

The Influence of Leadership Support, Job Satisfaction, and Organizational Commitment on Organizational Citizenship Behaviour in Malaysian Port Workforces

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ABSTRACT

Ports play a vital role in national economic development by facilitating trade and logistics activities. Beyond performing formal job responsibilities, port employees often engage in discretionary behaviours known as Organizational Citizenship Behaviour (OCB), which contribute to operational effectiveness, teamwork, and service reliability. This study aims to examine the direct effect of leadership support on OCB among Malaysian port employees and to investigate the mediating roles of job satisfaction and organizational commitment. Specifically, the study proposes a serial mediation model in which leadership support enhances job satisfaction, which subsequently strengthens organizational commitment and ultimately promotes OCB. A quantitative cross-sectional survey design will be employed using structured questionnaires administered to employees from selected Malaysian ports. Data will be analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) to test both direct and indirect relationships among the constructs. The findings are expected to provide practical guidance for port authorities in developing supportive leadership practices and employee-centred initiatives that foster voluntary work behaviours. The study also contributes to the limited literature on OCB within the Malaysian port context by empirically examining the psychological mechanisms underlying citizenship behaviour.

Keywords: Organizational Citizenship Behaviour, Port Employees, Job Satisfaction, Leadership Support, Organizational Commitment

INTRODUCTION

Background of the study

Seaports are significant points of supply chain in the world. Their good performance is not only based on the infrastructure and technology but on the behaviour of the employees who process the cargo, run terminals and organise logistics operations. According to recent research, human resources are starting to be viewed as one of the key strategic assets in ports, and that job satisfaction, favourable working culture, and employee friendly practices contribute to retention and performance (Senbursa, 2023). Employees who are willing to deliver more than their actual job duties, assist their coworkers, propose better solutions and cushion organizational interests can help to facilitate a safer, smoother and more flexible port operation in this type of working environment. These are the extra and voluntary behaviours that are referred to as Organizational Citizenship Behaviour also known as OCB.

OCB may be viewed as discretionary behaviour which is not regarded as part of the job requirements but helps in organizational effectiveness. According to the concept of social exchange, employees will be more willing to

portray OCB when they feel respected, fairly treated, and emotionally attached to their organisation (Nguyen and Le, 2023). Even though OCB is a well-studied subject, the majority of studies remain focused in the areas of education, healthcare, government and manufacturing (Wibowo et al., 2024). A limited amount of research has been done on OCB in port employees, particularly those who are engaged in terminal and cargo operations. This is a big gap since ports are available 24/7, subject to high safety measures, tight deadlines and highly interdependent between departments. Informal cooperation and voluntary behaviour of employees is often needed to achieve success.

A study carried out in Indonesia established that transformational leadership has a positive effect on OCB directly and indirectly through job satisfaction and organizational commitment (Hermanto et al., 2024). It was found that OCB is stronger in employees of higher education institutions with high rates of job satisfaction and organizational commitment (Nguyen and Le, 2023). These results substantiate the opinion that leadership support, job satisfaction and organizational commitment are important factors that influence OCB. Worku (2024) states that OCB research currently is extending into new areas and indicates that it is necessary to comprehend how various job settings and work anticipations can affect voluntary behaviour. In the port industry, organizational culture, job satisfaction and intention to stay have been the primary focus of the available research. The findings suggest that strong retention intentions and increased performance results are associated with positive organizational culture and satisfied employees (Senbursa, 2023). Nevertheless, the number of studies involving OCB in the port environment directly or investigating the interaction between leadership support, job satisfaction and organizational commitment to affect OCB is still limited.

The explanation of the formation of OCB in port employees is significant both in terms of theoretical knowledge and practical application. Theoretically, the development of OCB in port environment can be used to expand the social exchange and leadership-based frameworks to a high risk, logistics intensive environment. Practically, port authorities and terminal operators need proof of the way leadership practices, resourceful working environments, and greater emotional connection to the organisation can motivate employees to volunteer some additional work beyond their assigned duties. They may involve exchange of information on matters that are related to safety, working together during the peak working hours or even voluntarily resolving any disruptions in a service. The purpose of the study is to determine how leadership support, job satisfaction and organizational commitment affect OCB among port employees in Malaysia.

Problem Statement

The operations of ports are heavily dependent on the human performance due to the safety, coordination, and time sensitive logistics. Nevertheless, research suggests that a large proportion of port employees continue to carry out their primary job tasks and fail to engage in more supportive behaviours (e.g., helping fellow employees, taking initiative, protecting organizational property, etc.) on a regular basis (Muhammad, Malik, and Nasrulhaq, 2022). These other voluntary behaviours are referred to as Organizational Citizenship Behaviour, and they are very important in the smooth, safe and flexible operations of ports particularly in the setting of heavy workloads, fast technological adaptations and very strict safety regulations (Muhammad et al., 2022). In the case of low level of Organizational Citizenship Behaviour, this can lower cooperation, postponement of tasks, poor service quality and eventually the entire performance of the port.

In manufacturing, public administration, and healthcare research, it was always discovered that leadership style, job satisfaction, and organizational commitment play important roles in influencing the Organizational Citizenship Behaviour (Na Nan et al., 2020; Nurjanah et al., 2020; Khaskheli et al., 2020). Such studies also have the additional effect of indicating that job satisfaction and organizational commitment tend to act as mediating factors that define the impact of Leadership style on Organizational Citizenship Behaviour. Voluntary helping behaviours are more likely to occur in employees who feel the support of their leaders, are emotionally attached to their organisation, and are satisfied with their workplace (Khaskheli et al., 2020; Zeng et al., 2023). It implies that the impact of the leadership on the Organizational Citizenship Behaviour is not necessarily direct, yet it can be mediated by job satisfaction and organizational commitment (Na Nan et al., 2020).

Nevertheless, such mediating relationships have not been properly investigated in port industry. The available literature on Organizational Citizenship Behaviour in port environments is predominantly descriptive and lacks

the examination of the interaction between leadership style, job satisfaction, and organizational commitment to affect Organizational Citizenship Behaviour, specifically in the Malaysian environment (Muhammad et al., 2022). Concurrently, Malaysian ports have been under pressure due to the growing digitalisation, augmented competition, and complicated operations. Such challenges need not just technically qualified employees but also show commitment, teamwork, ability to solve problems and voluntary helping behaviour. It is however not clear whether supportive leadership practices in ports directly positively affect the increase of Organizational Citizenship Behaviour, or it occurs indirectly by enhancing job satisfaction and organizational commitment.

Consequently, the research gap in this paper is the absence of mediation empirical research in the port sector particularly in Malaysia to support how the leadership style impacts Organizational Citizenship Behaviour via job satisfaction and organizational commitment. In the absence of this knowledge, port managers might not be sure whether to concentrate on the leadership development or to pay attention to enhancing employee satisfaction and emotional attachment to promote voluntary work behaviour. The proposed study will address this gap by examining direct and indirect influences of leadership style on Organizational Citizenship Behaviour using job satisfaction and organizational commitment among port employees in Malaysia.

To clarify the novelty of this study, it is important to position it against the wider body of existing research. Although previous studies have demonstrated the relationships between leadership support, job satisfaction, organizational commitment, and Organizational Citizenship Behaviour in sectors such as healthcare, manufacturing, education, and public administration, empirical evidence within the port industry remains limited. Existing studies involving ports have primarily focused on organizational culture, job satisfaction, and employee retention, with little attention given to voluntary employee behaviours such as OCB. Furthermore, no known study has simultaneously examined the serial mediating roles of job satisfaction and organizational commitment in explaining how leadership support influences OCB among Malaysian port employees. Given the unique characteristics of port operations, including round-the-clock services, safety-sensitive tasks, interdependent teamwork, and increasing digitalisation, the mechanisms influencing citizenship behaviour may differ from those observed in other sectors. Therefore, this study contributes to the literature by extending Social Exchange Theory and Transformational Leadership Theory into the Malaysian port context through the examination of a serial mediation framework.

LITERATURE REVIEW

Organizational Citizenship Behaviour (OCB)

Organizational Citizenship Behaviour (OCB) refers to discretionary employee behaviour that is not directly recognised by the formal reward system but, in aggregate, promotes the effective functioning of the organisation. Such behaviour goes beyond formal job requirements and includes helping colleagues, protecting organizational resources, following rules voluntarily, and contributing to a positive work climate. Organ (1988) identified five widely cited dimensions of OCB, namely altruism, conscientiousness, courtesy, civic virtue, and sportsmanship. In the port context, these behaviours are particularly valuable because operations depend on round-the-clock teamwork, strict safety compliance, and close coordination between departments. When employees willingly assist one another during peak cargo periods, share safety-related information, and respond cooperatively to operational disruptions, port operations become safer, smoother, and more reliable. This study therefore treats OCB as the key outcome variable and examines how leadership support, job satisfaction, and organizational commitment work together to encourage it.

Leadership Support and Organizational Citizenship Behaviour

One of the most significant aspects that influence the behaviour of employees at the workplace is leadership support. It is the process of directing, encouraging, communicating and helping employees in day-to-day work by the leaders. A supportive leader is one that hears the concerns of the employees and offers support, gives straightforward instructions and treats them fairly and respectfully. When applied to the sphere of port operations, leadership support is vital due to the high-pressure and time-sensitive nature of the employees that must face the risk of safety concerns and collaborate as a strong team.

Transformational Leadership Theory is used to explain how leaders can guide employee attitudes and behaviour using inspiration, motivation and emotional support. Transformational leaders also do not simply concentrate on the job but also make employees be creative in their thoughts, have faith in themselves and contribute beyond job descriptions. They instil good working environment in which employees are made to feel empowered, appreciated and encouraged to work better. Hermanto et al. (2024) state that transformational leadership enhances the willingness of employees to exhibit additional role behaviours including assisting co-workers, defending organizational interests and exchanging valuable ideas, which are the core aspects of OCB.

Another theory that can be used to explain the existence of elevated OCB in relation to leadership support is the Social Exchange Theory. This theory states that, by the employees being supported, valued, and treated fairly, by their leaders, they are emotionally obligated to reciprocate this positive treatment to the organisation. They are also rewarded with returning favours in the form of additional behaviours like assisting others, acting in accordance with safety regulations, securing organizational assets and making recommendations. These actions are indicative of OCB. Employees who feel well treated and led by fair leaders demonstrate a better attitude of loyalty and readiness to go out of their job description (Nguyen & Le, 2023).

Empirical research proves the powerful impact of the leadership support on OCB. The results of a study by Wibowo et al. (2024) indicated that leadership support has a direct and indirect positive effect on OCB via job satisfaction and organizational commitment. In another study, Hermanto et al. (2024) stated that communication-oriented leadership, trust and emotional support, promote employees to express helping behaviour, civic responsibility and loyalty. These are behaviours that are under OCB and they lead to performance of organisations.

Leadership support is also of special significance in the port industry because the work there involves coordination of teams and their work, prompt decision making and problem solving. Employees are more ready to assist one another to keep the safety standards up, to fulfil cargo handling job and to ensure a smooth operation when the leaders are able to give directions, to reward the effort of employees and to promote open communication. Senbursa (2023) argues that positive work culture can be developed with the support of management practices in ports which can decrease stress and promote voluntary cooperation among the employees. This leads to stronger OCB.

Emotional factors are also closely associated with leadership support like job satisfaction, and organizational commitment. Once port employees are encouraged and their leaders provide feedback and appreciation, they become more satisfied with their work and grow their loyalty to the organisation. These good emotions then result in increased OCB. This implies that leadership support has a direct effect on OCB as well as an indirect effect on the same via the role of attitudinal variables.

Thus, the leadership support is regarded as a significant independent variable in this research. It is anticipated to positively affect organizational citizenship behaviour amongst port employees in Malaysia, where the supportive and transformational leadership can be used to encourage employees to make voluntary contributions to their formal roles.

Job Satisfaction and Organizational Citizenship Behaviour

Job satisfaction is described as the positive emotional feeling that the employees experience when they are happy, comfortable, and satisfied with what they do. It shows how much employees enjoy their job and place of work. Job satisfaction encompasses the emotion about salary, teamwork, leadership style, work atmosphere, career development opportunities and work life balance. When workers feel that their needs are being met in the workplace, they have positive attitudes towards the organisation and they are more prepared to make the extra effort in addition to their normal duties at work.

Social Exchange Theory provides that when employees feel that they are treated fairly, supported and appreciated by the organisation, they will be motivated to reciprocate this kind of positive treatment by assisting the organisation in any form of meaningful way. This can be in the form of Organizational Citizenship Behaviour whereby employees are willing to assist co-workers, safeguard organizational resources, adhere to rules and

offer helpful suggestions. Nguyen and Le (2023) state that satisfied employees tend to exhibit citizenship behaviours since they desire to have good relations with the organisation.

This relationship has also been supported by Affective Events Theory which clarifies that positive behaviours like cooperation, kindness and willing to help are possible because of positive emotional experiences at work. Employees who are satisfied are bound to be relaxed emotionally, motivated and ready to do more than expected. Studies have established that when employees are satisfied and happy at their place of work, they will tend to show more respect, helpfulness and cooperation which are major aspects of Organizational Citizenship Behaviour.

Wibowo et al. (2024) discovered that job satisfaction contributes a lot to the willingness of the employees to assist coworkers, take responsibilities and undertake additional tasks without directly rewarding them. Job satisfaction is a significant factor in the port operations because the working environment is challenging. The port workers are commonly subjected to time pressure, physical needs, precautionary needs and odd working hours. They get positive emotional attachment towards the organisation when they are content with their working conditions, are treated fairly, provided with the right safety equipment, and have a supportive leadership. These positive emotions make them assist their colleagues in heavy cargo seasons, assist in keeping safety standards, and play a role in ensuring that the handling and schedule operations are streamlined. It was reported by Senbursa (2023) that job satisfaction among the port employees is strongly connected with teamwork, safety behaviour as well as organizational commitment which is connected with Organizational Citizenship Behaviour.

Organizational commitment is also closely connected with job satisfaction. By being contented with the work, the employees develop emotional attachments with the organisation, thus pushing them to engage in voluntary behaviour. It implies that job satisfaction tends to generate a better organizational commitment, which subsequently promotes the emergence of citizenship behaviours like assistance and positive work climate.

Thus, job satisfaction is regarded as a significant mediating variable in the given study. It describes how the leadership support contributes to Organizational Citizenship Behaviour indirectly. Employees will be more satisfied to work when they are guided, respected and encouraged by their leaders. Such satisfaction encourages them to demonstrate increased levels of Organizational Citizenship Behaviour. Job satisfaction is also crucial in the port environment where teamwork, communication, and cooperation are critical aspects in establishing a work environment that fosters voluntary and helpful behaviour.

Organizational Commitment and Organizational Citizenship Behaviour

Organizational commitment is the emotional attachment, commitment and sense of belonging of the employees to their organisation. It is a measure of how much the employees desire to stay in the organisation, have faith in its objectives, and ready to make contributions towards its success in the long run. Highly committed employees do not just carry out their minimum job roles but extend their job roles and responsibilities to assist in the development of the organisation. They identify themselves with the organisation psychologically and act in a manner that facilitates its performance and mission.

Three types of organizational commitment are traditionally defined. The first one is affective commitment, that is, the emotional attachment and pride that employees have of being a part of the organisation. The second one is the continuance commitment, which is grounded on the perceived cost of quitting the organisation like loss of benefits, job security and career opportunities. The third type is normative commitment that is defined as the moral obligation the employees feel towards staying in the organisation as it has helped them. Of these three types, affective commitment is the closest to the Organizational Citizenship Behaviour since it is motivated by emotional attachment, loyalty, and personal identification with the organisation (Wibowo et al., 2024).

The social Exchange Theory is used to explain why Organizational Citizenship Behaviour is promoted by organizational commitment. When the employees are convinced that their organisation has treated them in a fair manner, provided support and a good workplace environment, they feel compelled to give back that good treatment. They react by voluntarily practicing such voluntary acts as assisting co-workers, cooperating with

management, safeguarding organizational property and adhering to safety measures. These are voluntary behaviours that demonstrate the major characteristics of the Organizational Citizenship Behaviour.

The other beneficial explanation is the Affective Commitment perspective that opines that the more employees are emotionally committed to their organisation, the more they tend to extend beyond their official work obligations since they are actually interested in the success of the organisation. They exhibit higher levels of team work, problem solving and loyalty. They are ready to assume additional duties, even in situations that do not constitute their official duties. Organizational Citizenship Behaviour is frequently performed by employees who have high organizational commitment as they view the organizational objectives as extending to their own (Nguyen & Le, 2023).

The empirical research conducted in the period between 2020 and 2024 has proven the fact that the organizational commitment is a powerful predictor of Organizational Citizenship Behaviour. Wibowo et al. (2024) discovered that high affective commitment employees tend to exhibit more additional role behaviour like assisting others, responsibility and active involvement in organizational activities. The highly committed employee in port settings where safety, coordination and teamwork are paramount values tend to assist the rest of the workers during peak cargo handling periods, provide safety information and assistance to the management in addressing any operational dilemmas. These behaviours are Organizational Citizenship Behaviour in port settings.

In addition, Hermanto et al. (2024) also established that transformational leadership positively influences organizational commitment which results in increased Organizational Citizenship Behaviour. Employees will have more emotional attachment to the organisation when they trust and respect their leaders. This emotional bond will motivate them to support co-workers, become proactive in problem solving and uphold high standards of work. This implies that the role of organizational commitment is not only to affect the Organizational Citizenship Behaviour but it also mediates the relationship between the leadership support and the Organizational Citizenship Behaviour.

Organizational commitment is highly valued in the context of ports since most of the work can be associated with strenuous schedules, safety work, and collaboration between departments. Whenever employees are committed to the organisation, they do not concentrate on their own tasks but they care about the overall objectives of the port. They can help other people in cases of emergency unloading, instruct new workers on the safety measures, or keep the relations with shipping agents and logistics partners positive. Such voluntary behaviours are Organizational Citizenship Behaviour and contribute towards enhancing port efficiency and reliability.

Thus, organizational commitment will be regarded as a significant mediating variable in the study. It describes the role of leadership support on Organizational Citizenship Behaviour in terms of emotional attachment and loyalty. Psychologically attached employees will be more enthusiastic to express voluntary behaviour which facilitates effective and smooth port operations.

HYPOTHESES DEVELOPMENT

Leadership Support and Organizational Citizenship Behaviour

Leadership support is a major determinant in influencing employee behaviour at the work place. According to the Transformational Leadership Theory, leaders who inspire, communicate, and empower employees can assist in creating a good working environment where employees feel they are valued, respected and empowered. When staff members are motivated, treated well and mentored by their leaders, they are likely to attain better attitudes towards their job and the organisation. The Social Exchange Theory also explains the effect of leadership support on the behaviour of employees. It implies that employees feel obliged to give back the support when they feel that their leaders have treated them fairly and have offered emotional and professional support. They also give back by exhibiting voluntary and positive behaviours like assisting colleagues, initiative, collaborating with the management, and loyalty. These are the behaviours that are identified as Organizational Citizenship Behaviour. A number of empirical studies have established the positive role of leadership support on Organizational Citizenship Behaviour. According to Hermanto et al. (2024), leadership support has a great influence in

enhancing the willingness of the employee to engage in additional role behaviours that would lead to organizational performance. The hypothesis is as follows based on the theoretical and empirical evidence.

H1: Leadership support has a positive effect on Organizational Citizenship Behaviour among port employees.

Job Satisfaction as a Mediator between Leadership Support and OCB

Job satisfaction is a positive emotional response of the employees towards their work and the working environment. Satisfied employees have greater motivation and responsibility and will be ready to give to the organizational objectives. The support of leadership assists in enhancing the level of job satisfaction by providing an amicable, appreciative, and inspiring work environment. Under these circumstances, employees believe that they are appreciated and valued and this factor enhances their emotional attachment to the organisation. When the employee is satisfied with the job, they have high chances of exhibiting voluntary behaviours like helping others, participating in teamwork, and safeguarding organizational interests. Such behaviours are Organizational Citizenship Behaviour. Past studies have indicated that job satisfaction does not only determine Organizational Citizenship Behaviour but also mediates between leadership support and Organizational Citizenship Behaviour. The authors Wibowo et al. (2024) emphasized that leadership support has a positive impact on job satisfaction which subsequently encourages employees to work beyond their official job duties. Based on the theoretical and empirical evidence, the following hypothesis is proposed.

H2: Job satisfaction mediates the relationship between leadership support and Organizational Citizenship Behaviour among port employees.

Organizational Commitment as a Mediator between Leadership Support and OCB

Organizational commitment is a term that is used to refer to the emotional attachment, trust and loyalty that employees have towards their organisation. Once employees have support, fairness and encouragement by their leaders, they will have greater feelings of respect and trust, which will raise the level of their loyalty to the organisation. This emotional attachment motivates them to be active and play their part in organizational objectives. According to Social Exchange Theory, when employees develop an emotional attachment and appreciation by the organisation, they develop a feeling of indebtedness to pay back. This mutual behaviour is frequently manifested in the Organizational Citizenship Behaviour, which includes cooperation, responsibility, assisting others and problem-solving contribution. These activities indicate the readiness of the employees to do something extra. The mediating role of organizational commitment in mediating leadership support and Organizational Citizenship Behaviour is also supported in previous empirical studies. Nguyen and Le (2023) affirmed that workers who are emotionally devoted to their organisation tend to exhibit voluntary and helpful behaviours. This means that leadership support can have an effect on Organizational Citizenship Behaviour in terms of heightened organisation commitment. Based on this theoretical and empirical evidence, the following hypothesis is proposed.

H3: Organizational commitment mediates the relationship between leadership support and Organizational Citizenship Behaviour among port employees.

Job Satisfaction and Organizational Commitment as Serial Mediators

Job satisfaction and organizational commitment are two concepts that are closely related to the behaviour of employees. By being satisfied with their job, employees stand higher chances of developing stronger emotional attachment with the organisation. This emotional bondage makes them feel more loyal and responsible, which motivates them to make more contributions than their official job responsibilities. Both satisfied and emotionally committed employees will be more likely to engage in voluntary behaviours which would aid organizational objectives. Here, leadership support can have an impact on the Organizational Citizenship Behaviour by the interaction of job satisfaction and organizational commitment. The employees are more satisfied when they are supported by the leaders and this makes them more committed to the organisation emotionally. This chronological relationship motivates the employees to act in addition to their assigned role like cooperation, assisting others and being loyal. Hermanto et al. (2024) confirmed that job satisfaction and organizational

commitment may collaborate as serial mediators that clarify the role of leadership support in the Organizational Citizenship Behaviour. Based on this theoretical and empirical reasoning, the following hypothesis is proposed.

H4: Job satisfaction and organizational commitment serially mediate the relationship between leadership support and Organizational Citizenship Behaviour among port employees.

Conceptual Framework Explanation

Figure 1 illustrates the conceptual framework of this study. It shows how leadership support influences Organizational Citizenship Behaviour among port employees, both directly and indirectly, through job satisfaction and organizational commitment. The framework is grounded in Transformational Leadership Theory and Social Exchange Theory. Job satisfaction is positioned as the first mediating variable between leadership support and organizational commitment. When employees receive guidance, recognition, and fair treatment from their leaders, they are more likely to feel satisfied with their job. This job satisfaction creates a sense of comfort, motivation, and positive emotional response toward the organisation. Employees who are satisfied tend to develop a stronger emotional connection, which forms the foundation of organizational commitment.



Figure 1: Conceptual Framework

The first mediating variable between the leadership support and organizational commitment is job satisfaction. Employees can be satisfied with their job when they are guided, recognized and treated fairly by their leaders. This job satisfaction brings in a feeling of comfort, motivation and positive emotional reaction towards the organisation. Satisfied employees are more likely to have a more emotional bond which is the basis of organizational commitment. The second mediating variable is organizational commitment. It is the emotional attachment and loyalty to their organisation that the employees have. As the employees feel contented with their work and feel that their leaders are supportive, they are more likely to become committed and loyal. This emotional attachment motivates the employees to practice positive behaviours including cooperation, responsibility, helping others, and protecting organizational interests. These behaviours are indications of Organizational Citizenship Behaviour.

The framework implies a sequence. Job satisfaction is enhanced by leadership support, organizational commitment by job satisfaction and Organizational Citizenship Behaviour by organizational commitment. The sequential relationship is the reason why attitudinal factors may reinforce the impact that leadership support has on voluntary employee behaviour.

Organizational Citizenship Behaviour is the last outcome variable in this research. It is voluntary behaviour like assisting fellow workers, adhering to safety measures, safeguarding organisation assets, and teamwork, which is important in port operations. Such behaviours facilitate the effective running of operations, enhance coordination, and enhance the performance of the port.

Thus, Figure 1 gives a visual illustration of the direct and indirect effects of leadership support in Organizational Citizenship Behaviour through the mediating effects of job satisfaction and organizational commitment. This model assists one to understand the psychological route by which the supportive leadership prompts employees to exhibit voluntary and positive behaviours at port settings.

RESEARCH METHODOLOGY

Research Design

The research design employed in this research is quantitative research design through the employing of a survey. The primary tool of data collection was a structured questionnaire, which was addressed to the port employees

working within the operations, logistics, administration, and support functions. Survey method is deemed appropriate in this research since it can be used to gather data of a large population of respondents in a systematic, efficient and cost-effective way. It also brings about uniformity in the responses, and data analysis using statistical methods can be done. This study requires the use of survey method to test the relationship between variables. It will allow investigating the direct and indirect effect of the independent variable, leadership support, on the dependent variable, Organizational Citizenship Behaviour. It also enables exploration of mediating effects of job satisfaction and organizational commitment. A structured survey will be useful in quantifying employee perceptions and attitudes and this is required in testing the hypotheses proposed and attaining the objective of the study.

Target Population

The research sample group of the study is the employees of Malaysia port authorities and terminal operating firms. This comprises of container port workers, logistics officers, cargo handling staff, supervisors, administrative staff and support service employees of major port locations like Port Klang, Penang Port, Johor Port, Westports and Northport. Such staff members have various roles in the scheduling, cargo handling, processing of documents, safety checks and port coordination.

The target population is chosen as port employees due to their work, which requires high cooperation, proper communication, safety awareness, and cooperation. The characteristics of port operations include time sensitive operations, interdepartmental coordination, and high safety. Under these circumstances, Organizational Citizenship Behaviour gains tremendous significance, as workers tend to exceed their formal job responsibilities and help other workers, exchange information, find solutions to issues, and facilitate unproblematic port operation. Hence, this population will be appropriate to investigate the effects of leadership support, job satisfaction and organizational commitment on Organizational Citizenship Behaviour.

Sampling Method

The purposive sampling mechanism is employed in this study, and it is non-probability sampling in which respondents will be chosen on the basis of attributes that are relevant to the research objectives. The primary qualification used to select the respondents in this study is the fact that employees should be at least five years of working experience in the port industry. This covers the employees in terminal operations, cargo handling, logistics coordination, documentation, customer service and supervisory roles.

The reason why employees with at least five years of experience were selected is that such employees are likely to have a better grasp of organizational culture, leadership behaviour, teamwork behaviour, and voluntary behaviour like Organizational Citizenship Behaviour. Creswell and Creswell (2017) described that purposive sampling would be appropriate when a researcher requires participants with the knowledge and work experience that are relevant to the research topic. The long-term employees in this study will have a higher probability of undergoing various leadership styles, attaining job satisfaction and organizational commitment, and exhibiting additional role behaviours in their work environment. Thus, their answers will be more correct, descriptive and significant to analyse the constructs in this study.

Sample Size Determination

The minimum sample size required for this study was determined using G*Power version 3.1. Based on Cohen's (1988) recommendations, an anticipated medium effect size ($f^2 = 0.15$), a significance level of 0.05, and statistical power of 0.95 were specified. Considering the maximum number of predictors directed towards an endogenous construct in the proposed model, the analysis indicated a minimum sample size requirement of 119 respondents. However, to enhance statistical robustness and account for potential non-response or incomplete questionnaires, the study aims to collect at least 250–300 usable responses from employees working in selected Malaysian ports.

Pilot Study

Prior to the main data collection, a pilot study involving approximately 30 port employees with characteristics

similar to those of the target respondents will be conducted to assess the clarity, wording, and appropriateness of the questionnaire items. The pilot study will also evaluate the preliminary reliability of the constructs using Cronbach's alpha coefficients. Feedback obtained from the participants will be used to refine the questionnaire to ensure content clarity and contextual relevance within the Malaysian port setting.

Research Instrument

Leadership Support measurement items were based on Multifactor Leadership Questionnaire that was created by Bass and Avolio (1996). This scale is used to measure the leadership behaviours that include encouragement, trust building, recognition, guidance and emotional support. In this study, minor contextual modifications were carried out to accommodate the port operations, but the original meaning of items was retained. Leadership Support was also assessed on the basis of eight items that reflect the perceptions of employees' vis-a-vis the communication of supervisor, motivation and support.

The measure of Job Satisfaction was done based on six items which were modified on the Minnesota Satisfaction Questionnaire designed by Weiss et al. (1967). This tool is well known in the measurement of intrinsic and extrinsic satisfaction, satisfaction with work tasks, workplace relationships, recognition and work conditions. Minnesota Satisfaction Questionnaire can be used in research studies that investigate the additional role behaviours like Organizational Citizenship Behaviour since satisfied employees are more willing to engage in actions that are not part of their job description (Casu et al., 2021).

The items that measured Organizational Commitment were modified to fit the Organizational commitment scale that was developed by Meyer and Allen (1991). Their study narrowed down to the parameter of affective commitment which is the emotional attachment and sense of belonging to the organisation by the employee. The affectively committed employees often show voluntary and beneficial behaviours as they are psychologically attached to the organisation. Wibowo and colleagues (2024) support this approach by discovering that extra role behaviours are closely related to affective commitment.

The scale used to measure Organizational Citizenship Behaviour was based on the items that had been modified by Podsakoff et al. (1990) which is also one of the most popular scales of measuring OCB. This scale is a mirror of five main behavioural dimensions namely altruism, conscientiousness, courtesy, civic virtue and sportsmanship. Ten items were employed in this research to assess the Organizational Citizenship behaviour in port employees, based on behavioural aspects like assisting fellow employees, adhering to regulations even in the absence of supervision, safeguarding resources, and caring about the organizational performance.

Validity and Reliability Assessment

The reliability and validity of the measurement model will be assessed prior to testing the structural relationships. Internal consistency reliability will be evaluated using Cronbach's alpha and Composite Reliability (CR), with values above 0.70 indicating acceptable reliability (Hair et al., 2021). Convergent validity will be examined through Average Variance Extracted (AVE), whereby values exceeding 0.50 demonstrate adequate convergence. Discriminant validity will be assessed using both the Fornell–Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT), with HTMT values below 0.85 indicating satisfactory discriminant validity (Henseler et al., 2015). Following confirmation of the measurement model, bootstrapping procedures involving 5,000 resamples will be employed to examine the significance of both direct and indirect relationships within the proposed structural model.

Ethical Considerations

Ethical approval will be obtained from the relevant institutional ethics committee prior to data collection. Participation in the study will be entirely voluntary, and respondents will be informed about the purpose of the research before providing informed consent. Participants will be assured that their responses will remain anonymous and confidential and will be used solely for academic purposes. They will also be informed of their right to withdraw from the study at any point without any penalty or consequences.

Justification for Using PLS-SEM for Data Analysis

The research uses Partial Least Squares Structural Equation Modelling to test the data and the research model proposed. Partial Least Squares Structural Equation Modelling is the appropriate technology to use in this study since the primary aim of the research is to estimate the influence of leadership support, job satisfaction, and Organizational commitment on Organizational Citizenship Behaviour in port employees, and to assess the mediation impact of these variables. A partial Least Squares Structural Equation Modelling is appropriate in studies that are interested in explaining the variation and forecasting the results instead of validating an already developed theory, as described by Hair et al. (2021). In addition, Hair, Risher, Sarstedt and Ringle (2019), Partial Least Squares Structural Equation Modelling is suitable when analysing complex models, and it is more common in research in the behavioural, organizational and social sciences including when the effects are of mediation and moderation. It is also more adaptable in dealing with non-normal data distribution that is usually prevalent in the workplace survey data. Partial Least Squares Structural Equation Modelling gives the researcher an opportunity to test the measurement model and the structural model simultaneously. The measurement model considers the reliability and validity of the constructs in terms of Composite Reliability, Average Variance Extracted, Cronbach Alpha, and discriminant validity in terms of Fornell and Larcker criterion and the HTMT ratio (Henseler et al., 2015). After obtaining the measurement model fit, the structural model is applied to test the hypotheses, both direct and indirect relationships. Hair et al. (2021) assert that PLS-SEM will be applicable in estimating the indirect effects through bootstrapping, which is necessary in the mediation analysis of this study.

Implications and Expected Results of the Proposed Model

Based on the conceptual model proposed, the positive impact of leadership support on Organizational Citizenship Behaviour among port employees is likely to be substantial. Employees would develop voluntary behaviours when they feel supported, listened and treated fairly by their supervisors, which include assisting co-workers, guarding organizational property and cooperating during challenges in the operation. Such voluntary measures are particularly important in a port setting, where day-in day-out operations require high levels of teamwork, coordination, safety consciousness, and making of timely decisions.

The model also hypothesises that job satisfaction and organizational commitment will mediate the relationship between leadership support and Organizational Citizenship Behaviour. Employees are likely to be more satisfied with their jobs when leaders encourage, guide, and recognize them. This satisfaction will result into positive emotions which in turn will translate to greater emotional attachment towards the organisation. Social Exchange Theory proposes that employees are more ready to pay back when they feel that they are appreciated and are supported by it. Thus, satisfied, and emotionally committed employees are assumed to exhibit a high degree of Organizational Citizenship Behaviour.

Serial mediation pathway describes that leadership support initially increases job satisfaction, which in turn raises organizational commitment, and the combination of the two increases willingness of employees to exhibit voluntary behaviours. This indicates that positive emotion and loyalty play a vital role in influencing Organizational Citizenship Behaviour. When applied to the port operations, it implies that the management should not merely concentrate on work supervision and delegation of tasks, but also on the establishment of the supportive, respectful, and motivating environment where the employees will feel trusted, valued, and emotionally attached to the organisation.

The theoretical and practical implications of the expected findings of this study are quite significant. Theoretically, the study expands the existing body of knowledge by demonstrating that leadership support, job satisfaction, and organizational commitment are interrelated to affect Organizational Citizenship Behaviour in the high risk and high demand workplace like port operations, which is a relatively underexplored topic in the literature. Practically speaking, the results can be used by port authorities and terminal operators to design leadership training initiatives, employee participation approaches, and work policies, which will support job satisfaction and organizational commitment.

In the case the anticipated relationships are established, port management gains an opportunity to develop a more committed, cooperative, and active workforce that promotes operational efficiency, safety performance, and service reliability. This may help to enhance the competitiveness of Malaysian ports and assist in developing the positive organizational culture focused on cooperation, responsibility, and continuous improvement.

CONCLUSION

This study proposes a serial mediation model to explain how leadership support influences Organizational Citizenship Behaviour among Malaysian port employees through job satisfaction and organizational commitment. Grounded in Social Exchange Theory and Transformational Leadership Theory, the proposed framework suggests that supportive leadership enhances employees' positive work experiences, leading to greater job satisfaction and stronger emotional attachment to the organisation. These favourable attitudes subsequently encourage employees to engage in discretionary behaviours that contribute to organisational effectiveness. The study extends existing knowledge by examining these relationships within the underexplored Malaysian port context, characterised by safety-sensitive operations, interdependent teamwork, and increasing operational complexity. The findings are expected to offer both theoretical contributions and practical implications for port authorities seeking to foster a more committed, cooperative, and proactive workforce.

The model suggests both direct and indirect correlations. Leadership support is supposed to positively impact on Organizational Citizenship Behaviour, whereas job satisfaction and organizational commitment are the mediating variables, which reinforce the effect. The serial mediation line suggests that leadership support initially increases job satisfaction which increases the organizational commitment and the two attitudinal variables jointly increase the level of Organizational Citizenship Behaviour. This double-tiered impact underscores the need to integrate positive leadership behaviour with attempts to create employee satisfaction and emotional attachment.

The working environment in the Malaysian port setting exposes employees to hard operational conditions, safety measures, and complicated coordination processes. Promotion of Organizational Citizenship Behaviour would aid in enhancing the efficiency of the services provided, operational preparedness as well as workforce compatibility. Satisfied and emotionally attached employees are more likely to do something extra to their work and add value to everyday activities in their organisation. Thus, the suggested model is not only theoretically applicable but also has practical significance to the port authorities and terminal operators who want to enhance the behaviour of their employees, the quality of services provided, and the overall performance of the organisation.

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