

Operations Management Strategies - A Critical Analysis on Recent Trends

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ABSTRACT

Operations management strategies are increasingly becoming more sophisticated and diverse in the modern business world. The objective of operations management is to create a system that will provide the company with the ability to produce goods or services while minimizing the costs, time, and risks associated with it. Operations management has undergone many changes over the last few years. One of those changes is that it has become more data-driven and technology-driven. Newer

Operations management refers to the techniques, procedures, and processes used to run a business or organization efficiently and effectively. It has become a vital subject in recent years as businesses have increasingly depended on computer automation and information technology. Organizations must now plan and execute their operations with utmost care to ensure productivity, efficiency, and stability.

Today, operations management is used in almost every industry to improve production outcomes and increase business competitiveness. These strategies are primarily led by the goal of increasing organizational efficiency, which refers to the time and costs required to accomplish a task. Organizational efficiency is measured by the time, money or effort spent to produce the desired result. For example: if your company wants to increase its profits, it must develop an operations management strategy to reduce costs while maintaining quality standards.

If we look at the corporate landscape, it is obvious that operations management strategies are essential in a competitive environment. For example, in a college or university environment, there are usually multiple colleges or schools competing for students' money and attention. To succeed, organizations need to have good operational strategies to win over prospective students and keep them as customers.

technologies and strategies are being adopted by companies to improve their operations management. This paper analyses the recent trends in the field of operations management and its implications for businesses.

Keywords: Operations management; Technology; Strategies; Businesses; Operation manager; Organization; Supply chain management; Manufacturing; Analyze; Labor.

I. INTRODUCTION

Operations management involves managing a company's daily tasks and activities. It involves planning, organizing, controlling, and leading the work of employees. An operations manager oversees tasks such as purchasing, accounting, hiring, and employee training. The main task of an operations manager is to create and maintain the flow of goods and services in a profitable manner. This involves identifying bottlenecks and monitoring the performance of employees to create a smooth workflow. The operations manager must also keep track of inventory and plan output schedules to ensure the timely delivery of goods to customers. Using computerized logistics systems can help with this; these systems use algorithms to identify supply and demand patterns and forecast market trends. This information allows businesses to plan their activities effectively and generate profits.

Operations management has become increasingly important in recent years as technology has transformed the way businesses operate. A number of recent trends have shifted operations management from a manual to an automated process. This includes the use of advanced gadgets, software, and systems. Further, there are various ways that operations managers can improve productivity by adopting these strategies.

II. LITERATURE REVIEW

Recent research developments of strategic consumer behavior in operations management (Mike Mingcheng Wei, Fuqiang Zhang) 2018. The authors of this research examined current advances in the literature and potential operational plans and choices to mitigate the negative effects of strategic consumer behavior. They divided these judgments into three classes, namely pricing, inventory, and information, and further addressed the impact of customers' strategic waiting behavior on these decisions as well as the underlying processes that counterbalance it.

Supply Chain Management Research and Production and Operations Management: Review, Trends, and Opportunities (Panos Kouvelis, Chester Chambers, Haiyan Wang) 2009 The authors examined the supply chain management-related papers that had appeared in Production and Operations Management over a period of about 15 years (1992 to 2006). The manuscripts covered a range of subjects, including supply chain design, uncertainty, and the bullwhip effect, contracts and supply chain coordination, capacity and sourcing decisions, applications and practice, and teaching supply chain management. They emphasized the important contribution POM has made to the subject of supply chain management during the course of this study and provided examples of how this body of work has helped the journal's mission be furthered. The authors went on to highlight pieces from this group and analyze a few publications from other prestigious journals in an effort to give a fairly comprehensive overview of the key themes covered in current supply chain management research.

Big Data Analytics in Operations Management (Tsan-Ming Choi, Stein W. Wallace, Yulan Wang) 2017 The authors of this study first looked at the big data analytics methods that were currently on the market, highlighting their benefits and drawbacks. They then looked at a number of big data analytics technologies to handle the relevant computational and data difficulties. After that, they looked at the literature to demonstrate how different big data techniques, strategies, and architectures can be used to address different OM topical areas, such as forecasting, inventory management, revenue management and marketing, transportation management, supply chain management, and risk analysis. Using case studies, they also investigated the real-world applications of big data analytics in well-known corporations.

III. METHODOLOGY

The research done here is theoretical in nature. A theoretical research analyses existing theories and explanations in order to produce new concepts using the findings from previous efforts. These novel concepts are not examined by gathering proof in the form of primary facts.

1. Globalization

Globalization has changed operations management by making it easier for countries to communicate and trade with each other. Operations management is an industry-specific field that focuses on efficiency and optimization in any type of business environment. This includes creating processes, maintaining equipment, and managing people. It is used in diverse fields such as manufacturing, banking, and the military.

Operations management uses trends and changes in the business environment to create new strategies. For example, businesses often change their products based on consumer demand. They do this by collecting data and creating a plan to reach their goals. This includes creating a marketing strategy for global businesses and creating supply chains for global markets. Globalization makes it easy for companies to supply products to any part of the world. For example, China became a major manufacturing center several years ago. This allowed companies to cheaply manufacture products in China and ship them to international markets. Companies can now easily expand their operations based on demand from different parts of the world. This has led to greater economic growth and global peace, much faster than previous expansions ever did. However, this growth has led to greater environmental impact as countries become more industrialized.

Modern-day life requires businesses to be globally competitive. This means managers need good decision-making skills when implementing new strategies or optimizing current ones. Additionally, they need to ensure everyone works efficiently so costs are minimized. Technology helps in this matter a lot as we will see next.

2. Technology

Operations management is a field that uses technology, manufacturing, and supply chain management to improve the efficiency of businesses. The field involves the coordination, planning, and control of the flow of products, information, and energy within an organization or system. Technology has made this field even more fascinating as it allows for faster and more efficient processes. Essentially, technology has

revolutionized operations management and created new possibilities for human advancement.

Technology and operations management has a huge impact on businesses and the world as a whole. Both apply to many industries including transportation, banking, hospitality, and healthcare. Transportation companies use operations management to plan for and execute safe and effective transport processes. Banking companies use it to plan for the creation of new banking policies, products, and regulations. Hospital administrators use it to plan for patient care delivery with patients' best interests in mind. And hotel managers use it to plan for and manage their organizations' guest services processes.

The benefits of applying technology to operations management are immense. It allows businesses to scale up their output without increasing their costs or manpower needs. It also allows companies to quickly adapt to changing market conditions by updating their technological infrastructure. Newer machines or software can help organizations produce more efficiently without interrupting their normal processes. For example, A textile factory can run its machines at increased speeds without affecting production schedules or damaging its machines while updating its software.

An operations manager also needs to ensure that processes within an organization are efficient while protecting data security. To do so, operations managers oversee the technological aspects of a company's infrastructure. They're also responsible for training employees in processes and ensuring that all procedures are followed correctly. Employees must know how to follow every step of a process or else complications can arise. In addition to training, equipment must be readily available for staff to use when necessary. All procedures must be clearly explained so that every member of the staff understands what needs to be done and can carry out their duties efficiently and effectively.

Operations management uses technology to improve the efficiency of businesses, making it suitable for any industry that wants greater profitability or customer satisfaction. Since technology is rapidly improving, it's exciting to watch how this field develops in the coming years.

3. Supply Chain Management

Supply chain management is a field of management that uses technology, planning, and organization to carry out the production of goods and services. In other words, it's the technique and method used to produce items or services.

Operations management is a more general term that describes the entire management process from planning to execution.

Working in a supply chain management department requires a unique set of skills. First, it's an administrative field that requires strong time management and organizational skills. It's also an extremely data-driven field that requires expertise in information technology and computer science. Finally, an ideal candidate should have a thorough understanding of inventory control, purchasing, transportation, and quality assurance systems. These skills make up the core of what defines a successful supply chain manager.

Since both supply chain management and operation management focus on behind-the-scenes work, both require strong analytical skills. These include mathematical, statistical, quantitative, and decision-making abilities. Ideally, this talent allows the person in charge of a supply chain management department to make smart decisions regarding manufacturing plants, suppliers, and transportation systems. In addition, having good communication skills is essential since these people regularly interact with product developers, customers, and internal departments within the company.

In many ways, the terms supply chain management and operation management have been used interchangeably in the past to describe the entire strategy a company follows to create its products and services. However, some authors now differentiate between the two practices they call supply chain management—which they define as managing the flow of materials—and operation management—which they define as managing the flow of people and information. Essentially, both disciplines deal with planning, organizing, controlling, and monitoring work processes to achieve desired results. Supply chain management is an important field that many managers understand well because they've worked to implement it in their own companies.

4. Product Cycle Time Reduction

The manufacturing process is a series of operations that transform raw materials into finished products. Understanding the efficiency of a production line is essential to producing high volumes of quality products on time. A slow production process leads to low yields, which in turn delays the completion of tasks and increases production costs. Delaying a work process leads to longer wait times and less efficient work practices.

There are many factors that affect the speed of a production process. When workers reduce the pace of their work, they slow down

production. This reduces their output and increases the cost of their labor. To avoid this, workers must always reduce the pace with which they work but also maintain control over their work. Another factor that affects speed is the skill level of the workers. If workers do not perform tasks correctly, they slow down the process. To improve efficiency, managers must assign tasks based on job skill level and experience so that experienced workers perform more difficult tasks and new workers can learn responsibilities quickly.

To reduce cycle times, organizations need to reduce manpower on their production lines. When there are fewer people working in a line, it reduces the wait times for workers to complete tasks. For example, an unskilled worker may take 5 minutes to assemble an electronic product compared to an experienced worker who can assemble it in only 30 seconds, and thus the unskilled worker delays the production for every other worker. By reducing manpower, organizations increase efficiency without requiring more skilled workers. Additionally, managers should monitor staff performance through time sheets and evaluate their effectiveness using quality assurance standards to identify staff members who slow down the process and remove them from line supervision duties to improve production.

The next step in improving efficiency is to reorganize work processes within an organization's operations hierarchy. There are several ways to organize tasks within an operations hierarchy: task-based organization, job-based organization, and material-based organization. A task-based organization assigns specific tasks to specific staff members; a job-based organization assigns specific jobs to specific staff members, and a material-based organization uses material inputs and outputs throughout the hierarchy.

Worker safety is also important when modifying work processes within an organization's hierarchy. For example, when staff members increase the speed of their work, they can reduce the safety measures in place for workplace accidents. Therefore, staff members must always maintain current safety standards and implement new procedures when necessary to reduce risk and speed up cycle times.

5. Lean Production

Operations management makes sure that a company's products are produced and delivered efficiently and effectively. And as such, lean production is an integral part of operations management; it is used to create low-cost products and improve operational efficiency. Lean

production techniques help businesses save money by reducing waste. Many businesses run their production processes with little or no regard for wastes generated during the processes. This can be very expensive since every unnecessary cost is gobbled up by the company's bottom line. A change in attitude toward identifying unnecessary costs and eliminating them through lean production makes for more money in the company's pockets and for the employees who produce the company's goods.

Lean techniques help operations managers solve many common problems. Most problems in operations management can be solved by applying some of the lean production principles to an existing process. Some common problem areas include speeding up a slow process, reducing inventory, increasing productivity, and reducing worker stress. Omitting unnecessary processes through lean techniques allows managers to target their processes and increase productivity, which will ultimately result in more product sales and fewer expenses overall.

Lean techniques make operations management an entirely different game from traditional business management. Traditional operations management is purely tactical; it focuses on day-to-day tasks related to running a company's operations. Lean, on the other hand, is strategic in nature and aims to improve entire organizations through improved efficiency. Lean operations management looks at a company as a whole and identifies areas where improvement is needed so that all employees can reach maximum productivity levels. Over time, this can have huge impact on a company's performance and profitability.

6. Total Quality Management

Total quality management (TQM) is a management philosophy that emphasizes continuous improvement and effectiveness in all aspects of operations management. It is a way of ensuring that all processes, products, and services meet the high standards set by the organization. TQM originated in Japan in the 1960s under the leadership of the Toyota Production System (TPS), which later inspired other transformation efforts in manufacturing around the globe. In addition to streamlining manufacturing processes, TQM has proven beneficial in other industries as well.

TQM refers to a way of managing operations effectively and efficiently through assessing the quality of work done on various tasks and systems within an organization. It builds on the concept of just-in-time management and

emphasizes effective and efficient operations. By focusing on the quality of work being done, TQM encourages employees to make timely decisions with relevant information and skills. This approach naturally promotes teamwork and accountability at all levels. It also encourages employees to speak up when they feel something is wrong so that issues can be resolved promptly. At the same time, TQM aims to make everyone aware of best practices so that everyone can improve their work over time.

To ensure quality in all aspects of work, TQS practices these standards: staff, skills, systems, suppliers, and space. In terms of staff, TQM encourages staff development — both during training and afterwards — so that every employee can grow and learn new skills throughout their career. Systems focus on implementing best practices through IT systems development and maintenance so that all systems function efficiently together. Suppliers focus on building strong relationships with all internal suppliers so that everything runs smoothly without delays. Finally, space refers to keeping work areas clean, organized, and free from distractions so that employees can focus on their jobs without interruption.

To encourage quality throughout operations management, TQM encourages companies to implement change in their operations through a change management approach. This approach naturally promotes teamwork and accountability at all levels by ensuring that everyone understands what needs to change before implementing any changes. It also encourages employees to speak up when they feel something is wrong so that issues can be resolved promptly. On the same hand, change management approaches promote innovative thinking since it encourages employees to identify problems and propose solutions. Promoting creative thinking promotes overall growth in both operations management strategies and employee attitudes towards work ethics.

Focusing on quality helps companies manage their staff, systems, skills, suppliers, and space effectively to produce high-quality products or services with minimal errors or mistakes. To implement quality control effectively, companies should have a thorough knowledge of Total Quality Management principles via in-house or off-site training courses.

7. Worker Involvement

Another crucial component of operations management is incorporating workers' input in all decisions. This ensures that staff is included in any

changes or decisions that directly affect their jobs. For example, if managers want to change working hours for staff members, they should first consult with the workers. This avoids any misunderstandings or conflict between workers and managers over meal times or rest periods. Essentially, operations management encourages inclusive decision-making that benefits everyone involved.

In addition to involving workers, operations management also focuses on effective decision-making at all levels, including the overall company and its individual departments. For example, the company's leaders make strategic business decisions regarding their organization's growth and development. These include deciding which products to produce and at what cost, as well as determining staffing levels and pay structures for employees. The leaders also make key marketing decisions that affect customer interest in their products. Apart from making strategic decisions, leaders also oversee day-to-day operations within their departments. They ensure each employee follows proper procedures to produce quality results. All this cannot function properly without having every employee on board with the plan, thus having more worker involvement is an emerging trend that leads to better results.

8. Re-Engineering

Optimizing a system is an integral part of operations management and can help organizations succeed by making smart decisions. However, the field is plagued by bad practices that make it difficult to save money and improve performance. Changing these practices could lead to substantial improvements in both efficiency and quality.

Companies must think creatively when optimizing their operations management strategies. One option is to add new features to existing products, this is known as reengineering. Reengineering is a strategy for making large cuts in cost by adding new features to existing products. For example, car companies overhaul their old models with new seats, transmissions, instruments, and paintjobs to give them a fresh look without spending thousands of dollars on a new model. In this way, companies can keep their products relevant while saving money on development costs. Anyone can update their old products with new features without changing them beyond recognition.

To improve operations management further, you'll need to study the best practices of other industries and apply them to your own organization's workflows. For example, many

industries use lean manufacturing principles to streamline operations and reduce waste. Participants can educate themselves on best practices for product development, such as agile methods for making software updates or design patterns for product design.

Re-engineering applies not just to the product cycle but also to several other factors like educating employees to rethink how they spend their effort so that it is productive. Operations management involves making decisions regarding manufacturing, purchasing, storage, distribution, and scheduling tasks for employees within an organization. Employees need to be educated to understand the strategic nature of operations management. And rethinking work habits is another way of re-engineering the system for efficiency.

9. Flexibility

Being adaptive and nimble in the face of change is essential in any field or business endeavor. However, it's particularly true with management. This is because anything related to the organization can go wrong due to unforeseen events which means that managers must have contingency plans for failure. In addition, Murphy's Law applies at every level of an operation; glitches can occur at any time causing unexpected results which makes it imperative that managers have contingency plans for unexpected consequences.

In addition, managers also need to plan for possible changes in the market and their competitors. They must always be ready to react to changing circumstances and change their strategies as needed. To make sure that the organization continues to do well, keeping headcount to a minimum is another important part of contingency planning. This is because keeping a low headcount means that an organization can be more nimble, and focused and have fewer problems with staff members being overworked and/or put under unnecessary stress. This also means that they'll spend less time on administration and more time on doing the job they're employed for. Some organizations have adopted contingency planning into their core operating model.

10. Downsizing

When referring to the concept of downsizing, most people think of businesses reducing the number of employees. However, this is not the only way that an organization can downsize its workforce. Employers can reduce labor costs by reducing the number of workers per

unit of work, space, or time. They can also reduce capital costs by reducing the number of machines or materials per unit of work. So essentially, there are many ways to cut costs through workforce reduction.

When evaluating an organization's cost structure, an employer should first evaluate how many employees it needs to produce its products or services. The number of employees that are needed depends on how complex an organization's processes are. More complex processes require more employees to run efficiently. For example, a food manufacturing plant may need more cooks than it does sales associates for its sales process. However, a clothing factory that only makes one style of clothing may only need one clerk along its production line instead of dozens. In this way, an employer reduces labor costs by reducing the number of employees needed per unit of work without affecting the quality of its products or services.

Another way to reduce labor costs is by reducing the number of workers per unit of space. For example, a factory that produces electronic devices must have a large building or warehouse to hold all its equipment. In order to save money on rent, some employers choose to reduce the number of workers per unit of space by hiring fewer people for each position in their production lines. When choosing between reduced labor and increased production, most employers opt for reduced labor costs because it yields greater savings than increased production does.

The final way to reduce labor costs through workforce reduction is by reducing the number of workers per unit of time. For example, when producing electronic devices, factories must have a large staff to produce and stock their product at regular intervals. An employer reduces this cost by hiring fewer people for longer periods which translates into lower wages for each job position. This way, the company increases its profits without increasing the number of people who produce its products.

Theoretical Contribution

This research paper adds up to the already existing knowledge base surrounding the topic of operations management. In this research, I have analyzed and examined various trends popping up in the field of operations management and suggested strategies one can apply to take their business operations to the next level. The research also suggests measures necessary to understand for an operations manager. A manager should stay up to date with the current workings of the

marketplace and this paper aims to provide that knowledge gap for operations managers.

Limitations and Future Research Directions

The very nature of the field of operations management is that it is ever-shifting and morphing according to the marketplace. So any research on this topic cannot be exhaustive. Trends are called that because they are time bound. Sometimes in a matter of just a few years trends change in the totally opposite direction. Hence, this research is also time-bound like the trends it studies.

Therefore, future research is necessary to determine what the next wave of trends will be. Further research to analyze trends in operations management can reveal common patterns in strategies that always work. Analyzing these commonalities can lead to a deep understanding of this subject and thus increase the chances of businesses profiting from the research.

IV. CONCLUSION

Recent trends in operations management strategies are influenced by the ever-changing technology and its impact on how people work. The internet has allowed businesses to reach customers around the world. This has led to a shift in customer demand as they are now looking for faster delivery and high-quality products. In order to keep up with these trends, companies need to adopt new technologies and strategies. With technology today, companies are trying out new strategies that allow them to differentiate themselves from others and provide a competitive advantage in the marketplace. One of the recent trends is to create systems that help companies collect information on their customers. This can be done by the use of analytics and decision-making tools. Through this process, a company knows exactly what their customers want and thus creates products to fulfill that need. Further, advances in software and manufacturing processes have allowed businesses to find new ways to approach the marketplace. This has created an opportunity where the strategies one uses in their business can lead to significant restructuring of the company's market standing. As such, a keen eye on the recent trends in this field becomes not only important but essential.

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