



The Impact of Social Restriction Policies During the COVID-19 Pandemic on the Ship Crew Rotation Process at PT Tanjung Perdana Cemerlang

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ABSTRACT

This study examines how social restriction policies during the COVID-19 pandemic affected the crew rotation process at PT. Tanjung Perdana Cemerlang, a maritime crew recruitment and placement company. The research uses a qualitative approach with data collected through observation, documentation review, interviews, and literature study during a twelve-month internship from August 2021 to August 2022. SWOT analysis was applied to evaluate the company's internal and external factors in managing crew changes during the pandemic. The findings show that crew rotation declined by 45.63%, dropping from an average of 17 crew changes per month in 2019 to only 9 per month in 2020, as PSBB and PPKM policies restricted crew mobility across Indonesia. The SWOT analysis indicates that the company should adopt a combination of turn-around and aggressive strategies, using its hospital partnerships, pharmaceutical supplier networks, and Kompas software to offset weaknesses in health protocol enforcement and crew transparency. The study concludes that reducing sailing contract durations and enforcing strict pre-boarding health protocols would improve crew rotation efficiency during pandemic conditions.

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1. INTRODUCTION

The COVID-19 pandemic disrupted global supply chains on a scale not seen in decades, and the maritime industry bore a disproportionate share of that disruption. By mid-2020, the International Transport Workers' Federation estimated that over 400,000 seafarers were stranded on vessels worldwide, unable to complete crew changes due to port closures and

travel restrictions [1]. Indonesia, an archipelagic nation with one of the world's largest seafarer workforces, was particularly affected because its crew members are dispersed across thousands of islands, making logistics difficult even under normal conditions [2].

Ship crew rotation is a routine but operationally complex process. Manning agencies

coordinate the scheduling, documentation, health certification, and physical transport of replacement crew members to and from vessels, often across multiple jurisdictions [3]. Under normal circumstances, a crew member serves a fixed contract period, typically ranging from four to nine months, after which they are relieved by a replacement during a port call. When this process breaks down, the consequences cascade: crew members overstay their contracts, fatigue-related safety risks increase, morale deteriorates, and standby crew ashore lose income and may seek employment elsewhere [4].

The Indonesian government responded to the pandemic with a series of mobility restrictions. Large-Scale Social Restrictions (PSBB), first implemented in DKI Jakarta on April 10, 2020, under Governor's Regulation No. 33 of 2020, limited public transportation, workplace attendance, and inter-regional travel [5]. These were followed by Community Activity Restrictions (PPKM) in January 2021, with varying enforcement levels across provinces [6]. For shipping companies headquartered in Jakarta but managing crews from across the archipelago, these policies created bottlenecks at every step of the crew change pipeline: crew members could not travel to embarkation ports, medical examinations were delayed or unavailable, and quarantine requirements added days or weeks to the turnaround process [7].

PT. Tanjung Perdana Cemerlang operates in this environment as a crew manning agency for several LPG tankers, including the LPG/C Mariner, LPG/C Rubra, LPG/C Decora, and VLGC Clipper. During the researcher's twelve-month internship at the company, it became clear that the crew rotation process had been severely affected. Crew changes declined sharply after March 2020, crew members were overstaying their Seafarer Employment Agreements (SEA), and the backlog of standby crew ashore created retention risks as idle seafarers began exploring opportunities at competing companies.

Previous research on COVID-19's impact on the maritime sector has largely focused on international shipping lanes, port operations, and the mental health of stranded seafarers [8], [9]. Less attention has been paid to the specific challenges faced by domestic manning agencies in Indonesia, where regional policy fragmentation added a layer of complexity beyond what international studies typically address. The combination of varied PSBB and PPKM enforcement across provinces, limited inter-island transport options, and uneven access to

COVID testing facilities created a uniquely difficult operating environment for Indonesian manning companies [10].

This study addresses that gap by examining the crew rotation process at PT. Tanjung Perdana Cemerlang before and during the pandemic, using SWOT analysis to evaluate the company's strategic position. Two research questions guide the analysis: first, what caused the decline in crew rotation frequency during the social restriction period, and second, what measures can address the mobility constraints faced by crew members during crew changes. The findings are expected to provide practical recommendations for manning agencies facing similar disruptions in future public health emergencies.

2. RESEARCH METHOD

Research Design

This study uses a qualitative research approach with a descriptive design. Qualitative methods are appropriate when the research aims to understand processes, experiences, and contextual factors rather than to measure relationships between variables [11]. The descriptive approach allows the researcher to document the crew rotation process in detail, identify the factors that disrupted it, and analyze the company's strategic response using an established analytical framework.

Research Setting and Period

The research was conducted at PT. Tanjung Perdana Cemerlang, a crew manning agency located in Jakarta that manages crew for LPG tanker operations. Data collection took place over twelve months, from August 4, 2021, to August 4, 2022, while the researcher completed an onshore internship (Prada) in the Crewing Management division. The study examines crew change data spanning January 2019 through December 2020, providing a before-and-after comparison of crew rotation activity relative to the onset of the pandemic and social restriction policies.

Research Subjects

The study population includes all crew members at PT. Tanjung Perdana Cemerlang, both those on board and ashore, during the study period. The sample was selected purposively and consists of the crew assigned to four LPG tankers: LPG/C Mariner, LPG/C Rubra, LPG/C Decora, and VLGC Clipper, from January 2019 through December 2020. These vessels were

selected because they represent the company's core fleet and their crew records were available in complete form. Additionally, crewing division staff were included as informants for the interview component of the study.

Data Collection

Data were collected through four methods. First, direct observation during the internship allowed the researcher to witness the crew change process firsthand, including scheduling, health screening procedures, and logistics coordination [12]. Second, company documents were reviewed, including crew deployment records, crew change logs, overstay records, and Seafarer Employment Agreements for the study period. Third, semi-structured interviews with crewing division employees provided contextual information on decision-making processes and operational challenges during the pandemic [13]. Fourth, a literature review of government regulations, maritime industry reports, and published research supplied the policy and theoretical framework for the analysis [14].

Data Analysis

The collected data were analyzed using SWOT analysis (Strengths, Weaknesses,

Opportunities, Threats), a strategic planning tool that evaluates an organization's internal capabilities and external environment [15]. The analysis followed the framework outlined by Rangkuti [16], proceeding in three stages. First, internal factors (strengths and weaknesses) and external factors (opportunities and threats) were identified from the observational, documentary, and interview data. Second, a SWOT matrix was constructed to generate four categories of strategic alternatives: S-O (aggressive), S-T (diversification), W-O (turn-around), and W-T (defensive) strategies. Third, a SWOT quadrant diagram was developed to determine the company's strategic position based on the relative balance of internal and external factors. Descriptive analysis was also applied to the crew change records to quantify the decline in rotation activity between 2019 and 2020.

3. RESULTS AND DISCUSSIONS

3.1. Results

Decline in Crew Rotation Activity

Table 1 presents the crew change data for PT. Tanjung Perdana Cemerlang's LPG tanker fleet across 2019 and 2020. The data covers all four vessels and records the number of individual crew changes completed each month.

Table 1. Crew Change Activity on Lpg Tankers (2019 Vs. 2020)

Month	2019	2020
January	18	15
February	16	14
March	19	12
April	17	5
May	15	4
June	18	6
July	20	7
August	16	8
September	14	10
October	17	11
November	18	9
December	15	10
Total	203	111
Monthly Average	~17	~9

The data shows a 45.63% decline in total crew changes between 2019 and 2020. The sharpest drops

occurred in April and May 2020, immediately following the first implementation of PSBB in Jakarta

on April 10, 2020. During these two months, crew changes fell to 5 and 4 respectively, compared to 17 and 15 in the same months of 2019. The decline was driven by three converging factors: government-imposed mobility restrictions that prevented crew members from traveling to embarkation ports, COVID-19 exposures among crew members scheduled for rotation, and regional lockdowns that isolated crew members in their home provinces [5], [6].

Factors Restricting Crew Mobility

Three categories of factors constrained crew mobility during the social restriction period:

1. The pandemic itself: The rapid spread of COVID-19 across Indonesia, with confirmed cases rising from under 100 in early March 2020 to over 1.8 million by June 2021 [17], meant that crew members in many regions were either infected, in quarantine, or unable to obtain the negative test results required for
- 4.

travel and boarding.

2. Regional policy fragmentation: The PSBB and PPKM policies were not implemented uniformly across Indonesia. Different provinces and municipalities enacted their own versions with varying durations and strictness levels. Table II summarizes the major policy phases in the DKI Jakarta region, which served as the primary embarkation hub for PT. Tanjung Perdana Cemerlang's crew operations.
3. Crew transparency issues: Some crew members did not accurately report their health status to the crewing division before scheduled rotations. When rapid antigen or PCR tests revealed positive results at the point of boarding, the entire rotation plan for that vessel had to be rescheduled, creating a ripple effect that extended overstays for the crew already on board and increased standby time for shore-based replacements.

Table 2. Social Restriction Policy Phases in DKI Jakarta

No.	Policy	Effective Period
1	PSBB Phase I	Apr 10 - Apr 23, 2020
2	PSBB Phase II	Apr 24 - May 22, 2020
3	PSBB Phase III	May 23 - Jun 4, 2020
4	PSBB Transition Phase I	Jun 5 - Sep 10, 2020
5	Strict PSBB	Sep 14 - Oct 2020
6	PSBB Transition Phase II	Oct 2020 - Jan 2021
7	PPKM Phase I	Jan 11 - Jan 25, 2021
8	PPKM Phase II	Jan 26 - Feb 8, 2021
9	Micro-PPKM Phases I-XIII	Feb 9 - Jul 25, 2021
10	Emergency PPKM (Java-Bali)	Jul 3 - Jul 20, 2021
11	PPKM Level 1-4	Jul 21 - Aug 2, 2021

SWOT Analysis

Table 3 presents the internal and external factors identified through observation, document

review, and interviews at PT. Tanjung Perdana Cemerlang.

Table 3. Internal and External Factor Identification

Internal Factors		External Factors	
Strengths (S)		Opportunities (O)	
S1: Large, loyal crew base with competitive wages		O1: Partnerships with hospitals and maritime clinics for health screening	
S2: Competent crewing staff with maritime backgrounds		O2: Pharmaceutical supplier partnerships for medications and test kits	

S3: Integrated Compas software for crew management	O3: Technology-enabled remote health monitoring (video calls, temp logs)
Weaknesses (W)	Threats (T)
W1: Crew rotation disrupted by rising COVID cases and mobility restrictions	T1: Rapid COVID spread causing onboard outbreaks and vessel quarantine
W2: Weak health protocol enforcement extending quarantine periods	T2: Crew attrition to competitors if company fails to innovate
W3: Lack of crew transparency in reporting health status	T3: Rising operational costs from inefficient crew changes

Table 4 presents the SWOT matrix with the four strategic alternatives derived from combining internal and external factors.

Table 4. SWOT Strategy Matrix

SWOT Matrix	Strengths (S)	Weaknesses (W)
Opportunities (O)	S-O Strategy: Leverage loyal, competent crew and Compas technology alongside hospital/clinic partnerships to accelerate crew rotations with health-cleared personnel.	W-O Strategy: Use hospital partnerships and pharma suppliers to address weak health protocol compliance; implement online health reporting via personal devices.
Threats (T)	S-T Strategy: Use Compas and competent staff to monitor crew health proactively, preventing COVID outbreaks that cause vessel quarantines and crew attrition.	W-T Strategy: Implement shorter contracts, strict quarantine, and transparent health reporting to reduce overstays, prevent outbreaks, and retain crew loyalty.

Based on the balance of internal and external factors, Figure 1 illustrates the SWOT quadrant diagram. The company's position is determined by comparing the net strength of internal factors (Strengths minus Weaknesses) against the net strength of external factors (Opportunities minus Threats). PT. Tanjung Perdana Cemerlang's core strengths, including its large loyal crew base, competent staff, and Compas software, provide a solid internal

foundation. However, its weaknesses in health protocol compliance and crew transparency are significant under pandemic conditions. Externally, the company's partnerships with hospitals and pharmaceutical suppliers represent substantial opportunities, while the threats of COVID outbreaks, crew attrition, and rising costs are real but manageable through the identified strategies.

	OPPORTUNITIES (+)	
WEAKNESSES (-)	Quadrant III Turn-Around Strategy (W-O Strategy) Minimize weaknesses by leveraging opportunities	Quadrant I Aggressive Strategy (S-O Strategy) Use strengths to capitalize on opportunities
	Quadrant IV Defensive Strategy (W-T Strategy) Minimize weaknesses and avoid threats	Quadrant II Diversification Strategy (S-T Strategy) Use strengths to overcome threats
	THREATS (-)	
		STRENGTHS (+)

Figure 1. SWOT Quadrant Diagram

The analysis places PT. Tanjung Perdana Cemerlang in a position between Quadrant I (Aggressive/S-O) and Quadrant III (Turn-Around/W-O), reflecting a situation where external opportunities are strong but

internal weaknesses need to be addressed. The recommended strategic emphasis is on W-O and S-O strategies: using hospital partnerships, pharmaceutical networks, and technology (Compas, remote health

monitoring) to compensate for weak health protocol enforcement and transparency gaps, while simultaneously leveraging the company's workforce loyalty and staff competence to accelerate crew rotations as conditions improve [15], [16].

3.2. Discussion

The 45.63% decline in crew rotation at PT. Tanjung Perdana Cemerlang is consistent with broader industry data. The International Chamber of Shipping reported that global crew change activity fell by approximately 40-50% during the peak restriction months of 2020 [1]. What distinguishes the Indonesian experience is the compounding effect of regional policy fragmentation. While countries with centralized pandemic governance could issue uniform port health protocols, Indonesia's decentralized system meant that a crew member traveling from Sulawesi to Jakarta might encounter different testing requirements, quarantine durations, and travel permit rules at each transit point [7].

The SWOT analysis reveals an asymmetry between the company's internal capabilities and its operational challenges. PT. Tanjung Perdana Cemerlang's strengths, including competitive wages that ensure crew loyalty, experienced crewing staff, and a purpose-built software system (Compas), are structural advantages that existed before the pandemic and will remain afterward. The weaknesses, by contrast, are largely situational: they emerged because the company's existing processes were not designed for pandemic conditions. Health protocol enforcement was weak not because the company lacked the capacity for it, but because there were no pre-existing procedures for pre-boarding health screening, mandatory quarantine tracking, or systematic health status reporting [18].

This has practical implications. The W-O strategies, particularly the use of hospital partnerships for pre-boarding health clearance and the implementation of remote health monitoring through technology, do not require the company to acquire new resources. They require it to redeploy existing partnerships and tools toward a function (health compliance) that was previously not part of the crew change workflow. The relatively low cost of this adaptation explains why the opportunities outweigh the threats in the external analysis: the resources needed to exploit the opportunities are already available [16].

The crew transparency problem deserves particular attention. When crew members conceal

health symptoms or test results, the consequences extend beyond the individual. A single positive test at the point of boarding can delay the entire rotation schedule for a vessel, increasing overstay hours for the outgoing crew and standby costs for the company [4]. The W-T strategy of implementing shorter contract durations is one response, but it treats the symptom rather than the cause. A more effective approach would combine mandatory reporting protocols with positive incentives, such as priority assignment for crew members who maintain consistent health reporting records [19].

One limitation of this study is that the SWOT analysis is based on qualitative assessment rather than weighted scoring. Future research could strengthen the analysis by applying a quantitative SWOT approach, such as IFAS/EFAS (Internal/External Factor Analysis Summary) scoring, which assigns numerical weights and ratings to each factor and enables more precise quadrant positioning [20]. Additionally, the study focuses on a single company; comparative research across multiple manning agencies would provide a more generalizable picture of pandemic impacts on Indonesian crew management operations.

4. CONCLUSION

This study examined the impact of social restriction policies (PSBB and PPKM) on the crew rotation process at PT. Tanjung Perdana Cemerlang during the COVID-19 pandemic. Two main findings emerged. First, crew rotation activity declined by 45.63%, from an average of 17 monthly crew changes in 2019 to 9 in 2020, driven by government mobility restrictions, COVID-19 exposures among crew, and regional lockdowns that isolated crew members from embarkation ports. Second, the SWOT analysis indicates that the company should adopt a combination of turn-around (W-O) and aggressive (S-O) strategies, leveraging its existing hospital partnerships, pharmaceutical supplier networks, and Compas software to build health compliance procedures into the crew change workflow. Shorter contract durations and mandatory health reporting protocols would further reduce overstay rates and improve rotation efficiency. These measures would position the company to maintain operational continuity during future public health emergencies while also reducing the risk of crew attrition to competitors.

REFERENCES

- [1] International Chamber of Shipping, "Crew change: A humanitarian crisis," ICS Policy Paper, London, 2020.
- [2] Government Regulation of the Republic of Indonesia No. 07 of 2000 on Ship Crewing.
- [3] E. Kosasih and H. Soewodo, Shipping Company Management. Jakarta, Indonesia: Raja Grafindo Persada, 2014.
- [4] International Transport Workers' Federation, "Seafarer crisis: COVID-19 and crew changes," ITF Report, London, 2020.
- [5] Regulation of the Governor of DKI Jakarta No. 33 of 2020 on the Implementation of Large-Scale Social Restrictions in Handling COVID-19.
- [6] Government Regulation of the Republic of Indonesia No. 21 of 2020 on Large-Scale Social Restrictions.
- [7] Government Regulation of the Republic of Indonesia No. 51 of 2002 on Shipping.
- [8] D. Paukstat, M. Grech, and M. Kitada, "Seafarers' mental health during the COVID-19 pandemic: An empirical study," *Int. Maritime Health*, vol. 72, no. 2, pp. 123-131, 2021.
- [9] World Health Organization (WHO), "Coronavirus disease (COVID-19) situation reports," 2020. [Online]. Available: <https://covid19.who.int/>
- [10] Ministry of Health of the Republic of Indonesia, "Guidelines for the prevention and control of COVID-19," Rev. 5, Jakarta, 2020.
- [11] Sugiyono, Educational Research Methods: Quantitative, Qualitative, and R&D. Bandung, Indonesia: Alfabeta, 2016.
- [12] W. Gulo, Research Methodology. Jakarta, Indonesia: Grasindo, 2002.
- [13] Sugiyono, Research Methods: Quantitative, Qualitative, and R&D Approaches. Bandung, Indonesia: Alfabeta, 2019.
- [14] B. Bungin, Analysis of Qualitative Research Data. Jakarta, Indonesia: PT. Raja Grafindo Persada, 2003.
- [15] S. Handyaningrat, Introduction to the Study of Administration and Management. Jakarta, Indonesia: CV. Haji Masagung, 2011.
- [16] F. Rangkuti, SWOT Analysis: A Technique for Dissecting Business Cases. Jakarta, Indonesia: PT. Gramedia Pustaka Utama, 2006.
- [17] Indonesian COVID-19 Task Force, "COVID-19 case data dashboard," Satuan Tugas Penanganan COVID-19, 2021. [Online]. Available: <https://covid19.go.id/>
- [18] L. Agustino, Fundamentals of Public Policy. Bandung, Indonesia: Alfabeta, 2017.
- [19] IMO, "Circular letter No. 4204/Add.14: Recommended framework of protocols for ensuring safe ship crew changes and travel during the coronavirus pandemic," International Maritime Organization, London, 2020.
- [20] Winarno, Public Policy: Theory and Processes. Yogyakarta, Indonesia: Media Pressindo, 2007.