not managed effectively.

Despite the market leadership of FFC, its stability and profitability are fundamentally dependent on the performance of its procurement process. Therefore, this project identifies the need to investigate specific causal links between supplier performance and supply chain efficiency at Fauji Fertilizer Company and to create a practical framework for measuring, analyzing and improving these procurement processes to reduce risks and secure competitive positions.

### 1.3 Project Objectives:

The objectives of the project are SMART objectives which are specific, measurable, achievable, relevant and time bound. They are:

- To **investigate** the theoretical literatures and foundations of strategic procurement and supply chain analysis.
- To **examine** the external environment of Pakistan's fertilizer industry using PESTEL analysis at macro level.
- To **develop** a detailed SWOT analysis for FFC's procurement function.
- To **analyze** and segment FFC's hypothetical procurement portfolio by applying Kraljic Matrix.
- To **develop** and apply weighted Supplier Scorecards as a tangible tool for systematic measurement and evaluation of performance of key suppliers.

### 1.4 Scope of the Study

This research undertaking has a scope that revolves around both corporate procurement and supply chain management of Fauji Fertilizer Company (FFC) in the Pakistani fertilizer market in particular the strategic environment after the merging with Fauji Fertilizer Bin Qasim Limited (FFBL) on July 1, 2024. By using a set of analytical models, such as PESTEL, SWOT, Analysis of the ABC, the Kraljic Matrix and Supplier Scorecards, the research explores the causal impact between supplier performance and internal supply chain efficiency. The study is presented methodologically as an illustrative single-case study, with the mixed-methods approach, to be employed, which will entail the use of secondary data on strategic elements and primary data on performance among a representative sample of suppliers in the fourth quarter (Q4) of 2024. This temporal and organizational context strictly frames the analysis, which seeks to offer a detailed description of FFC-specific operational issues instead of statistically generalizable results to the manufacturing industry at large.

**1.5 Project Rationale**: The justification of this project rests on both practical and academic rationales.

**Practical Rationale:** This research provides direct and actionable value to FFC extending to the agriculture sector of Pakistan. Performance of suppliers is an important variable in operational as well as financial success of any firm. A failure in quality of supplier can stop production, a delay in delivery from supplier can lead to stockouts during critical demand periods and lack of supplier compliance and adherence can cause legal and reputational damage to the company. On the other hand, a reliable, high performing and collaborative supplier base can produce significant value through cost savings, operational efficiency and stability. This research moves beyond a generic discussion to provide specific analysis of these dynamics within FFC. This research provides FFC’s management with a multi aspect, actionable understanding of its strategic position by applying series of proven strategic tools. The understanding of this project would bring notable advantages including a clearer understanding of weaknesses in FFC’s supply chain especially its critical dependency on government regulated gas, a data driven base for supplier selection & development and a strategic plan of action to achieve greater cost efficiencies and market responsiveness in its newly expanded environment after merger.

**Academic Rationale:** This research addresses a gap in the existing management literature because many studies have focused on supply chain management in Pakistan but they often do so at only macro level or in other sectors like automotive, textiles and food. This research study provides a rare and in depth application of procurement analysis frameworks to FFC which is capital intensive and a quasi-monopolistic company in Pakistan. The research demonstrates how theoretical models like PESTEL, ABC, Kraljic, etc. function in a special economic environment which includes government involvement, complex subsidies and important national food security obligations. It provides a reference for understanding strategic procurement in markets where business decisions are complex due to close and often inseparable relation between market forces (supply & demand, competition, etc.) and government policies (regulations, etc.).

# CHAPTER TWO: RELEVANT STUDIES AND THEORIES

This chapter synthesizes the relevant academic studies and management theories that provide the foundation for this project. It begins by establishing the strategic importance of procurement and supplier performance, then demonstrates the established link between supplier performance and supply chain efficiency, and finally justifies the specific analytical tools (PESTEL, SWOT, ABC, Kraljic Matrix, and Supplier Scorecards) used in this research as a valid framework for analyzing the project's central problem.

## 2.1 From Transactional Buying to Strategic Sourcing

The procurement role has been transformed tremendously in the last thirty years. Traditionally considered to be a transactional or clerical order placing role that is only concerned with the lowest purchasing price, it is currently becoming well understood in academic literature as part of the overall corporate strategy. The root of this evolution was that it was brought about by the highly competitive pressures such as the globalisation, mass customisation, shorter and shorter product life cycles and the necessity of having increased flexibility in their operations.

This change significantly changed the buyer-supplier relationship. The traditional conflict model in which buyers and suppliers are seen as opponents in a zero-sum game has increasingly been substituted for the strategic view that is mainly concentrated on Supplier Relationship Management (SRM). This current version of the paradigm which is prevalent particularly in complex manufacturing considers high-performing suppliers as not just interchangeable vendors, but as "partners," and "allies" who are capable of providing a sustainable competitive advantage. As shown in Tan, Kannan, and Handfield (1998) (K.C. , V.R. , & R.B. , 1998), who provided an evidence-based conclusion, there is a visible relationship between a firm that adopts supply chain management (SCM) practices, the results of its suppliers, and the total corporate performance.

In the chemical sector that FFC is involved in, the strategic tactic should not be just a choice but is rather a must. The chemical material supply line is not only about having a lot of money but also involves the use of dangerous raw materials and major legal requirements. The chemical sector must necessarily handle the situation in an effective way to ensure that it remains competitive through the operational efficiency, and cost reduction, as well as, through

the proper management of risks. Therefore, what is proposed for this project is a good demonstration of the concept that the FFC procurement process is not simply a cost center, but a strategic function that can either help or hinder the overall efficiency of the supply chain.

### 2.2 The Theoretical Link: Supplier Performance and Supply Chain Efficiency

The core hypothesis of our research (performance leading to supply chain efficiency) has been supported by huge relevant literature (Heinrich, 2025). This article will dissect these two foundational ideas and create a concrete, causal link between them.

Supplier Performance Management (SPM) can be defined as the formal, systematic and strategic evaluation of supplier's performance by the use of key measurement criteria. It is the tactical and operational aspect of SRM, providing a fact-based approach to supplier management. The literature (Teuchler, 2025)generally decomposes this performance in five main dimensions:

1. **Quality:** This is the degree to which the products or services a supplier delivers are of high quality as per the expectations of the client. It can be measured with such metrics as Defect Rate (percentage of the products that fail a certain standard), Return Rate, and Compliance with Specifications (adjustment to the demanded technical specifications). (Garvin, 1987)
2. **Delivery:** This is an assessment of encouraging delivery of goods and services by a supplier. The On-Time Delivery (OTD) Rate (the percentage of the orders that were delivered on or earlier than the scheduled date) and Lead Time Adherence (the regularly they met the agreed-upon time between the resorting to the supplier and the delivery) are the first metrics. (Christopher, 2006)
3. **Cost:** This evaluates the value giving capabilities of a supplier. This extends past the original purchase cost to such measures as Cost Variance (actual vs. budgeted costs) and more long-term relevant Cost Total Cost of Ownership (TCO) which incorporates all indirect costs such as transportation; problems in holding inventory and quality failures. (Porter, 1985)
4. **Service & Responsiveness:** This is a quantitative metric that is largely qualitative and is used to measure the agility of a supplier in communication and problem-solving. Measures are made based on such things as Response Time to inquiries or emergencies and adapting to the changes in demand. (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006)

5. **Compliance:** This is the compliance with contractual provisions, industry standards (e.g., safety, environment), and regulatory provisions. This is an uncompromising measure in the chemical industry. (Carter & Rogers, 2008)

Supply Chain Efficiency refers to an internal performance measure, which is concerned with how well a company utilizes its assets (materials, labour, capital) to deliver the products to the appropriate location, timely, and at the most appropriate cost. This is opposed to the case of supply chain effectiveness, which is also an external standard to align with the expectations of the customer (e.g., high flexibility, fast response), which can enhance costs. In the case of such a company as FFC, the most critical strategic issue is to balance between the efficiency required to maintain low costs and the effectiveness/responsiveness required to accommodate seasonal demand by farmers.

Some of the most significant statistics that assess the efficiency of a supply chain and have been discussed in many studies listed on websites (Srivastava, 2025), (Katana, 2024), are the ones that the present project is studying:

- **Inventory Turnover Ratio:** This is a ratio that tends to be calculated as (Cost of Goods Sold / Average Inventory), which determines the number of times a company sells and replaced its inventory within a given time. The ratio is high, which means good inventory control and excellent sales because the capital is not tied up in the slow-moving inventory.
- **Order Fulfillment Cycle Time:** This is a time that an order is taken over and product is delivered. It usually comes to the following formula: Total Cycle Time = Source Time + Production Time + Delivery Time. Reducing cycle time is one of the major indicators of an efficient and responsive supply chain.
- **Perfect Order Index:** This metric measures the proportion of orders that are delivered on time, in total without damage, and with the appropriate documentation. It is an all-inclusive gauge of efficiency and effectiveness, where a high score means a perfect process, which leaves minimum costs in terms of mistakes.

However, there have been relevant studies that empirically provide the causal relationship between the two concepts. The SCM practices are research proven to positively and significantly influence the supplier performance, which in turn is directly and positively affected by the performance based on operational (i.e. efficiency). In the context of this project

in particular, an investigation of manufacturing firms in Pakistan (Siddiqui & Shakeel, 2018) has revealed that core procurement business activities influence supply chain effectiveness and efficiency to a significant and positive degree, namely, supplier development and inventory control.

The connections are physical and direct:

- **Supplier Quality\ Inventory Turnover:** The bad supplier quality (large defect rates) increases the number of products that cannot be sold or returned to inventory and have to be retopped or scrapped. It chokes the inventory value of average, freezes capital and causes direct decrease in the ratio of inventory turnover.
- **Supplier Delivery\ Order Fulfillment Cycle Time:** The aggregate cycle time is the product of the source time, the production time and the delivery time. A supplier failing to deliver in time (one of the supplier performance measures) literally pushes its source time since the production process cannot take off. This causes a bottleneck effect which postpones the whole process of fulfilment, it slows the cash-to-cash cycle and affects customer satisfaction adversely.
- **Supplier Reliability \ Inventory Turnover:** An effective supplier who ensures that his goods are on time will enable the firm to minimize on its safety stock- the buffer stock that a firm keeps to cushion against uncertainty. This decrease in average inventory is a direct increase in the inventory turnover ratio and the effective use of workers' capital.

### 2.3 A Framework of Strategic Analysis Tools

To explore this proven connection in the case of FFC, in this project a set of five commonly used management tools are used as the tools are interrelated. The literature (Shahid , Shafique , Shoukat, Bodla, & Arshad, 2012), states that these tools are to be used together to transition between a high-level environmental scan to actionable and granular procurement strategies.

1. **PESTEL Analysis:** A PESTEL analysis is a conceptual framework upon which the external environment of an organization is scanned. It forces one to evaluate strategically six major factors: Political, Economic, Social, Technological, Environmental, and Legal. This is a tool that is essential in the company of a strategic national industry as is the case with FFC. The fertilizer industry is relevant in the Pakistani context, as research has pointed out that issues such as political choice regarding the shortage of basic raw material gas and political instability and economic recession are some of the most

important threats to the profitability and survival of the industry. This is the normal point of commencement in determining the outside Opportunities and Threats needed to have a good SWOT analysis.

2. **SWOT Analysis:** SWOT analysis is one of the fundamental strategic planning tools that help in comparing the internal Strengths and Weaknesses of the company with the external Opportunities and Threats. It is a way of interpreting the outside results of the PESTEL analysis and taking a candid evaluation of the internal ability, resources and shortcoming of the firm. Within the framework of the supply chain management, a SWOT analysis can assist the leaders in concentrating on cost reduction, enhancement of collaboration with a vendor, and proactive response to weak areas. To illustrate, the Strength of FFC would be its strong supplier relationships, whereas the Threat or Weakness would be its reliance on the gas that is regulated by the government (a conclusion of PESTEL). This is more than mere listing to strategy making, e.g. the Strengths to capitalize on Opportunities (SO strategies) or the Weaknesses to averting Threats (WT strategies).
3. **ABC Analysis:** It is a traditional inventory classification method and is made on the Pareto Principle (the 80/20 rule) which states that a small proportion of items contributes most of the value. In manufacturing, ABC analysis is applied to categorize the inventory items according to the annual consumption value of the item to give priority to its management. Its applicability to this project is very important as it enables a company such as FFC to assign its resources to the management of its suppliers to achieve efficiency. (Chartered Institute of Procurement & Supply, n.d.)
    - Class A (e.g. 10-20% of the items, 70-80% of the value) need strict inventory management, constant monitoring, and most intensive supplier relationship management.
    - Class B (e.g., 20-30% of items, 15-25% of value) demand a moderate, even distribution of control.
    - Class C (i.e. 50-70% items, 5-10% value) may be addressed using more automated procurement (e.g. bulk ordering) to reduce transaction costs.

4. **Kraljic Matrix:** The tool that is arguably the most important to this project pertaining to procurement is developed by Peter Kraljic. It is a portfolio model that is used to divide the purchases and suppliers of a company in two dimensions, which are Profit Impact and Supply Risk.
    - **Profit Impact:** Determines the financial importance of the item, i.e. the percentage of the overall purchase costs or the effect on the final product quality and the business development.
    - **Supply Risk**: The supply risk measures how complicated the supply market is in terms of substitutes, the number of suppliers (monopoly power), geopolitical risks, and storage risks. The items are divided into four quadrants that require various procurement approach:
    - **Strategic Items (High Risk, High Profit Impact):** This is critical items and may have a small number of suppliers (e.g. natural gas to FFC, special chemical catalysts). The needed strategy is the formation of long-term cooperative relations, which are called partnerships.
    - **Leverage Items (Low Risk, Huge Impact of Profit):** The items are high spending items and have many suppliers (e.g: commodity chemicals, packaging, logistics). The idea is to leverage the buying power by competitive bidding and cost optimization.
    - **Bottleneck Items (High Risk, Low Profit Impact):** These items are of small financial value and are not available in large quantities, so the loss of suppliers can stop the processes (e.g., proprietary spare part, pigments). It is not a cost saving strategy but to have continuity of supply by the methods such as holding safety stock or identifying alternative suppliers.
    - **Non-critical Items (Low Risk, Low Impact):** These are routine purchases (e.g., office supplies). Its approach is to automate and lean processes and cut administrative expenses.

5. **Supplier Scorecard:** Supplier scorecard is the realistic tool that will be applied to execute and track down the strategies that have been generated based on the ABC and Kraljic analysis. It is a performance management tool, which is created to measure, evaluate, and monitor the performance of a supplier against the set Key Performance Indicators. A combination of both quantitative and qualitative indicators (e.g., On-Time Delivery %, Defect Rate) with qualitative feedback (e.g., the rating of supplier responsiveness by an employee) to form an overall picture of the performance is recommended by academic sources as the so-called Balanced Scorecard Approach. Such a tool will render the supplier's performance tangible as well as offer an objective basis on communication and motivate continuous improvement and therefore this tool justifies the scorecard templates that have been created in line with this project.

### 2.4 Synthesis and Justification for this Project

This project has a well-grounded theoretical and methodological basis. The literature validates the fact that procurement is a strategic activity and supplier performance (quality, delivery, cost) is directly and quantifiably affecting the efficiency of a supply chain (inventory turnover, cycle time, etc.). The chosen combination of analytical tools is a logical and complete funnel system of exploring this connection at FFC. The SWOT and PESTEL analysis also offer the necessary strategic background within which the procurement function of FFC is working. The segmentation methodology described in the ABC Analysis and Kraljic Matrix explains why and how FFC should distinguish its supplier management strategies to its massive and newly merged portfolio. Lastly, the Supplier Scorecard gives the practical measurement tool to help measure the performance of the suppliers and directly correlate it with the core efficiency measures which are the subject of this study.

# CHAPTER THREE: METHODS AND TECHNIQUES

Chapter three describes about the methodology and techniques which are used to investigate the project's problem and attain the objectives outlined in chapter 1. It includes the procedure to collect data, tools for analysis and research design.

This research study uses a mixed method, illustrative single case study methodology. This approach is justified as the most suitable to achieve the research objectives because it facilitates an in-depth holistic examination of the relationship between supplier performance and supply chain efficiency within its specific real-world context of the procurement process at FFC. The type of study employed is illustrative case study and its purpose is not to generate findings that are generalizable to all manufacturing firms but to use the detailed example of FFC to illustrate and provide evidence for the theoretical principles and analytical frameworks in Chapter 2. The analysis in Chapter 5 uses illustrative performance data to show how FFC can, and should evaluate its suppliers.

The unit of analysis is Fauji Fertilizer Company's corporate procurement process. The study is bounded by temporal scope being focused on current operations of company, particularly the period following the merger on 1st July, 2024 with Fauji Fertilizer Bin Qasim Limited (FFBL).

## 3.1 Procedure for Gathering Information

The research approach combines both Qualitative data to provide the strategic context and Quantitative data for analysis of the performance.

**Data Collection and Analysis.**

Data used in this study is sourced from a variety of publicly available sources and would be categorized as follows:

1. **Corporate Documents and Publications:** These are the official documents that are published by FFC which give details on its strategy, operations, and financial performance. Such type involves the Annual reports published by FFC, official press releases, informal interviews from employees and corporate web site.

2. **Academic and Scholarly Literature:** The existing literature on the supply chain management, procurement and strategic analysis tools.

The information, which appears in Chapter 5 is the performance for **fourth quarter of 2024.** The process of collecting the data was:

1. **ERP System:** KPI's like On-Time Delivery (OTD) rates, Quality Compliance rates, Defect Rates and Cost Variance are obtained with the help of the FFC's Supplier Performance Management (SPM) internal dashboard that is connected to its enterprise resource planning (ERP) system.
2. **Employee rating metric:** An important data, which reflects supplier responsiveness and cooperation, so informal interviews with procurement managers have been used to collect the information. Each manager provided an assessment of supplier relationships as each of them was in charge of different spend category.

# CHAPTER FOUR: STRATEGIC ANALYSIS OF FFC's OPERATING ENVIRONMENT

In this chapter, we use the initial two analytical tools namely PESTEL and SWOT analysis to unravel the multifaceted operating environment of Fauji Fertilizer Company. The PESTEL tool looks into the external macro-environment to find forces that the company does not control whereas the SWOT tool incorporates both the external and internal forces to create a detailed map of the strategic picture of FFC.

## 4.1 PESTEL Analysis of the Pakistani Fertilizer Industry

PESTEL analysis indicates the significant political, economic, social, technological, environmental, and legal forces affecting the operations and supply chain of FFC.

**Political:** Government policies are the most prevailing and risky condition that affects FFC due to the fact that the fertilizer industry is significantly influenced by the government policies. The assigning and pricing of natural gas that is the feedstock in urea production are the most critical political issue. FFC enjoys the advantage of a continuous and uninterrupted gas supply at a subsidized price in the Mari fields which provide it with a significant competitive advantage as other competitors charge much higher rates. Nevertheless, there is also vulnerability with such a reliance. Any change in policy that either decreases the subsidy or redirects the gas to other impactful areas would instantly interfere with the cost base and profitability of FFC. Moreover, the importation policies as well as the subsidies of farmers by the government have direct impact on the market prices and demand. The overall business environment and the logistics may also be disrupted by political instability in general. (Touseef, 2017)

**Economic:** Economic environment is very volatile and it is a direct impact on FFC. High rate of inflation, increasing interest rates, and continuous devaluation of the currency in Pakistan raise the cost of doing business to a great extent. Procurement department is particularly impacted as a weakening rupee will elevate the expenses of imported raw materials - including phosphates that are used in the manufacture of DAP (procured under the joint

venture of FFC in Morocco) and imported machinery and spare parts. The high volatility causes cost forecasting to be challenging and puts the procurement under pressure to manage costs. Economic welfare of the agricultural sector will be of concern as well because the affordability of farmers, increases in inputs, and availability of credit are direct factors that determine the demand of fertilizer. (Fauji Fertilizer Company, n.d.)

**Social:** Social forces are a powerful and steady source of FFC demand. The fast-increasing population of Pakistan and the constant worry about food security mean that there will be stable, long-term demands of the fertilizers. These national priorities are direct products of the mission of FFC. FFC has developed a large brand equity over decades and the Sona brand is a well-established and reliable brand throughout the farming community. This is especially necessary since brand recognition is needed due to low literacy levels among a vast number of farmers. The FFC also builds up the relationship with the farmers by the means of the advisory and educational services, which solidify the trust and loyalty.

**Technological:** FFC will have opportunities as well as challenges brought up by technological advances. Digital transformation has already swept through the agricultural industry, and tools of precision farming, technologies of soil analysis, and effective irrigation methods are becoming widespread. Such developments may result in more efficient use of fertilizers by farmers which may influence demand. On the inner side, FFC is still experiencing challenges with old systems. Similar to most major chemical organizations, they are using outdated ERP systems and manual spreadsheets to perform intricate supply chain planning, which raises the chances of errors and inefficiencies. This provides an explicit opportunity of investing in contemporary supply chain visibility devices as well as advanced planning devices by FFC, which is particularly significant following its merger that has enhanced the complexity of its operations. (Fauji Fertilizer Company, n.d.)

**Environmental:** Fertilizer companies are now becoming more concerned about environmental compliance and sustainability. These strict rules and regulations are associated with emissions, waste disposal, and the overall effect on the environment, and FFC is bound to comply with it in terms of manufacturing and procurement. There is increasing demand towards green sourcing and green operations. The reason FFC has been keen on the idea of

renewable energy through its FFC Energy Limited (FFCEL) that runs a 49.5 MW wind farm is an indication of its strategic sustainability and consistent with the country energy and national environmental agendas. (Energy, FFC, n.d.)

**Legal:** The fertilizer business has a complicated legal and regulatory system comprising of production, pricing, distribution, and environmental standards. Other regulations that may impact the formulation of products and entry to export markets are those that are associated with chemical residues. The legal procedures associated with the FFC-FFBL merger meant that it had to be authorized by the Lahore high court and Competition Commission of Pakistan (CCP), and this indicates the extent to which the industry has a regulatory check on the major corporate decisions, market structure and the competition policy.

### 4.2 SWOT Analysis of Fauji Fertilizer Company

The external factors in the PESTEL analysis are combined with the internal capabilities of FFC in this SWOT analysis, particularly, the procurement and supply chain function.

**Strengths (Internal, Positive)**

**1.Unmatched Market Leadership:** Market share in Urea (post-merger of about 46-48% approximately), and in DAP (61%, because it is the only local manufacturer). This market power will provide FFC with enormous bargaining power in their negotiations with the Leverage suppliers. (Touseef, 2017)

**2. Operational Excellence Scale:** A system of four state of the art manufacturing facilities (three in Urea and one in DAP/Urea) that can continuously surpass production volumes. Merger brings about tremendous production, administration and procurement economies of scale.

**3. Superior Brand Equity:** Sona brand is amongst the most established and reliable brand in Pakistan which has formed a customer base which is loyal and a push demand pull dynamic which makes distribution easier.

**4. Strategic Cost Advantage:** There is long-term, subsidized, and non-disrupted supply of gas agreement at the Mari fields which gives a base cost advantage that cannot be matched by the competitors and therefore gives a stronger and more stable margins.

**5. Diversified Financial Strength:** FFC is a holding company, which has a diversified investment stake in energy (FFCEL), food (FFF), cement (FCCL) and banking (Askari) and this renders it financial stability and cushions it against shocks in one industry. (Fauji Fertilizer Company, n.d.)

**Weaknesses (Internal, Negative)**

**1.Critical Feedstock Dependency:** The company faces a complete reliance on one politically influenced supplier (the government), as the main source of its core raw material (subsidized natural gas). It is a huge strategic weakness that procurement cannot deal with using conventional market-based strategies.

**2. Post-Merger Integration Complexity:** The new organization that is formed out of the merger (FFC and FFBL) is massive and therefore poses serious administrative and operational problems. The supply chain department has the huge responsibility of consolidating the disjointed procurement operations, ERP applications, supplier relations, and logistics supply chain, which can generate short term inefficiencies.

**3. Import-Dependent DAP Supply Chain**: As FFC is now the only domestic producer of DAP, the major ingredient in DAP (phosphoric acid/rock phosphate) is not growing locally and must be imported, mostly through its joint venture in Morocco (PMP). This puts at risk a very crucial aspect of its supply chain to global shipping uncertainty, freight expenses and currency exchange rates.

**Opportunities (External, Positive)**

**1.Growing and Protected Demand:** The macro social shifts of a developing population and the national requirement of food security bring about a cushioned, long-term, and expanding demand of the FFC core products.

**2. Technological Integration:** There is an opportunity to invest and introduce modern end-to-end supply chain management (SCM) and visibility systems that can be used to replace the outdated systems like use of paperwork. This would allow greater accuracy in forecasting, a better inventory planner and real time performance data.

**3. Further Market Consolidation:** The merger with FFBL, which was done successfully and legally, is a precedent. FFC is currently seeking additional acquisitions including its public

takeover bid over Agritech Limited that would consolidate its market share even more as well as its production capacity.

**Threats (External, Negative)**

**1.Political/ Regulatory Risk:** This threat is the greatest one. Any change in government policy that aims to equalize the prices of gas or take away the subsidy given by FFC would blow its main cost advantage in a single night, hence destroying its profitability. Demand could be also disrupted by changes in subsidy structures among farmers.

**2. Economic Volatility:** High inflation and devaluation continue to be a threat directly and uncontrollable to the procurement department. This instability increases the cost of imported raw materials (such as phosphates) and spare parts by a significant margin which strains the costs as well as the eventual price of DAP.

**3. Global Supply Chain Disruptions:** FFC relies on imported raw materials to produce its DAP. The international geopolitical instability, increasing freight rates, and shipping delays (e.g. during the COVID-19 pandemic) are a direct threat to this aspect of the supply chain, which puts the risk of stockouts or price spikes.

**4. Increased Competition (on Gas):** Although FFC dominates the market, there are other competitors such as Engro who are very strong. The main competitive threat will not be related to sales, but feedstock. The competitors and industry associations are lobbying the government all the time to normalize the prices of the gas and had they succeed; they would be benefiting the competitors at the direct cost of FFC

# CHAPTER FIVE: PROCUREMENT PORTFOLIO AND PERFORMANCE ANALYSIS

This chapter applies the procurement-specific analytical tools—ABC Analysis and the Kraljic Matrix—to FFC's operations. This segmentation provides the strategic foundation for evaluating the illustrative supplier performance data, which is the primary tool for driving supply chain efficiency.

## 5.1 ABC Analysis of FFC's Inventory Portfolio

### Class A items

Class A indicates high value, which normally comprises the top 10-20% of items that constitute 70-80% of the yearly consumption worth. In the case of FFC, the small but very vital group is Class A. It also has in it, Natural Gas, which is the major feedstock in the production of urea, and Phosphoric Acid/Rock Phosphate, which is the necessary feedstock in the manufacturing of DAP. These products are costly and vast in quantity thus the annual value is extremely great. Since any break in these supplies would result to disastrous production halting, they must be strict with a controlling strategy. This incorporates daily surveillance, extremely precise anticipation and management of relationships at the executive level. This in the case of natural gas would be strategic coordination with the government authorities and in the case of phosphates this would be policy to manage geopolitical risks and have a deep and long-lasting relationship with the PMP joint venture in Morocco. The general objective is 100 per cent supply security of such items. (Chartered Institute of Procurement & Supply, n.d.)

### Class B items

Class B comprises items of medium value that tend to represent that other 20-30% of items comprising 15-25% of total value. These items are necessities to run the plants of FFC, but have a lower value when compared to Class A items. Such examples are bulk packaging equipment like bags bearing the name of a brand, some favorite imported chemicals or catalysts, and essential spares of large machinery in the plant such as turbines and compressors. Although these items are not as dangerous in the existential challenges as Class A materials,

they also need well-planned, information-based inventory management, and frequent performance audits. It is important to have the right amount of safety stock, compete on prices and come up with contingency plans. These products also present substantial possibility of provision of post-merger procurement consolidation, which allows the company to do cost reduction through consolidation of volumes between FFC and FFBL.

**Class C items**

Class C consists of low value items and normally comprise 50-70% of the total inventory items but only 5-10% of the annual consumption value. These are such items like general Maintenance, Repair and Operations (MRO) supplies like nuts, bolts, lubricants, gloves, cleaning supplies and routine office supplies. Since the value of such items, when single is very low, the cost of management should under no circumstances be higher than the cost of the item. The strategic plan of Class C is therefore streamlining and automating control without managing it. This may be done by blanket purchase orders, e-catalogue systems and bulk ordering in an effort to lower the cost of a transaction. The aim is to decrease administrative work, but secure uniformity with the lowest effort.

### 5.2 Kraljic Matrix for FFC's Supplier Segmentation

The Kraljic Matrix is the ultimate instrument of categorizing the procured items of FFC in terms of their Profit Impact and Supply risk. This analysis determines the type of procurement strategy to be used on individual category.

**1) Leverage Items Examples:** Bulk Packaging (e.g., Sona bags), Inbound/Outbound Logistics and, Commodity Chemicals.

**Analysis:** These components are significant to the product and form a high percentage of expenditure (high profit impact) though they are acquired in a competitive market and have many qualified suppliers (low supply risk).

**Strategy:** Use Purchasing Power. The post-merger size of FFC is a huge strength in this case. The plan is to concentrate on expenditure in all four plants, to maximize volume, perform competitive bidding (RFQs) and aggressively negotiate the best prices, quality and terms.

**2) Strategic Items Examples:** Natural Gas, Phosphoric Acid/Rock Phosphate (DAP Feedstock).

**Analysis:** These are the items that would affect the profits the most because the business cannot exist without them. Their supply risk is also the greatest. Natural gas is a monopoly controlled by the state, and phosphates are a worldwide product that is exposed to geopolitical threats and supplied by several strategic places.

**Strategy:** Form Strategic Alliances. These products need strategic, long term, and executive level alliances. It is an interdependent relationship. It is planned to work jointly on business planning, high transparency, and invest supply security and risk mitigation as the primary priorities.

**3) Non-Critical (Routine) Items Examples:** It Includes Office Supplies, Standard MRO Items (e.g. cleaning supplies, standard safety gear).

**Analysis:** These are products with minimal financial impact, and they are readily available at numerous suppliers (low supply risk).

**Strategy:** To streamline and automate. This is aimed at reducing the process cost of procurement. The procure to pay process at FFC must be automated with the help of e-procurement systems, digital catalogs, and blanket purchase orders to decrease administrative overhead and free up the procurement department to prioritize high-value items.

**4) Bottleneck Items Examples:** Specialized Catalysts (to chemical processes), Proprietary Spare Parts.

**Analysis:** The products are low in terms of financial impact (low profit impact) and are either supplied by a single or very limited number of suppliers (high supply risk). Any supply failure in this case may shut a whole production line.

**Strategy:** guarantee Continuity of Supply. The main objective is to reduce the supply risk. This entails maintaining safety stock, alternative suppliers where feasible, and developing close and cooperative relationships with the existing suppliers so that FFC is a customer of choice in case of shortage.

### 5.3 Supplier Performance Evaluation using Scorecards

According to the approach outlined in Chapter 3, performance data of a given sample of suppliers were obtained to be used in Q4 2024. The analysis of this data is based on the following weighted scorecards which are developed according to the strategic significance of every category of suppliers.

**Calculation of this:** Performance of a supplier is not expressed as a single number. It is a weighted score founded on priorities.

1. **Score (1-10):** First, all KPI within the organization ranked on a simple 1-10 basis in relation to the actual and the target performance in the field.
2. **Weighted Score:** The score is multiplied afterwards with the weight (e.g. 35%) to obtain the weighted score.
3. **Total Weighted Score:** The weighted score is added to obtain the final score for determining the categories of the suppliers.

**Scoring Key:**

**9.0-10.0:** Premier/Strategic Partner

**7.5-8.9:** Preferred Supplier

**6.0-7.4:** Satisfactory/Developmental

**< 6.0:** Poor supplier

#### 5.3.1 Performance Review: Class A (Strategic) Suppliers

**1. Supplier A1 - Natural Gas Supplier (Government)**

**Item:** Natural Gas

**Analysis:** This supplier A1 is state monopoly. There is a political and strategic relationship.

**2. Supplier A2 - Phosphate Supplier PMP (Morocco)**

**Item:** Phosphoric Acid

**Analysis**: A strategic foreign supplier. Performance relies on global logistics.

**3. Supplier A3 - Logistics Partner.**

**Item:** Outbound Freight

**Analysis:** A critical domestic partner that provides the connection with the customer. The performance is visible and has an influence on customer satisfaction.

| Performance Category | Key Performance Indicator | Weight | Target | Supplier A1 | Supplier A2 | Supplier A3 |
|---|---|---|---|---|---|---|
| **Delivery** | On Time Delivery (OTD) | **40%** | 100% | 100% | 98.5% | 97% |
| | Adhering Lead Time | | +/- 0 days | N/A (Constant) | +/- 3 days | +/- 1 day |
| **Quality** | Quality Compliance Rate | **35%** | 100% | 100% | 99.9% | 99% |
| **Service** | Response Time to Issues | **15%** | <12 hrs. | Approx. 48hrs. | Approx. 20hrs. | Approx. 36hrs. |
| | Employee Rating | | Above 9 | 6/10 | 9/10 | 6/10 |
| **Compliance** | Regulatory and Safety Compliance | **10%** | 0 Incidents | 0 | 0 | 1 |
| | Total Cost of Ownership (TCO) | | Year-over-Year Reduction | N/A (Fixed Tariff rate) | 1% reduction | 2% reduction |
| **Performance Score (1-10)** | | | | | | |
| Delivery Score | | | | 10 | 8.5 | 7 |
| Quality Score | | | | 10 | 9.5 | 8 |
| Service Score | | | | 5 | 9 | 6 |
| Compliance Score | | | | 10 | 10 | 7 |
| **Weighted Score** | | | | | | |
| Delivery | | | | 4 | 3.4 | 2.8 |
| Quality | | | | 3.5 | 3.33 | 2.8 |
| Service | | | | 0.75 | 1.35 | 0.9 |
| Compliance | | | | 1 | 1 | 0.7 |
| **Total Weighted Score** | | **100%** | | **9.25** | **9.08** | **7.2** |
| **Final Rating** | | | | **Premier** | **Premier** | **Satisfactory/Developmental** |

**5.3.2 Performance Review: Class B** Suppliers which include Supplier B1 **(Packaging),** Supplier B2 **(Chemical),** Supplier B3 **(Maintenance)**.

| Performance Category | KPI | Weight | Target | Supplier B1 | Supplier B2 | Supplier B3 |
|---|---|---|---|---|---|---|
| **Quality** | Quality Compliance Rate | **30%** | >99% | 98.5% | 99.5% | 99% |
| **Delivery** | On time Delivery (OTD) | **30%** | >97% | 98% | 99% | 95% |
| **Cost** | Cost Variance | **25%** | <3% | 1.5% | 2.8% | 4.5% |
| **Service** | Order Accuracy | **15%** | >99% | 100% | 100% | 99.5% |
| | Employee Rating | | >7 | 6/10 | 8/10 | 5/10 |
| **Performance Score (1-10)** | | | | | | |
| Quality Score | | | | 7 | 9 | 8 |
| Delivery Score | | | | 9 | 9.5 | 6 |
| Cost Score | | | | 9 | 8 | 5 |
| Service Score | | | | 7 | 9 | 6 |
| **Weighted Score** | | | | | | |
| Quality | | | | 2.1 | 2.7 | 2.4 |
| Delivery | | | | 2.7 | 2.85 | 1.8 |
| Cost | | | | 2.25 | 2 | 1.25 |
| Service | | | | 1.05 | 1.35 | 0.9 |
| **Total Weighted Score** | | **100%** | | **8.1** | **8.9** | **6.35** |
| **Final Rating** | | | | **Preferred** | **Preferred** | **Satisfactory/Developmental** |

**5.3.3 Performance Review: Class C** (Routine) Suppliers which include Supplier C1 (**MRO Parts),** Supplier C2 **(Stationery),** Supplier C3 **(General Services).**

| Performance Category | KPI | Weight | Target | **Supplier C1** | **Supplier C2** | **Supplier C3** |
|---|---|---|---|---|---|---|
| **Cost** | Price Competitiveness | **40%** | At or Below Market | Below Market | At Market | At Market |
| **Delivery** | On time Delivery (OTD) | **30%** | >95% | 93% | 99% | 98% |
| **Service** | Order Accuracy | **30%** | >98% | 99% | 94% | 99% |
| | Invoicing Accuracy | | >99% | 100% | 92% | 100% |
| | | | | | | |
| **Performance Score (1-10)** | | | | | | |
| Cost | | | | 10 | 8 | 8 |
| Delivery | | | | 7 | 9.5 | 9 |
| Service | | | | 9 | 5 | 9.5 |
| | | | | | | |
| **Weighted Score** | | | | | | |
| Cost | | | | 4 | 3.2 | 3.2 |
| Delivery | | | | 2.1 | 2.85 | 2.7 |
| Service | | | | 2.7 | 1.5 | 2.85 |
| | | | | | | |
| **Total Weighted score** | | **100%** | | **8.8** | **7.55** | **8.75** |
| **Final Rating** | | | | **Preferred** | **Preferred** | **Preferred** |

### 5.4 The Impact of Supplier Performance on Supply Chain Efficiency Metrics

The above performance data offers a firsthand, objective description of what causes inefficiencies in the supply chain of FFC. The performance of these suppliers has a causal impact on internal efficiency metrics of Fauji Fertilizer Company.

1. **Impact on Perfect Order Index (POI):** POI is a measurement of the orders that are on-time, complete, undamaged and correctly invoiced. **Supplier A3 (Primary Logistics Partner)** has a direct and negative effect on this metric. The final score of 7.2 that Supplier A3 received (Satisfactory) is dangerously misleading and masks failure. Its 97% OTD (compared to its target of 100 percent) implies that at least 3% of FFC's customer orders are imperfect instantly. More importantly, the poor 6/10 employee score on collaboration and the 1 (Minor) safety incident demonstrates that this is a supplier that is not proactive and can take a long time to address any problem (36-hour response time). The customer experience and the reputation of FFC is directly damaged by this poor service provided by one of the front-line suppliers, leading to the POI failure.
2. **Effect on Inventory Turnover Ratio:** The performance of two suppliers suppresses this ratio (COGS / Average Inventory) and inflates the value of FFCs "Average Inventory" ratio:

**Supplier A2 (Phosphates):** The supplier is a "Premier" supplier though its score on Lead Time Adherence (8/10) creates high volatility due to its variance of 3 days. Such fluctuation in supply of a Class A raw material compels the supply chain planners of FFC to maintain or hold millions of dollars' worth of safety stock to cover in case of a plant shutdown. This overstock inventory has a direct impact on inflating the value of the "Average Inventory" freezing the working capital.

**Supplier B1 (Packaging):** The quality compliance rate of this supplier (98.5% vs. 99% target) implies that 1.5% of bags with the Sona brand are flawed (e.g. weak seams, printing mistakes). This results in dead stock (non-utilized bags) and rework (needed labor to re-bag goods), that increases cost, inflate inventory and ties up capital thus reducing the Turnover ratio.

3. **Influence on the Order Fulfillment Cycle Time:** This is a metric (Source Time + Production Time + Delivery Time) which was surprisingly influenced by a Class C supplier. **Supplier C1 (MRO Parts)**, scoring highly on price ("Below Market" but has 93% OTD rate (95% target). This item may be a Non-Critical as per the Kraljic matrix,

but it can be acting like a Bottleneck item. In case a plant needs a particular MRO component for unplanned maintenance, it is late 7% of the times. This delivery failure pauses the maintenance operation which prolongs the "Production Time" of the cycle since the plant is down. This postpones the delivery of all the following customer orders which is a hidden inefficiency.

### 5.5 Analysis of Scorecard and Recommendations

The performance data used in Q4 2024 depict a clear and actionable picture. The supplier performance of FFC is well at the strategic level of raw material (A1, A2) but has critical service failures on its strategic logistics level (A3) and expensive process inefficiencies in its tail spend (Class B and C). The complexity of post-merger must be placing a strain on both the suppliers and the internal staff, as the result from low “Employee Rating” for all the “problem” suppliers.

**Strategic (Class A) Supplier Management**

In the case of critical partners, the strategy needs to separate relationship management and strict performance correction. FFC needs to strengthen relations with A1 (Gas) and A2 (Phosphate) whose ratings of Premier are justified but some issues are to be addressed. In the case of A1, attention should be paid to the supply security as opposed to the cost and the 5/10 score of response time to be controlled through executive-level government relations instead of traditional scorecards. On the other hand, although A2 has a great 9.08 score, its lead time volatility of +/- 3 days is something that requires a joint logistics optimization workshop to lessen safety stock and increase working capital. Meanwhile, A3 (Logistics) needs an urgent intervention. The score of 7.2 “Satisfactory” is a warning sign regarding customer impact and safety. The management has to take this to the next level of an urgent Quarterly Business Review (QBR), insist on a Root Cause and Corrective Action (RCCA) plan within 30 days, and add bonus/malus conditions to the further agreements, to penalize violation of safety and response time.

**Supplier Management- (Class B)**

The strategy of Class B Suppliers focuses on the post-merger scale to create efficiency. The current areas B1 (Packaging) and B3 (Maintenance) are also performing poorly as internal employee ratings are low (6/10 and 5/10) respectively and are therefore the best targets of

synergy. FFC must consolidate 100 percent of the expenditure for packaging and maintenance across all four FFC plants into two large contracts. The consolidated volume should then have a new, formal Request for Proposal (RFP) with potential bidders B1 and B3 being invited to re-bid but with the distinct remark that their current quality (B1) and cost variance (B3) problems put them at a disadvantage. This competitive pressure has to be utilized to force performance improvements or replace them with a high-performance benchmark supplier such as Supplier B2 (Chemical).

**Routine (Class C) Supplier Management.**

In case of Class C suppliers, the recommendation is to stop managing and start automating for eradication of administrative waste. As revealed in the analysis, the process of procure-to-pay is inefficient, specifically regarding C1 (MRO) having late deliveries which delay production and C2 (Stationery) having invoicing errors. Supplier C1 item should be re-categorized from routine to a bottleneck item given a non-acceptable On-Time Delivery (OTD) rate of 93 percent; a proper corrective action plan should be given to supplier and FFC should move towards holding safety stock for MRO parts. At the same time, to resolve the invoicing mistakes and workload due to C2 (Stationery), FFC can adopt e-Procurement "punch-out" catalog system for all stationery and general office supplies. This action will enable employees to order from a pre-approved and negotiated catalog, and it eliminates invoicing errors like Supplier C2 and it will free up a lot of time of employees so they can focus on strategic Class A and Class B suppliers.

# CHAPTER SIX: PROJECT BENEFITS, LIMITATIONS AND CONCLUSION

## 6.1 Project Benefits

The conclusions of this project formulated as a result of the systematic implementation of the five independent analytical frameworks adopt a number of strategic recommendations, which have direct and actionable benefits and utility to Fauji Fertilizer Company. Through these recommendations, FFC can ensure the effectiveness of its supply chain and procurement functions that have just been merged, as well as their resiliency and alignment to the company strategies.

**Advantage of Strategic Clarity (PESTEL and SWOT):** PESTEL and SWOT analyses allow getting a clear, structured, and comprehensive picture of the strategic environment of FFC. This is to look beyond its daily activities to create an emphasis on the one most strategic weakness, which is the political and regulatory risk of its subsidized natural gas supply. It further explicitly points out the main opportunities (e.g., market growth, technology adoption, post-merger synergies). This framework offers a strategic compass on which the executive makes decisions and as a result procurement strategies are not formulated in isolation, but they are coordinated with the macro-realities of the company.

**Virtue of Prioritized Resource Allocation (ABC and Kraljic):** ABC Analysis and Kraljic Matrix will offer a roadmap which can be used in the action plan to divide the whole procurement portfolio at FFC. This is particularly important following the FFBL merger which has increased high levels of complexity. Rather than using a one-size-fits-all supplier management strategy, FFC is now able to use its most valuable asset its time with skilled procurement professionals with greater accuracy. This model will enable them to concentrate on its Class A / Strategic suppliers (such as its gas and phosphate suppliers) to secure supply, whilst seeking cost-efficiencies on its Leverage suppliers (such as packaging) and automating its non-critical items to ease administrative pressures.

**Advantages of Performance-Driven Management (Supplier Scorecards):** Chapter 5 provides the analysis of the supplier scorecard, which converts strategic objectives to a practical, quantitative management instrument. Through the adoption and development of such system, FFC may:

**Drive Continuous Improvement:** Shift the discussion with suppliers to discussions that are objective and composed of data rather than personal argumentation founded on weighted performance scores.

**Prevent Risk Before It Happens:** Make the scorecard a dividing tool. A falling score in an OTD or quality measure of one of the strategic suppliers (such as the problems observed at A3 Logistics) may be the catalyst of high-level intervention before resulting in a significant customer facing failure.

**Optimize the Supply Base:** Data-driven decisions on supplier contracts, allocation of volume, and development programs and eventually reward the high performing partners (such as B2) and retire the ones that fail to meet the standards (such as B3).

**Immediately Enhance Efficiency:** With the direct management of the supplier KPIs that contribute to the scorecards, as shown in section 5.4, FFC will have a direct and positive impact on its own efficiency measures, such as inventory turnover (by resolving A2 volatility), order fulfillment time (by resolving C1 OTD), and the perfect order index (by developing A3).

### 6.2 Limitations

Practical constraints and limitations of this project should be noted to allow academic integrity and put the results into perspective.

- **Sample Size of the illustrative data:** Data used in Chapter 5 is based on a sample size of nine suppliers, which will be used to show the analytical framework. It is not a full, long term audit of FFC overall multi-billion supply base. Conclusions are not statistically exhaustive but are directional.
- **Snapshot in Time:** The performance information corresponds to one quarter (Q4 2024). This is a one-point view and may not be adequate to reflect seasonal volatility (e.g., there may be a surge in demand at one end of the season) or performance by a supplier on an annualized basis.
- **Dynamic and Opaque Environment:** Analysis is a time-static analysis. The Pakistani political and economic environment is extremely dynamic; the price of gas, government subsidies and import policies may fluctuate within a short period, and this may render the PESTEL and SWOT results obsolete. In addition, numerous significant supplier

contracts, particularly those involving natural gas are not transparent, which restrict a comprehensive evaluation of supply risk.

- **Limited Generalizability:** The study was a single-case study that was specific to FFC and the specific organization of the fertilizer industry in Pakistan. Although the research demonstrates the use of the theoretical frameworks rather well, its conclusions (e.g. the criticality of the gas subsidy) cannot be generalized to other firms and industries without further significant changes.

### 6.3 Conclusion

The study aimed to examine the effect of supplier performance on supply chain efficiency in a multi-dimensional case study of how Fauji Fertilizer Company procurement process affects supply chain effectiveness. The use of a five-part analysis tool, namely: PESTEL, SWOT analysis, ABC, Kraljic Matrix, Supplier Scorecards, has shown that in the case of a company of the scale and the strategic national significance, procurement is not the work of the administration but the contributor of the corporate strategy, profitability and operational efficiency.

Analysis revealed two-procurement models at FFC a market-based of such items as packaging and logistics and policy-based its most important natural gas feedstock. This dualism is the focus of its main dilemma it must be an aggressive negotiator in the areas where it operates competitively, and a high-stakes political diplomat when it comes to dealing with the government, which is its most important supplier.

The 2024 merger with FFBL was one-stroke supply chain magic turning FFC into the only domestic manufacturer of DAP, concentrating its market strength, and establishing immense, "levered" procurement synergies. Nevertheless, the complexity of this merger is also growing, which explains the importance of a systematic, data-driven approach to supplier management as never before.

Finally, this study makes the conclusion that supplier performance and supply chain efficiency of FFC has a direct, mechanical and deep connection. It is no longer a hypothetical statement, but the illustrative figures in Chapter 5 do supply tangible evidence. Failure in the performance of the supplier does not merely result in minor-cost difference, but directly affects inventory turnover, by filling the safety stock (Supplier A2), order fulfillment time, by stopping the production (Supplier C1), administrative wastage (Supplier C2) and the perfect order index, thus, spoiling customer relations and stirring up profitability (Supplier A3).

In the FFC case, supplier performance management is not just an operational activity but strategic capacity directly supporting its market leadership, financial performance and its crucial role in the food security of Pakistan.

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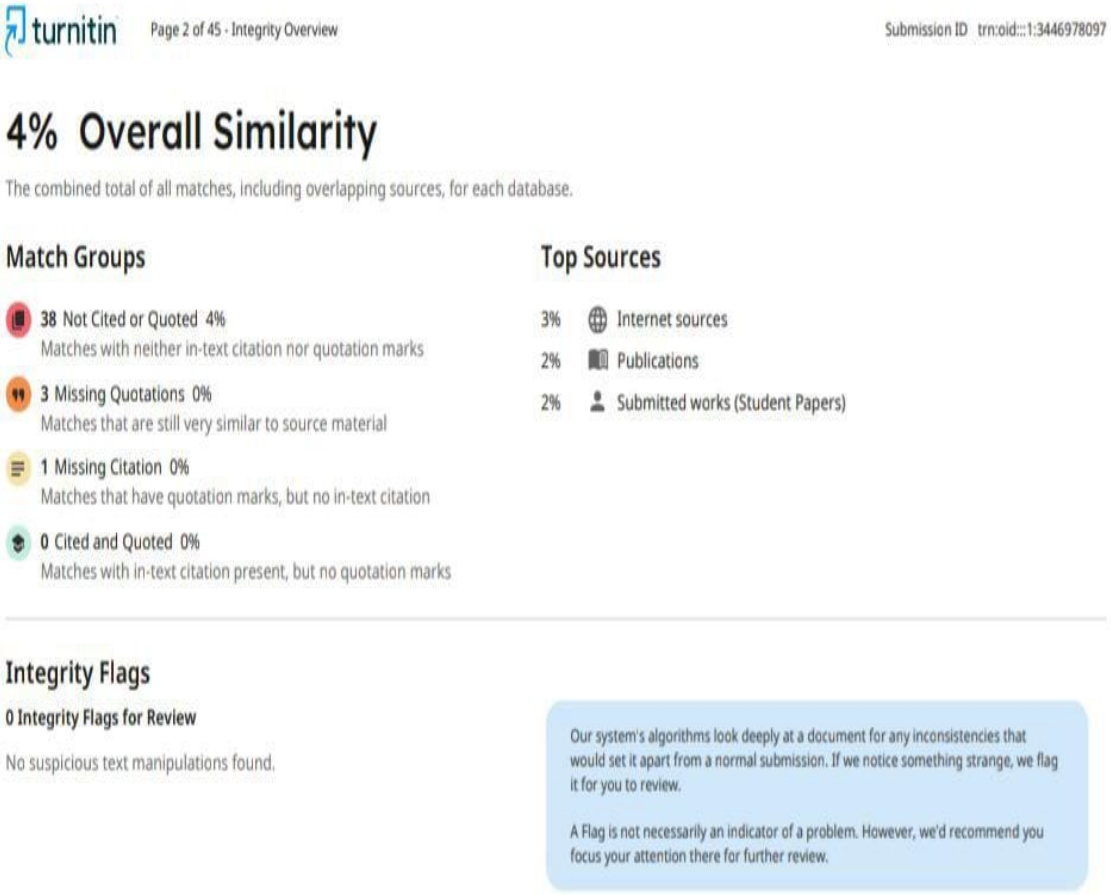

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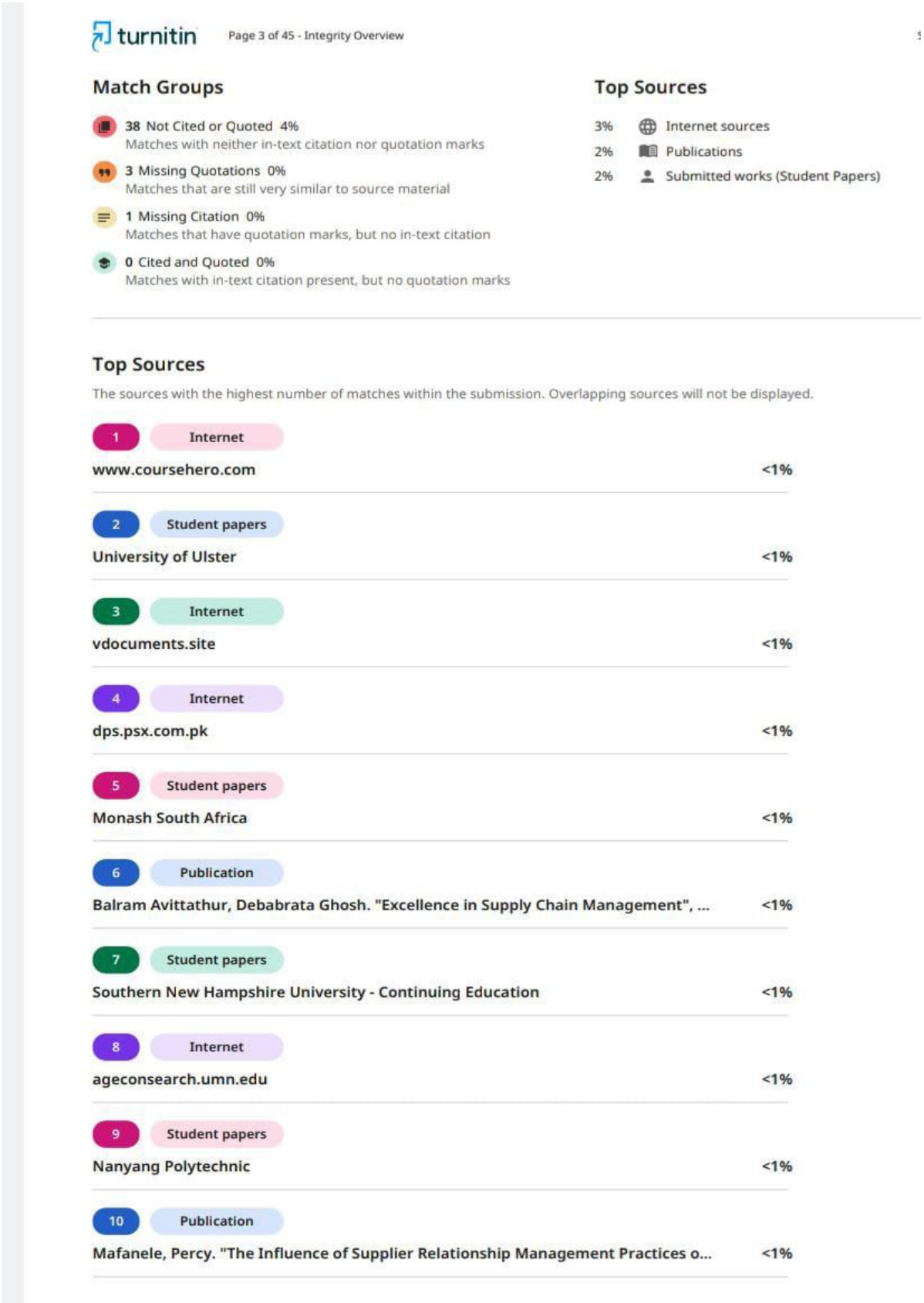

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RC-01

## Thesis/ Project Supervisor Allocation Form

Please tick the relevant box: ☑ BBA ☐ MBA (2nd last semester)

1. Student Name: Mohammad Saad Butt Enroll #: 01-111221-051

Course Code: FYP 401 Cr. Hrs:3 Degree Duration: 4 Cell No: 03351943901

Email: msbsaad1@gmail.com CMS Registration: Yes/No.

**(In case of Project, details of other Members)**

2. Student Name: Muhammad Zarbakht Khan Durrani Enroll #: 01-111212-178

Course Code: FYP401 Cr. Hrs:3 Degree Duration: 4years Cell No: 03325120979

Email: zebikhan317@gmail.com CMS Registration: Yes/No

3. Student Name: Muaz Ali Babur Enroll #: 01-111221-054

Course Code: FYP 401 Cr. Hrs. 3. Degree Duration: 4. Cell No: 03379746746

Email: muazalibabar@gmail.com CMS Registration: Yes/No.

**Research Type:** ☐ Thesis ☑ Project

**Research Area:** ☑ Supply Chain Management/ PM ☐ Marketing ☐ HRM ☐ Finance ☐ MIS

**Name of Supervisor:** Mam Hafiza Ghosia Awan

1. Student Signature: _____ Date: 23-Sep-2025

2. Student Signature: _____ 3. Student Signature: _____

Ghosia.

Supervisor Signature

**Note:**

1. Student must fill and send this form to respective supervisor for the approval. After approval send this form at research.cell@bahria.edu.pk and CC your supervisor.
2. Students first inquire the supervisor's available slots either from Supervisor or research cell before submission of supervisor allocation form to research cell

RC – 02

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| **Student Name** | 1). Mohammad Saad Butt.<br>2. Muhammad Zarbakht Khan Durrani<br>3). Muaz Ali Babur |
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BAHRIA UNIVERSITY ISLAMABAD

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Name: Ghazia Awan Sign: _____ Date: 01-10-2025

Bahria University
Islamabad Campus

RC-04

**1st Half Semester Progress Report**

| | |
|---|---|
| Name of Student(s) | ①M. Saad Butt, ②M. Zabakht khan, ③ Muaz Ali Babur |
| Enrollment No. | ① 01-111221-051, ② 01-111212-178, ③ 01-111221-054 |
| Thesis/Project Title | Impact of supplier performance on supply chain effeciency. A study of Fauji Fertilizer Company's procurement process. |

**Supervisor Student Meeting Record**

| No. | Date | Place of Meeting | Topic Discussed | Signature of Student |
|---|---|---|---|---|
| 1 | 1/10/25 | Faculty workstation | Topic disaussion | ① ② ③ |
| 2 | 7/10/25 | faculty workstation | FYP Proposal | ① ② ③ |
| 3 | 29/10/25 | faculty workstation | Ch 1 and Ch 2 | ① ② ③ |
| 4 | 11/11/25 | faculty workstation | Ch2 and Ch 3 | ① ② ③ |

Progress Satisfactory [✓] Progress Unsatisfactory [ ]

Remarks: progress is satisfactory; remaining tasks to be completed.

Signature of Supervisor: Ghosia Date: 13/11/25

Name: Ghosia Awan Note:

**Students attach 1st & 2nd half progress report at the end of spiral copy.**

Bahria University
Islamabad Campus

RC-04

**2nd Half Semester Progress Report & Thesis Approval Statement**

| | |
|---|---|
| Name of Student(s) | ① M. Saad Butt, ② M. Zarbakht Khan Durrani ③. Muaz Ali Babur. |
| Enrollment No. | ① 01-111221-051 ② 01-111212-178 ③ 01-111221-054 |
| Thesis/Project Title | Impact of supplier performance on supply chain effeciency. A study of Fauji Fertilizer Company's procurement process. |

**Supervisor Student Meeting Record**

| No. | Date | Place of Meeting | Topic Discussed | Signature of Student |
|---|---|---|---|---|
| 5 | 25th Nov, 2025 | Faculty Workstation | CH 4 & CH 5 | ① ② ③ |
| 6 | 2nd Dec, 25. | Faculty Workstation | CH 6 | ① ② ③ |
| 7 | 9th Dec, 25 | Faculty Workstation | Finalization | ① ② ③ |

## APPROVAL FOR EXAMINATION

Candidates' Name: ① M. Saad Butt ② M. Zarbakht Khan ③ Muaz Ali Babur. Enrollment No: ① 01-111221-051 ② 01-111212-178 ③ 01-111221-054

Project/Thesis Title: Impact of supplier performance on supply chain effeciency. A study of Fauji Fertilizer Company's procurement process.

I hereby certify that the above candidates' thesis/project has been completed to my satisfaction and, to my belief, its standard appropriate for submission for examination. I have also conducted plagiarism test of this thesis using HEC prescribed software and found similarity index at 21 that is within the permissible limit set by the HEC for thesis/ project BBA/MBA. I have also found the thesis/project in a format recognized by the department of Business Studies.

Signature of Supervisor: Ghosia Date: 10th Dec, 2025

Name: Ghosia Awan.

**FAUJI FERTILIZER COMPANY LIMITED**
Sona Tower, 156 The Mall Rawalpindi PAKISTAN
Tel: +92 346 5289320
URL: usama.sami@ffc.com.pk

## CERTIFICATE

To Whom It May Concern,

This is to certify that Mr. M. Zarbakht Khan (01-111212-178), Mr. Saad Butt (01-111221-051), and Mr. Muaz Ali (01-111221-054), students of Bahria University, E-8 Campus, Islamabad, successfully worked under my supervision for their Final Year Project titled "Impact of supplier performance on supply chain efficiency. A study of FFC's procurement process".

During the course of their project, they were associated with the Supply Chain Management Department at Fauji Fertilizer Company. Throughout their engagement, they demonstrated a strong sense of responsibility, technical understanding, and a keen interest in learning practical aspects of supply chain operations.

All three students actively participated in research, data analysis, and problem-solving tasks relevant to their project objectives. They displayed good teamwork, discipline, and professional conduct during their interaction with the department.

This letter is issued on the request of the students and issued without any risk and responsibility on part of the company. Should you require any further information, please feel free to contact the undersigned.

**Raja Usama Sami**
**Deputy Manager**
**Supply Chain Management**
**Fauji Fertilizer Company Ltd. Rawalpindi**

**Raja Usama Sami**

Deputy Manager

Supply Chain Management

**Fauji Fertilizer Company (FFC)**