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Analysis of factors and solutions to poor supply chain quality in a manufacturing organisation

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Background: With about 55% of operating costs in manufacturing organisations coming from costs of supply chains, coupled with a 6% increase in supply chain costs incurred by a manufacturing organisation during the financial year 2021–2022, supply chain managers need to ascertain factors contributing to high supply operating cost and ascertain suitable strategies to lower supply chain management cost.

Objectives: The purpose of this study is to unveil the factors and the solutions to poor supply chain quality in a steel product manufacturing organisation.

Method: A qualitative approach conducted via an interview guide was used in this study. Perceptions of key supply chain stakeholders within a steel product manufacturing organisation formed the basis of the exploring factors contributing to poor supply chain quality and the solutions thereof. The Pareto chart was created to ascertain the critical factors that contribute to poor supply chain quality.

Results: The study revealed that inventory stock-out, management decisions, process deviations, longer lead times, suppliers and unreliable enterprise resource planning (ERP) system issues contributed to poor supply chain quality.

Conclusion: Supply chain managers should make use of strategies such as safety and consignment stock policy, just-in-time (JIT) system, supplier evaluation exercise for supplier selection, localisation of the sourcing of raw materials, customised ERP systems, job rotation and dashboards, with a view to improve visibility and efficiency of supply chain processes.

Contribution: The study serves as a knowledge advisor to supply chain managers, on the critical factors contributing to poor supply chain quality, and the solutions thereof.

Keywords: supply chain quality; steel product manufacturing; natural disruptions; factor; supplier.

Introduction

The efficient management of supply chain activities enables companies to earn profits. This translates to low supply chain costs and maximum possible deliveries (Meredith 2022). To achieve low supply chain costs, organisations need to achieve optimised internal and external operational performance (Cherrafi et al. 2018). For an organisation to remain competitive within the fierce market competition, it has to seek ways to lower costs, hence supply chain efficiency and effectiveness have become critical for organisational survival (Handfield 2021). Supply chain costs constitute about 55% of the total product costs (Lapinskaitė & Kuckailyte 2014). Supply chain costs are costs incurred by a company for performing supply chain activities, that is, a lower percentage indicates better performance (Diaz 2020). The costs of poor quality can increase the supply chain cost for most companies; it varies between 25% and 40% of the operating expenses. A waste-free supply chain has a substantial effect on a firm's financial performance. This is achieved by eliminating waste within the supply chain process and therefore, minimising the aforementioned costs (Zhou, Wang & Ji 2021).

Supply chain quality management is the controlling of all activities along the supply chain process to achieve and maintain an expected level of performance. It includes all activities in the supply chain to ensure that products and services delivered to clients are up to the required or agreed specifications and at the appropriate cost (Rahmah & Marlini 2018). The studies of Chau et al. (2021),

George and Pillai (2019), Nadali, Zarifi and Shirsavar (2017) and Ibrahim and Ayomoh (2022) have highlighted the factors that impact supply chain efficiency and quality in manufacturing organisations such as management, supplier quality, internal processes and policies, human resources and government. Businesses operating in this Volatile, Uncertain, Complex, and Ambiguous (VUCA) world, need to identify factors that may be potential threats to their operational excellence (Jengwa & Pellissier 2022). Supply chain quality and performance are influenced by various factors (Apornak & Hezaveh 2019) and these factors include but are not limited to, inventory, lead time (George & Pillai 2019), production processes, that is, manufacturing, technology, management (Mabrouk, Omri & Jarraya 2020) and also supplier issues (Chau et al. 2021). Manufacturing organisations use inventory data to make key decisions; thus, inaccurate inventory will result in supply chain decisions that are not feasible, leading to poor supply chain quality (Mashayekhy et al. 2022). For instance, if a bill of materials is inaccurate, products will not be produced up to the required or agreed specifications (Arora, Wright & Garman 2022). In addition, their study added that inventory inaccuracies can lead to other supply chain issues such as longer lead time, quality problems and stockout.

These organisations often have quality standards as part of their sourcing policies. However, because of longer lead times, checking the quality of raw materials upon receiving the same and quality checks at each processing stage are often neglected in order to meet customer demands (Noori-Daryan, Taleizadeh & Jolai 2019). Negligence of these inspection processes may result in a distorted supply chain performance (Chang & Lin 2019). Even though developing new technologies could have led to the automation of quality inspections and optimised processing of tasks, many companies are still relying on human inspectors. When a human operator is involved in supply chain processes, their characteristic will affect the performance of the supply chain (Grosse et al. 2017).

Product quality is of high strategic importance and is one of the significant factors that both the supplier and buyer should consider in their joint inventory replenishment (Zhang et al. 2019). Improving supply chains for profitability and sustainability is very important (Makinde et al. 2020). The reviewed literature highlights tools and techniques widely used to improve supply chain quality, which ranges from planning strategies such as collaborative planning and forecasting up to six categories of quality tools that include (1) Process tools such as Enterprise Resource Planning (ERP), Lean and JIT (Just-in-Time), Six Sigma and benchmarking (Foster, Wallin & Ogden 2011), (2) Basic tools such as 5-S, check sheets, Pareto Analysis, PERT (program evaluation review technique), and cause and effect analysis (Memon et al. 2019), (3) Statistical tools consisting of Computer-aided Testing (CAT), Computer-aided Inspection and Gage R&R (Foster et al. 2011), (4) Supply chain tools on the one hand including Single Sourcing, Customer Relationship Management, Complaint Resolution and Supplier Evaluation (Makinde et al. 2020), (5) Design tools on the other hand including Quality Function Deployment (QFD), Design Teams, Failure Mode and Effects Analysis (FMEA), Define, Measure, Analyse, Design Verify (DMADV), Computer-Aided Design (CAD), Concurrent Design, and Prototyping, and lastly (6) Management tools comprising of Reliability Measure, Systems Thinking, Contingency Theory, Deming, Quality circle, Plan, Do, Check, Act (PDCA) Crosby and Change Management (Hulme et al. 2019).

To the best of the authors' knowledge, the investigation of factors contributing to poor supply chain quality as well as the usage of any or a combination of the aforementioned techniques towards ensuring high supply chain quality in steel product manufacturing organisation is a grey area that need to be explored. Therefore, this study focused on exploring factors that contribute to poor supply chain quality in a steel product manufacturing organisation and thereafter unveil solutions that could be used to mitigate or eliminate these factors. This exercise was carried out with a view to discern strategies that can be used to improve supply chain efficiency and arrest the supply chain cost within the organisation. Following on this introduction, the article will present the research methods that were used to collect and analyse data, the results and discussion of how the results link to the literature, and finally the conclusion drawn from the results and areas for further research were presented.

Methodology

The research onion was adopted and used to develop a research framework for the study. A research onion presented in Figure 1 is a six-layered framework with each layer presenting key aspects of the methods used to carry out the study.

The study intends to explore factors that influence supply chain quality. The study followed the qualitative approach whereby open-ended interviews were used to collect data from a purposively selected sample in the selected manufacturing organisation. A research philosophy can be described as an important set of beliefs shared by researchers. It defines a set of agreements on how problems are understood. There are four main philosophies, that is, pragmatism, positivism, realism, and interpretivism as depicted on the research onion. The study adopted the interpretivism philosophy using interviews to understand the supply chain quality challenges experienced by the manufacturing organisation. The research onion highlighted three key research approaches, that is, the inductive, abductive and deductive approaches (Saunders et al. 2019). The inductive approach allows the researcher to derive themes from the collected data and thereafter develop a theory (Rehman & Alharthi 2016). Following the inductive approach, interview responses were used to identify themes and thereafter developing those themes into key factors that influence supply chain quality challenges experienced by a manufacturing organisation. Among the six methodological choices presented on the research onion, the qualitative

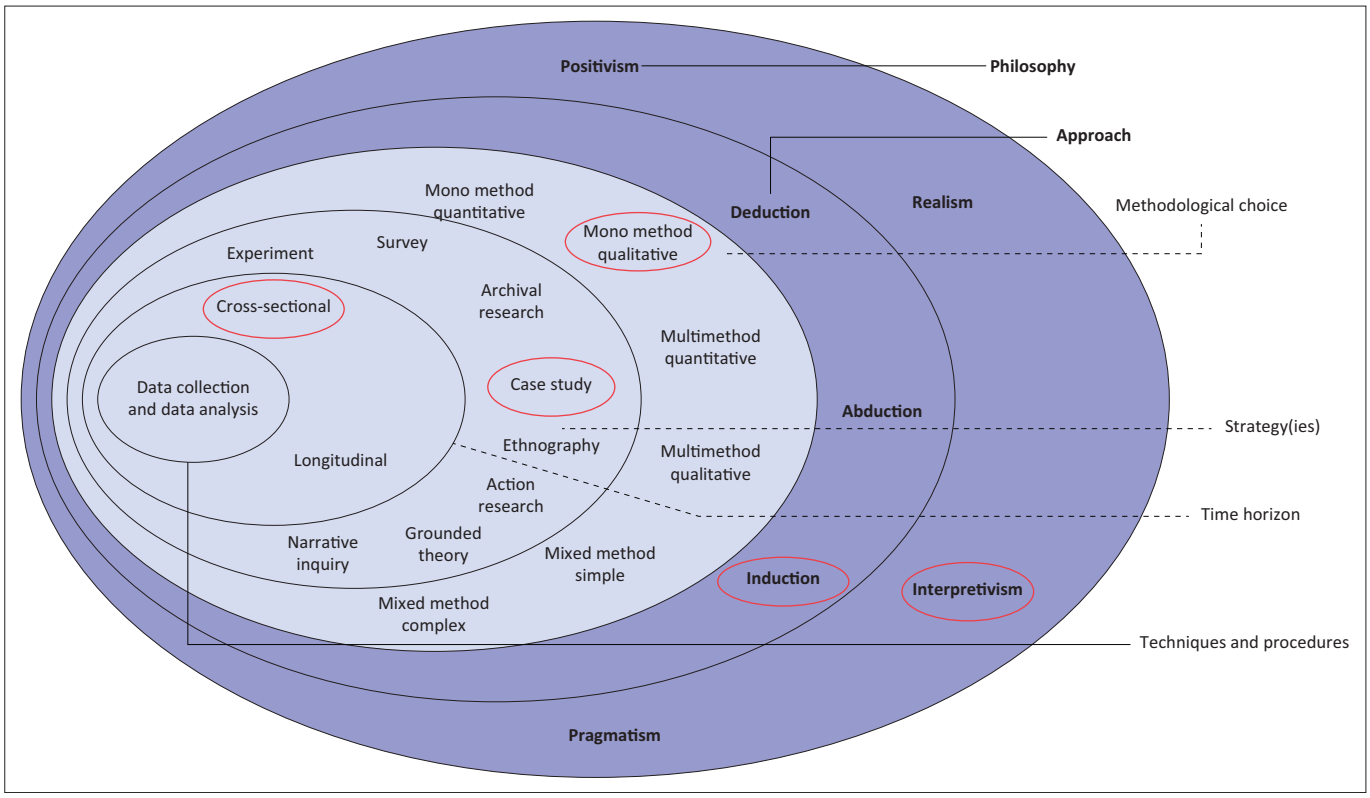


FIGURE 1: Research onion (Saunders, Lewis & Thornhill 2019).

method was selected for the study, because in-depth details regarding the supply chain quality issues faced by a steel product manufacturing organisation considered in this study are required via a structured interview. A research strategy can be defined as an overall plan on how to answer a set of research questions (Edwards & Burns 2016). Commonly used research strategies include experiments, surveys, case study and action research. The single-case study research design was adopted in this study and the steel product manufacturing organisation considered in this study was selected as the case. The researcher had no control or influence on the supply chain processes. The study adopted the cross-sectional research approach, in which the primary data collected from the participant were limited to a set period.

Twelve potential participants were purposively identified for the study; however, saturation was reached after six participants were interviewed. Study participants selected purposively based on their experience and knowledge provided value-adding information, which is essential in effectively answering the research questions and ultimately achieving the research objectives (Campbell et al. 2020). The following criteria were considered while selecting participants: (1) two or more years work experience in manufacturing, (2) an active team member within the supply chain departments, whether operational or overseeing, and lastly, (3) a post-matric qualification relevant to their role in the supply chain.

Data were collected through structured interviews. Interview meeting requests were sent to the participants, which indicated the time and place of the interview. All interviews took place online via Zoom meetings. The participants received the interview questions before the interview date to give them time to prepare. Thematic analysis was used to analyse the obtained data; verbatim responses were transcribed and coded to identify sub-themes and major themes revealing key factors that impact supply chain quality in a manufacturing organisation. A Pareto chart was further used to prioritise the themes according to the frequency. In addition to this, fishbone diagrams were created with a view to unveil the root causes of the factors contributing to poor supply chain quality and thereafter unveil potential solutions to address these salient issues. Selecting participants purposively allows better matching of the sample to the research objectives, hence improving the trustworthiness of the data and results. Furthermore, with respect to the trustworthiness of this qualitative research study, the verbatim recordings ensured the accuracy (transferability) of the transcribing process and debriefing of the participants when required.

Ethical considerations

Ethical clearance certificate was sought from the Economic and Management Sciences Research Ethics Committee (EMS-REC) of the North-West University (reference no.: 00691-22-A4). The authors acquired permission from the owners/representatives of the steel product manufacturing organisation considered in this study. It was made clear to the study respondents that participation was voluntary and informed consent form was sent to each respondent. The consent form acknowledged any existing conflict of interest and ensured the anonymity of the participants and provided

the advised voluntary participation. The *POPI Act*, that is, *Protection of Personal Information Act* that took effect on 01 July 2021 was taken into consideration during the course of the study. Thus, the informed consent form alluded to the respondents that confidentiality of the interview recordings will be secured. The participants' names and job titles were also protected.

Research findings

The results of the interview, after the coding process are presented in Table 1. It was deduced that there are 10 factors that contribute to poor supply chain quality in a steel product manufacturing organisation and they include: longer lead time, inefficient communication, inventory stock-out, process deviation, unreliable ERP system, environment, suppliers, management decision, labour/team and politics as stated in Table 1. The frequency column in the table highlights the number of times each of the factors was mentioned by the respondents during the interviews.

A Pareto (80/20) analysis was utilised to identify the key contributing factors. The frequencies were arranged in a descending order and converted into percentages so as to identify the proportional contribution of each factor, and thereafter the cumulative percentage was obtained to identify factors that contribute to 80% of the supply chain issues experienced by the steel product manufacturing organisation. The results are presented in Table 2.

The results of the Pareto analysis are presented in Figure 2.

TABLE 1: Factors contributing to poor supply chain quality in a steel product manufacturing organisation.

Factor	Frequency
Lead time (longer)	9
Inefficient communication	3
Inventory stock-out	14
Process deviation	12
ERP system (unreliable)	4
Environment	3
Supplier	9
Management decision	5
Labour /team	3
Politics	1

ERP, Enterprise Resource Planning.

TABLE 2: Analysis of factors contributing to poor supply chain quality in a steel product manufacturing organisation.

Factor	Frequency	Factor contribution (%)	Cumulative frequency (%)
Inventory stock-out	14	22	22
Process deviation	12	19	41
Supplier	9	14	56
Lead time (longer)	9	14	70
Management decision	5	8	78
ERP systems (unreliable)	4	6	84
Labour /team	3	5	89
Environment	3	5	94
Inefficient Communication	3	5	98
Politics	1	2	100
Total		**100**	

ERP, Enterprise Resource Planning.

The Pareto chart results indicated that inventory stock-out, process deviation, longer lead-time, suppliers, management decision and unreliable ERP systems are the vital few factors that negatively impact the supply chain quality of a steel product manufacturing organisation.

Root cause analysis of factors contributing to poor supply chain quality at a steel product manufacturing organisation

Based on the six factors obtained from the Pareto analysis, a root cause analysis was conducted using a cause-and-effect (fishbone) diagram for each factor. Based on the interview findings, this section presents potential root causes for inventory stock-out, processes, lead-time, suppliers, management and ERP system challenges experienced at a steel product manufacturing organisation.

Root cause analysis of inventory stockout

The results of the root cause analysis of inventory stockout at a manufacturing organisation revealed that the cost and scarcity of raw materials, the prices and quality of local suppliers, a lack of safety stock policy, shipping and receiving delays, inaccurate ERP System and human errors because of manual processes are contributory factors to the inventory stock-out issue experienced by a steel product manufacturing organisation as depicted in Figure 3.

Root cause analysis for process deviation

The results of the root cause analysis for the process deviation issues at a steel product manufacturing organisation revealed that production line bottlenecks, multiple sources of information, manual processes and paper-based process

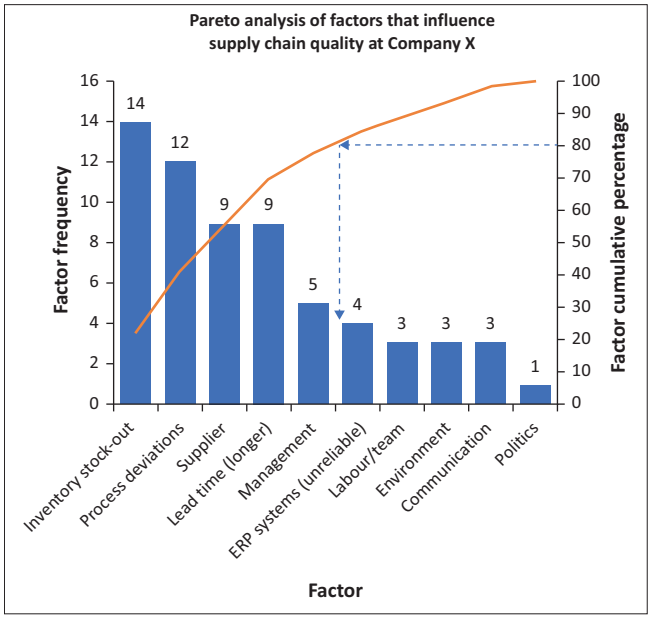
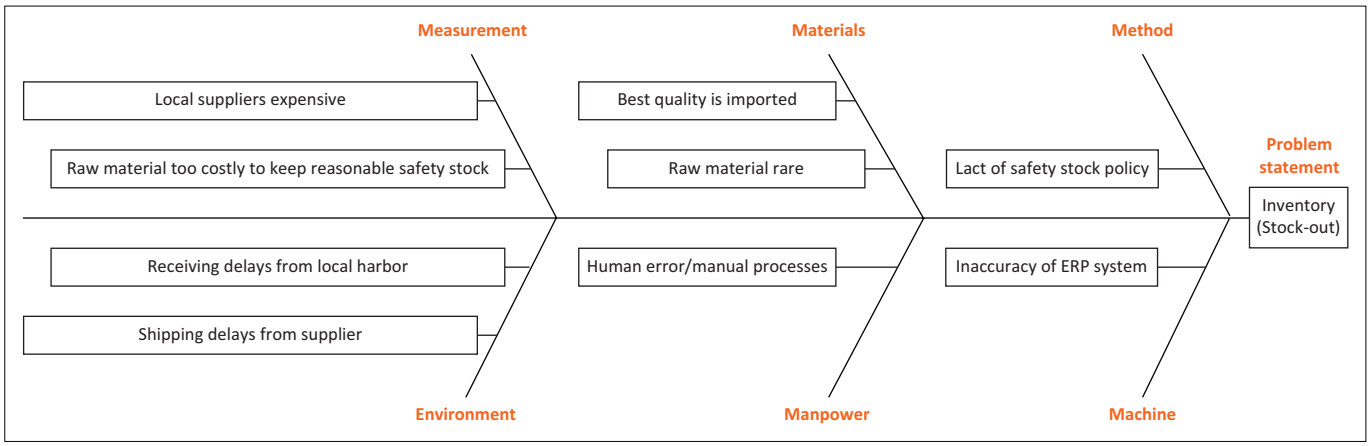


FIGURE 2: Pareto chart for factors contributing to poor supply chain quality at a steel product manufacturing organisation.



ERP, Enterprise Resource Planning.

FIGURE 3: Root cause analysis of inventory stockout in a steel product manufacturing organisation.

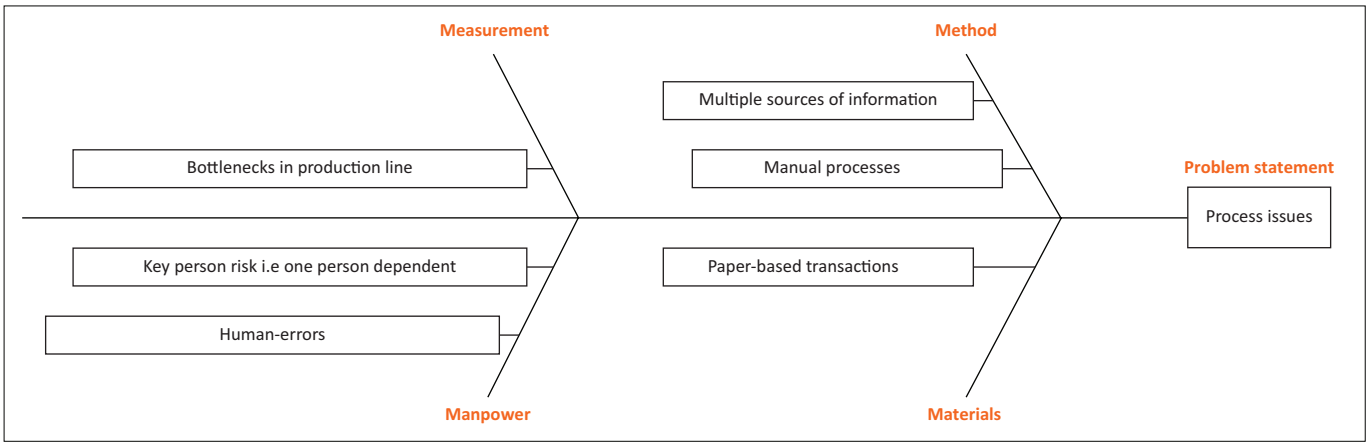


FIGURE 4: Root cause analysis of process deviation in a Steel Product Manufacturing Organisation.

transactions, processes dependent on individuals and human errors are contributory factors to process-related issues experienced in the organisation as depicted in Figure 4.

Root cause analysis of longer lead time

The results of the root cause analysis for longer lead time at a steel product manufacturing organisation as stated in Figure 5 revealed that key raw material suppliers preferred by the organisation are international suppliers based outside the borders of South Africa and this preference is based on both the price and quality they offer.

However, these suppliers not only have long production lead times but also transit leadtimes because sea shipment is the feasible mode of transportation. All these contribute to the lengthy lead times. During the period of investigation, it was also observed that because of coronavirus disease 2019 (COVID-19) regulations, suppliers delayed shipments while on the other hand, a natural disaster (flood) led to a temporary closure of the receiving harbour in the country considered in this study, which delayed the import clearing and final delivery process. Issues such as the key person risk (i.e. process dependent on an individual) and unreliable ERP system also emanated as contributory factors to lead time-related issues experienced by a steel product manufacturing organisation.

Root cause analysis for supplier issues

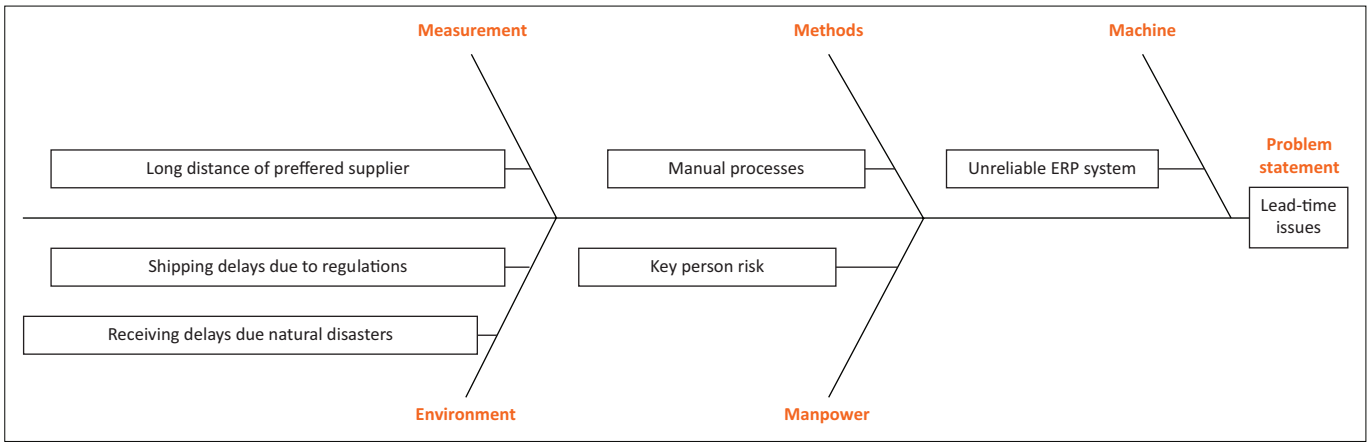
The results of the root cause analysis for supplier issues experienced by a steel product manufacturing organisation revealed that the distance of preferred suppliers, high prices of local suppliers, few local suppliers and strong negotiation of suppliers regarding debtors collection period are contributory factors to supplier issues experienced by the steel product manufacturing organisation as depicted in Figure 6.

Root cause analysis for ERP system issues

The results of the root cause analysis for ERP system issues experienced by a steel product manufacturing organisation revealed that the lack of buy-in from staff, that is, staff not in full support of the ERP system, the system requiring excessive human intervention and having multiple technologies that are not linked are the contributory factors to ERP system-related issues experienced by the organisation as depicted in Figure 7.

Root cause analysis for management issues

The results of the root cause analysis for management decision-related issues experienced by the steel product manufacturing organisation revealed that ineffective policies, low employee morale and the lack of job rotation strategies on administrative functions are contributory



ERP, Enterprise Resource Planning.

FIGURE 5: Root cause analysis of longer lead time experienced by a steel product manufacturing organisation.

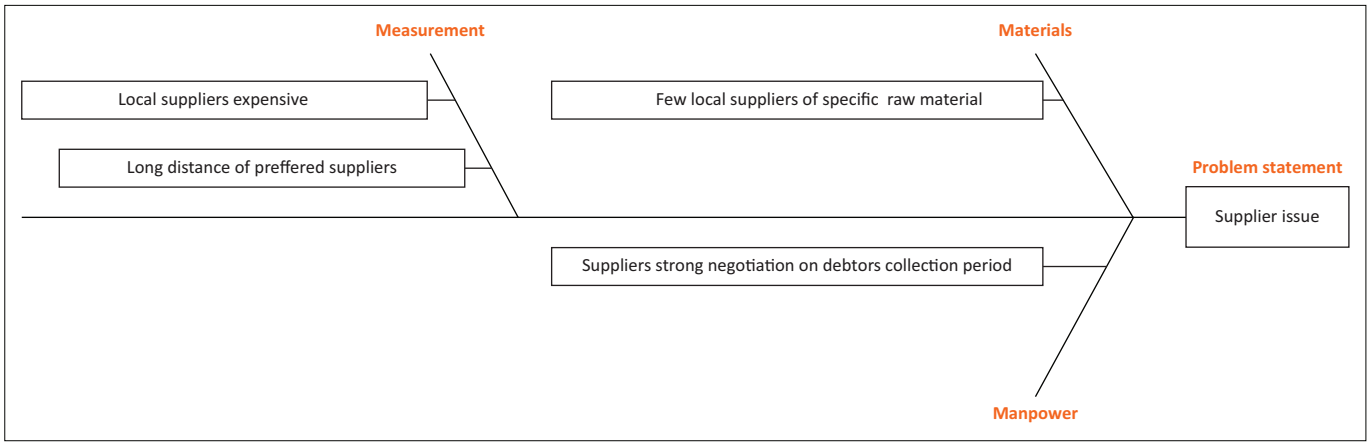
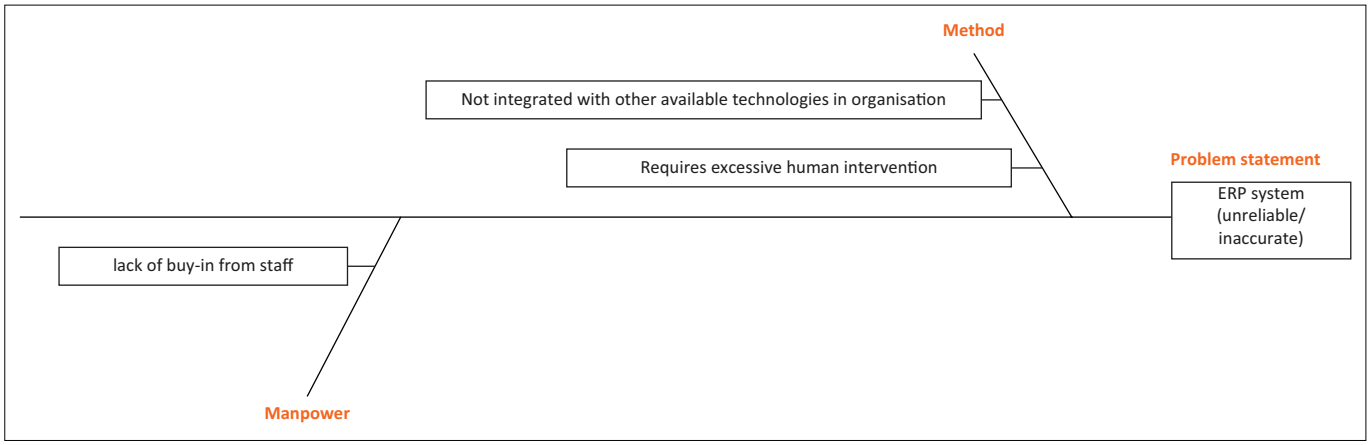


FIGURE 6: Root cause analysis of supplier issues experienced by a steel product manufacturing organisation.



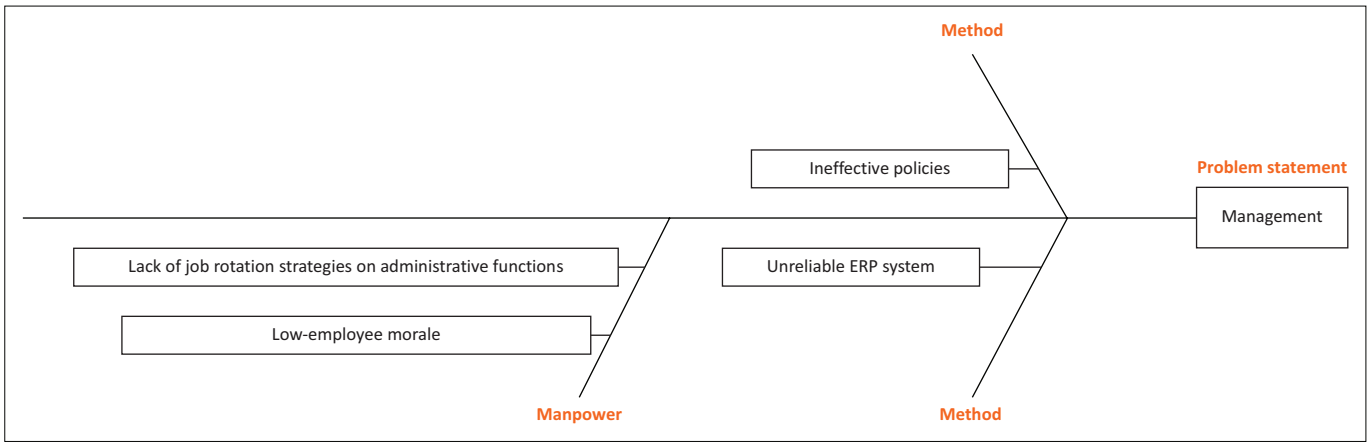
ERP, Enterprise Resource Planning.

FIGURE 7: Root cause analysis of ERP system issues experienced by a steel product manufacturing organisation.

factors to management-related issues experienced by this organisation as depicted in Figure 8.

Discussion

The study results highlighted that most of the supply chain issues experienced by the steel product manufacturing organisation was because of a lack of input-inventory, that is, stockout. Akinci, Ersoz and Boran (2023) indicated that the high cost of steel and iron is one of the major problems within the steel production sector, thereby negatively affecting businesses. The results of the study, through root causes analysis revealed that because of the high cost of steel, many steel product manufacturing organisations find it difficult to keep reasonable and efficient safety stock. In addition, the prices of local suppliers are above the market average price globally, hence the need of importing and endurance of



ERP, Enterprise Resource Planning.

FIGURE 8: Root cause analysis of management issues experienced by a steel product manufacturing organisation.

longer leadtimes. There are only a few reliable suppliers of raw steel locally. Therefore, when the demand exceeds the supply within the market, the steel product manufacturing organisation considered in this study is not prioritised by key suppliers.

Inventory stock-out affects the entire supply chain from the inbound to production and outbound processes within the organisation. Factors such as lead-time delays, ERP systems, policies and processes were also highlighted as contributory factors to the inventory stock-out issue. These factors are further discussed in this section. Process management in manufacturing companies is important, especially in ensuring business sustainability (Olabanji & Mpofu 2022). The efficient management of processes plays a crucial role in avoiding costs of poor quality, that is, costs incurred by a company because of errors occurring during the process of satisfying all customer requirements (Teplicka & Hurna 2021). The results of the root cause analysis revealed that not only are some of the processes manual and highly paper-based, opening a room for human errors, there are also processes dependent on individuals, that is, key person risk. This means when the key personnel is not available, a process stops or gets bypassed.

The lead time is considered one of the major factors that impact planning in each stage of the supply chain and thus, longer lead-time negatively impacts the competitiveness of the supply chains (Alzoubi et al. 2019). The longer lead-times do not enable organisations to positively respond to operations disruption such as unforeseen increase in demands (Chang & Lin 2019); these longer lead times result from various factors such as longer processing from administration functions and production, and also longer transits (Heydari, Mahmoodi & Taleizadeh 2016). Natural disruptions as observed in the root cause analysis of lead-time issues also play a major role causing supply chain inefficiencies. Coronavirus disease 2019 not only caused uncertainties but also led to regulatory decisons that negatively impacted companies such as the temporary closure of the Shanghai Harbour and such decisions impeded business trasnsaction globally. The import process of raw materials by the steel product manufacturing organisation considered in this study was affected by the closure of the Shanghai Harbour. In addition, because of the major floods that occurred in Durban (South Africa) during the first quarter of the year 2022, key infrastructure was damaged leading to delays in clearing imports from the harbour.

Supply chain quality requires strategic collaboration between supply chain partners with an intention to manage quality-related processes, communications, and other relationships to achieve high-quality performance at the lowest cost. Supplier and buyer relationships are considered strategic partnerships in which both parties are responsible for the product quality, the study of Zhang et al. (2019) alluded. The results of the root cause analysis for supplier issues at the steel product manufacturing organisation revealed that the distance of preffered suppliers, high prices of local suppliers and few local suppliers of the required raw material limit the strategic supplier selection options for the organisation. Another critical aspect that emanated from the analysis is the strong negotiation of suppliers regarding the debtors' collection period, that is, the period in which debtors must pay for goods received, given that the steel manufacturing organisation and their customers were not fully operational for approximately a year during the COVID-19 lockdown period, and thus conforming to the required collection period proved to be a challange.

In order to ensure business excellence, business leaders need to drive supply chain quality initiatives within organisations through value-adding decisions (Chau et al. 2021). The authors further highlighted the importance of leaders committing to the development of the supply chain process by encouraging participation, learning, innovation and creativity throughout the organisation. The results of the root cause analysis for the management factor revealed that unreliable ERP system hinders decision-making processes by managers; data plays an important role for managers to make effective and impactful decisions. Having inaccurate data may mask or magnify the problems experienced by the organisation, thus leading to managers making non-value adding decisions. The lack of job rotation strategies for

administrative functions leaves room for a key person risk; it is not ideal for process stoppage in the absence of an individual. In addition, inefficient policies and low employee morale also sprang from the root cause analysis of the management factor.

Advanced technology has a massive influence on every process of the supply chain; it allows and enables any organisation, regardless of size, to not only make sound supply chain decisions but also connect all the units within its supply chain from planning to distribution (Lee 2021). Having multiple non-synchronised sources of information in an organisation such as the steel product manufacturing organisation considered in this study can lead to inappropriate decision-making. Some of the data stored in the ERP system and the customised internal system were not the same, although serving the same purpose. This contributed to the supply chain issues experienced by this organisation. Change in an organisation requires buy-in from all stakeholders, especially from the teams that need to carry out and adopt the change. In this case, the ERP system in use by the steel product manufacturing organisation lacks buy-in from staff members. The root cause analysis of all factors highlighted the interrelation among these six factors, that is, the root cause of one factor being the next factor. For example, the role of three emerged factors, that is, ERP system, supplier selection and lead time on inventory stock-outs, which is also one of the emerged factors. The common contributing root causes to the factors were also noticed, that is, manual processing, key person risk, unreliable ERP system, distance of preffered suppliers, price of raw materials and also shipping and receving delays were noticed on more than one factor.

The factors that emerged from the study, together with the root causes stated here, support and contribute to the existing literature. However, there is insufficient literature on how challenges occurring as a result of natural disasters such as floods and the COVID-19 pandemic impact quality and efficiency of supply chain processes. Although steel product manufacturing organisations include protection provisions against circumstances that are beyond an organisation's reasonable control in their supply chain contracts for purposes of protecting their interests and minimising their liability to their counterparts should such circumstances occur, it is important for organisations to assess these challenges and proactively put mitigating strategies not only for avoiding liability but to also ensure sustainability and business continuity in general.

Proposed initiatives

Therefore, initiatives that can improve the supply chain quality in the steel product manufacturing organisation considered in this study should focus on mitigating/ eliminating all factors, but primarily on the inventory, management, lead times, processes, ERP system and supplier issues. Table 3 summarises the recommended initiatives that can be adopted to mitigate or arrest the above-mentioned factors.

TABLE 3: Initiatives to mitigate or improve the supply chain quality in a steel product manufacturing organisation.

Factor	Recommendations/improvement action
Inventory issues	Inventory management techniques such as safety and consignment stock can be utilised.
	Lean techniques can be implemented, that is, Just-In-Time, that allows the organisation to only hold inventory that is required on a certain period; this allows for a company to have liquid cash that can be re-invested whether for process improvement initiatives or interest-bearing savings.
Lead-time	Supplier evaluation can be used to monitor suppliers and the lead times. This also enables realistic lead-time delivery to customers to avoid unplanned overtime and outsourcing costs.
	Time and motion studies should be conducted with a view to set and monitor targets required to improve internal processing lead-times.
Supplier	Consider localising the sourcing of raw materials to minimise the lead-time and negotiate better pricing when buying in bulk.
	The organisation in the future should also consider and run a feasibility check to consider an upward vertical expansion.
ERP systems	The organisation must get an ERP system that is custom made to fit the organisation processes from a reliable developer, taking into consideration the voice of supply chain employees, so as to ensure buy-in from these employees and eliminate teething problems that could last longer than necessary.
Management	Management should adopt systems thinking culture and deployment of technology in not only production processes but also all processes required to complete the supply chain cycle (change management).
	A rigorous risk assessment of potential environmental factors should be conducted by the management. The management should collaborate with entities such as the World Health Organization (WHO) and United Nations or their partners with a view to obtain influential and informative risk analysis of environmental factors especially for non-natural events.
	The management should set the initiatives to get employees involved in strategic plans in order to get buy-in on key decisions.
	The management should adopt job rotation strategies in the organisation.
Processes	Creating process visibility by implementing dashboards, which will allow everyone to view processes' progress.
	Documenting standard operating procedures (all processes).
	The dashboard can be set to view the important KPIs on the organisation such as current sales, open orders, availability of inventory and efficiency of production. This will also enable key decision makers to act quicker when there are big variances without waiting for weekly or monthly reports.
	Making use of platforms such as Adobe Sign integrated with cloud technology to minimise paper-based transactions and unnecessary movement of staff.

ERP, Enterprise Resource Planning; KPI, Key Performance Indicator.

Conclusion

The importance of supply chain quality in manufacturing organisations cannot be overemphasised not only for profitability benefits but also for the contribution it adds to sustainable development goal 12, namely 'Responsible Consumption and Production', by eliminating all the inefficiencies and wastes that contribute to non-conformance in the supply chain processes. Therefore, this study was able to explore factors that contribute to poor supply chain quality in a steel product manufacturing organisation. Ten factors emerged from the interviews; however, during the analysis, six factors, that is, inventory stock-out, suppliers, longer lead time, management decisions, unreliable ERP system and process deviation were identified as the vital factors. A root cause analysis also indicated common issues that contribute to these factors, which are natural disruptions causing delays, manual processes including one personnel dependency on key processes and unreliable ERP system. These issues require immediate interventions proposed in this study given that today, businesses are operating in a world full of more uncertainties.

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Competing interests

The authors have declared that no competing interest exists.

Authors' contributions

R.L.S. contributed to the methodology, the formal analysis and investigation and also writing of the original draft. O.A.M. contributed to the conceptualisation and writing in terms of review and editing.

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Data availability

All data are available upon request with full anonymity of participants.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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