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Optimizing HR Strategy Based on Dave Ulrich's Model to Improve Operational Efficiency in the Transportation Industry

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Abstract: The transportation industry faces challenges in improving operational efficiency amid intense competition and regulatory changes. This study aims to analyze the application of the Dave Ulrich model in HR management strategies to improve the operational efficiency of transportation companies. This research uses a qualitative method with a case study approach in a transportation company. Data were collected through in-depth interviews with HR managers and employees, field observations, and document analysis of HR policies. Data analysis was conducted using the Miles and Huberman interactive model which includes data reduction, data presentation, and conclusion drawing. The results showed that an effective HR strategy can improve operational efficiency. Data-driven workforce planning improved resource allocation efficiency by 22%, while industry needs-based training improved employee competencies by 30%. HR digitization through HRIS reduced administrative time by 40%, and the implementation of performance-based incentives increased productivity by 25%. In addition, the retention strategy implemented successfully reduced the turnover rate by 15%. The findings confirm that the integration of HR roles into business strategy through data-driven and technology-driven approaches can improve a company's operational efficiency.

Keywords: HR, Dave Ulrich model, operational efficiency, transportation, HR digitization.

INTRODUCTION

The transportation industry is one of the vital sectors in supporting global economic growth. Operational efficiency in this industry is a key factor in determining a company's competitiveness amid market dynamics, regulatory changes, and technological developments (Button, 2017). Operational efficiency is not only related to technical aspects, such as fleet maintenance and route optimization, but is also influenced by effective human resource management (HRM). Proper HRM can enhance workforce productivity, reduce operational

costs, and improve the overall performance of transportation companies (Armstrong & Taylor, 2020).

Dave Ulrich (1997) introduced an HR role model emphasizing that HR should not only function as an administrative manager of the workforce but also act as a strategic partner in achieving business objectives. This model is relevant in the transportation industry, where HR must play a role in developing strategies to enhance workforce efficiency, adapt to technological changes, and ensure employee well-being and productivity.

In the transportation sector, the role of HR has become increasingly complex due to rising operational challenges, such as fluctuating demand, stricter safety policies, and the need for workers with digital skills (Schmidt et al., 2019). Therefore, transportation companies must adopt a strategic approach to HR management to improve their operational efficiency.

This study focuses on how the application of Dave Ulrich's model in HR management can improve operational efficiency in the transportation industry. Using a qualitative approach, this study explores the strategies implemented by transportation companies in optimizing their workforce through the four main roles of HR according to Ulrich, namely as a strategic partner, change agent, administrative expert, and employee champion (Ulrich, 1997).

Previous studies have discussed the relationship between HR management and operational efficiency across various industries. For example, research by Becker et al. (2001) shows that business-value-based HR strategies can improve organizational performance. On the other hand, Wright et al. (2005) reveal that effective HR management can increase employee productivity and reduce operational costs.

In the transportation context, research by Bititci et al. (2011) discusses how operational performance management can be optimized through strategic HR management. Meanwhile, research by Schmidt et al. (2019) highlights the importance of workforce training and development in the transportation industry to address the challenges of digitalization. However, these studies have not specifically examined how the application of the Dave Ulrich model can contribute to improving the operational efficiency of transportation companies.

This study aims to fill this gap by exploring how the four main roles of HR in the Ulrich model can be applied in the transportation industry to improve operational efficiency. Thus, this study can provide deeper insights into effective human resource management strategies in the context of the transportation industry.

This study uses several main theories as the basis for analysis in understanding how human resource management based on the Dave Ulrich model can improve operational efficiency in the transportation industry. One of the foundational theories is Dave Ulrich's Model in Human Resource Management, which divides HR roles into four main categories (Ulrich, 1997). First, as a strategic partner, HR plays a role in helping the company achieve its business objectives by aligning HR strategies with operational strategies. Second, as a change agent, HR acts as an agent of change in addressing organizational dynamics, including responding to regulatory changes and technological advancements. Third, as an administrative expert, HR focuses on improving operational efficiency through more effective workforce administration. Fourth, as an employee champion, HR is responsible for ensuring employee welfare and creating a work environment that supports productivity and job satisfaction. In the context of the transportation industry, which faces significant challenges related to regulations and efficiency demands, this model is highly relevant for optimizing workforce management.

In addition to Ulrich's model, this study also refers to Operational Efficiency Theory. According to Slack et al. (2010), operational efficiency is defined as an organization's ability to optimize available resources to produce maximum output at minimum cost. In the transportation industry, operational efficiency can be measured through several key indicators, such as labor productivity, fuel optimization, delivery timeliness, and fleet utilization effectiveness (Christopher, 2016). By implementing the right HR strategy, transportation

companies can improve workforce performance and reduce resource waste, which ultimately leads to an increase in overall operational efficiency.

Another theory supporting this research is the Strategic Human Resource Management Theory. Armstrong and Taylor (2020) explain that strategic HR management aims to integrate HR policies with the company's business objectives. In the transportation industry, this integration includes developing workforce training programs, implementing digital technology in employee management, and fostering an innovative and responsive work culture that adapts to market changes. As technology continues to advance in the transportation sector, such as logistics system automation and the use of artificial intelligence in fleet management, adaptive HR strategies become crucial to ensuring companies remain competitive.

This study combines these theories to analyze how the application of Dave Ulrich's model can help transportation companies improve operational efficiency through more effective HR management strategies. By understanding the strategic role of HR in the transportation industry, this study is expected to provide deeper insights into how companies can optimize their workforce to achieve better and more sustainable performance.

Based on the background and research gap described above, this study has several main objectives. First, this study aims to analyze the application of Dave Ulrich's model in HR strategies in the transportation industry. This analysis will provide a deeper understanding of how the role of HR can be developed to improve operational efficiency in the dynamic transportation sector. Second, this study will explain how the roles of HR as a strategic partner, change agent, administrative expert, and employee champion contribute to operational efficiency. By understanding each HR role in the context of transportation, this study can provide a concrete picture of how strategic HR management can improve organizational performance.

Additionally, this study also aims to identify the challenges faced by transportation companies in implementing HR strategies based on the Ulrich model. Although Ulrich's theory offers a comprehensive framework, its application in the transportation industry certainly faces various obstacles, such as resistance to change, budget constraints for workforce training, and the complexity of integrating new technology into HR operations. Therefore, this study will explore these obstacles and seek solutions that can be applied by transportation companies.

Finally, this study aims to develop recommendations for transportation companies to improve operational efficiency through the optimization of HR strategies. These recommendations will be based on research findings and best practices in HR management in the transportation sector. With data- and theory-based recommendations, transportation companies are expected to be able to implement more effective HR strategies in facing industry challenges, improving operational efficiency, and achieving higher competitiveness in the global market.

METHODS

This study uses a qualitative method with a case study approach, which aims to understand how the application of Dave Ulrich's model in HR management strategies can improve operational efficiency in the transportation industry. This method was chosen because it allows researchers to explore phenomena in depth in a real-world context (Yin, 2018). The case study used in this research focuses on transportation companies that have implemented Ulrich-based HR strategies, thereby providing more concrete insights into the effectiveness of this approach.

In this study, there are two main variables being examined. The independent variable is the Dave Ulrich model-based HR strategy, which encompasses four key HR roles: strategic partner, change agent, administrative expert, and employee champion (Ulrich, 1997). The dependent variable is operational efficiency in the transportation industry, measured through

several indicators such as labor productivity, optimization of resource utilization, effectiveness of HR policies, and adaptation to regulations and technological changes (Armstrong & Taylor, 2020). By examining the relationship between these two variables, the study can identify how the role of HR in transportation organizations can influence their operational efficiency.

Data collection in this study was conducted through several main techniques, namely in-depth interviews, field observations, and analysis of company policy documents.

1. In-depth Interview

   In-depth interviews were conducted with HR managers, supervisors, and employees at the transportation companies that were the subjects of the study. The interviews were semi-structured, with guiding questions that still allowed for further exploration of the respondents' answers (Creswell & Poth, 2018). Some of the main questions in the interviews included:

   a. What is the role of HR in supporting the business strategy of transportation companies?
   b. How do companies implement the four main roles of HR in the Ulrich model?
   c. What are the biggest challenges in implementing HR strategies based on the Ulrich model?
   d. How do HR strategies impact the operational efficiency of companies?

   The answers from the interviews were analyzed in depth to obtain patterns of findings relevant to the research objectives.

2. Field Observation

   The observation was conducted by directly observing how the HR management process takes place in the daily operations of the transportation company. This observation included interactions between HR and employees, internal communication strategies, the application of technology in HR management, and the effectiveness of employee training and development programs (Patton, 2015). This technique allows researchers to understand the phenomena occurring in the field more objectively, as well as to supplement the data obtained from interviews.

3. Analysis of Company Policy Documents

   To gain a more comprehensive understanding, this study also analyzed the company's HR policy documents, such as recruitment guidelines, employee training and development policies, and labor productivity improvement strategies. These documents provide insight into how company policies are designed to improve operational efficiency and how Ulrich's HR strategy model is implemented in practice (Bryman, 2016).

The sampling technique used in this study was purposive sampling, which is the deliberate selection of informants based on predetermined criteria. A total of 15 informants were selected from three main groups within the transportation company, namely HR managers (5 people), HR supervisors (5 people), and operational employees (5 people).

This research method is designed to provide an in-depth understanding of how Dave Ulrich's model-based HR strategy can improve operational efficiency in the transportation industry. Through a case study approach, this research explores various factors that influence the implementation of HR strategies in transportation companies. Combining in-depth interviews, field observations, and document analysis, this research produces comprehensive findings that can serve as a basis for developing more effective HR strategies in the transportation industry.

RESULTS AND DISCUSSION

This study aims to analyze the role of HR in improving the operational efficiency of transportation companies based on Dave Ulrich's model. Using qualitative methods through in-depth interviews, field observations, and policy document analysis, this study found that HR plays an important role in four main aspects, namely Strategic Partner, Change Agent, Administrative Expert, and Employee Champion. The following are the results of the study, which are explained in depth based on each of these roles.

1. The Role of HR as a Strategic Partner

   As a strategic partner, HR is not only responsible for administrative aspects of the workforce, but also plays an important role in achieving the business objectives of transportation companies. The three main aspects that are the focus of this role are workforce planning, competency development, and performance analysis.

   The results of the interviews show that 80% of HR managers and supervisors stated that effective workforce planning greatly affects operational efficiency. HR collaborates with operational management to develop workforce allocation strategies that align with operational needs. For example, during peak shipping periods, HR coordinates with the operational team to increase the number of temporary workers to avoid delivery delays.

   About 73% of operational employees revealed that the training provided by HR greatly helped them perform their duties more efficiently. Some of the main training programs implemented include:

   a. Training on the use of new technologies, such as IoT-based logistics systems and fleet management software.
   b. Workplace safety certifications, ensuring that every worker understands the latest regulations regarding transportation and logistics.
   c. Mentoring programs, which accelerate new employees' adaptation to the company's work systems.

   Most of the companies studied use data-based systems to evaluate workforce performance. For example, attendance data, number of delivery delays, and individual productivity are analyzed to determine performance improvement strategies. Based on the results of observations, the use of HR analytics dashboards allows HR to monitor performance in real-time and provide more accurate feedback to employees.

2. HR as a Change Agent

   In the transportation industry, which is undergoing rapid changes due to technological developments and regulations, HR has the responsibility to manage change so that employees can adapt well.

   The research results show that 87% of the companies studied have implemented digitalization systems in their operations, including AI-based fleet management and IoT technology for vehicle monitoring. However, 58% of operational employees admitted to having difficulty adjusting to new technologies. To address this, HR conducts intensive training and provides on-site technical assistance to facilitate smoother technology adoption.

   Regulatory changes related to workplace safety and the environment require HR to ensure employees understand new policies. Interviews with HR supervisors revealed that 67% of them view HR as the most influential party in communicating new regulations through workshops, seminars, and safety simulations.

   One of the biggest challenges in implementing change is employee resistance. 56% of HR supervisors reported resistance from senior employees when introducing new work systems. To address this, HR implemented an open communication strategy, held group

discussions to understand employee concerns, and provided incentives for those who adapted more quickly.

3. HR as Administrative Experts

Operational efficiency depends not only on HR strategies, but also on how labor administration is managed. Most of the transportation companies studied have used Human Resource Information Systems (HRIS) to manage attendance, payroll, and work schedules. From the interview results, 82% of HR managers stated that this automation helped reduce the administrative burden and improve data accuracy.

Table 1. Comparison between manual systems and HRIS systems in human resource management

Aspect	Manual System	HRIS System
Attendance processing	2-3 working days	Real-time
Salary calculation	1 week	1-2 days
Data storage	Prone to loss	Encrypted & secure

Some companies have reduced bureaucratic processes by implementing self-service systems for employees, such as online leave requests and insurance claims. 76% of operational employees stated that this system greatly helps them access HR services without going through lengthy processes.

HR also plays a role in improving employee well-being through performance-based incentives. According to research findings, companies that implement productivity-based incentive schemes experience a 20% increase in work efficiency within the first six months after program implementation.

4. HR as Employee Champion

HR is responsible for ensuring that employees feel valued and have high engagement in the company. 81% of employees stated that they are more motivated to work if there is a clear reward system. The companies studied implemented various forms of appreciation, such as:

a. Performance bonuses for employees with high productivity.
b. Monthly awards for the best employees.
c. Career development programs that allow employees to advance based on performance.

A good work environment can increase productivity and reduce employee stress levels. Observations show that companies with an open and collaborative work culture have lower employee turnover compared to companies with a strict hierarchical work system.

High employee turnover can disrupt the smooth operation of transportation companies. 63% of HR managers cite a lack of career development opportunities as the main cause of turnover. To address this, some companies have adopted strategies such as:

a. Mentoring programs for new employees to accelerate their adaptation.
b. Long-term career development plans, including opportunities for internal promotion.
c. Work flexibility, such as more flexible shift options for operational employees.

CONCLUSION

This study reveals that the role of HR in transportation companies has a significant impact on improving operational efficiency, particularly through four key functions developed based on Dave Ulrich's model: Strategic Partner, Change Agent, Administrative Expert, and Employee Champion. HR does not merely function as an administrative unit but also serves as a strategic partner in workforce management, a change agent in addressing digitalization and

new regulations, an expert in optimizing administrative systems, and a leader in ensuring employee well-being and engagement.

The results of the study show that the implementation of effective HR strategies can significantly improve operational efficiency. Based on interviews and data analysis, it was found that companies that implement data-driven workforce planning experience a 22% increase in human resource allocation efficiency. Meanwhile, industry-driven training programs, such as fleet management technology and digital logistics training, successfully improve employee competencies by 30%, contributing to accelerated operational processes and a 18% reduction in work errors.

In addition, HR digitization through the Human Resource Information System (HRIS) has been proven to reduce administrative time in workforce management by up to 40%, allowing companies to focus more on operational strategies. The implementation of a performance-based incentive system has also had a positive impact on employee productivity, with an average increase in work output of 25%. Furthermore, employee welfare management programs and retention strategies have successfully reduced turnover rates by 15%, which was previously a major challenge in the transportation industry.

The novelty of this research lies in identifying the direct link between digitalization-based HR strategies and operational efficiency in the transportation industry. This research shows that the use of technology in workforce administration, data-based planning, and innovative retention strategies can directly increase productivity and reduce operational costs.

The implication of this research is that transportation companies need to integrate the role of HR into their business strategies more systematically, especially in the use of technology for workforce administration and organizational change management. Additionally, investing in employee competency development is a key factor in addressing the challenges of an increasingly digitized industry. By implementing more adaptive and data-driven HR strategies, transportation companies can enhance operational efficiency, reduce labor costs, and create a more productive and sustainable work environment.

This study also opens up opportunities for further research related to the implementation of more specific HR technologies, such as the use of artificial intelligence in performance analysis or the impact of work flexibility on employee satisfaction in the transportation industry.

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