Perceived Regulatory Fairness and Stakeholder Satisfaction in Ghana's Port Sector

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ABSTRACT

Ports connect international trade with employment, livelihoods and public revenue, although operational improvements do not necessarily produce equitable stakeholder experiences. This study develops a conceptual explanation of perceived regulatory fairness and stakeholder satisfaction within Ghana's port sector. Organisational Justice Theory guides a bounded documentary synthesis using targeted retrieval, limited citation snowballing and the READ approach. Fifteen substantive sources, comprising five scholarly studies and ten institutional or legal sources, informed an interpretive coding matrix organised into twenty codes and five themes. The synthesis distinguishes procedural fairness, distributive equity, interpersonal recognition and informational transparency from satisfaction, operational efficiency and social acceptance. Four propositions specify positive relationships between fairness dimensions and satisfaction, while recognising that official commitments cannot establish stakeholder perceptions or causal effects. Ghana's evolving commercial shipping regulation and regional transit role make the framework relevant for complaints handling, consultation, tariff communication and future comparative research. The resulting model remains untested and provides a structured agenda for empirical investigation rather than evidence that its proposed relationships already operate.

Keywords: regulatory fairness; stakeholder satisfaction; organisational justice; port governance; Ghana; documentary synthesis

1 Introduction

Ports provide connections between maritime transport, production networks and the availability of goods across economies. Around eighty percent of international merchandise trade by volume travels by sea, making port governance relevant far beyond waterfront infrastructure (United Nations Conference on Trade and Development [UNCTAD], n.d.). This dependence connects regulatory decisions within ports to agricultural exports, industrial inputs, consumer prices and the resilience of supply chains. Ports also support direct employment in cargo handling, security, maintenance and administration, alongside employment associated with transport, warehousing and trade. Their economic significance therefore includes both activities within port boundaries and wider opportunities dependent on reliable movement through those boundaries. However, the geographical distribution of benefits may differ considerably from the distribution of congestion, environmental burdens and adjustment costs. Consequently, evaluating ports requires attention to the fairness of governance alongside their contribution to trade and employment (World Bank, 2025).

Employment makes this governance problem important because technological improvements can create opportunities while also changing occupations and working arrangements. The International

Labour Organization (ILO, n.d.) identifies social dialogue, training, safety, working conditions and gender inclusion as central concerns within ports and logistics. Its sectoral statistics provide global and regional employment information, although the accessible material does not establish a harmonised worldwide headcount exclusively for port workers. Accordingly, seafarer totals and broad transport employment estimates should not be presented as interchangeable measures of direct port employment. The employment relevance of ports instead rests here on occupational functions and their connections with wider economic activity. UNCTAD (2025) provides the wider maritime development context, while across African economies those connections matter for livelihoods associated with coastal gateways, inland freight corridors, agricultural supply chains and distribution businesses. A fairness perspective asks whether the people bearing adjustment costs can influence decisions and access the opportunities associated with modernisation.

Ghana provides a West African setting because its ports combine domestic trade functions with services supporting regional economic connections. The Ghana Shippers' Authority (GSA, 2026a) reports approximately 31.08 million metric tonnes of cargo throughput through Tema and Takoradi during 2025. Tema accounted for roughly sixty-four percent, while Takoradi accounted for approximately thirty-six percent of the total. The same review records about 1.26 million metric tonnes under a combined transit and transshipment category, which should not be interpreted as transit cargo alone. GPHA identifies Burkina Faso, Mali and Niger among the hinterland markets served through its transit facilities (Ghana Ports and Harbours Authority [GPHA], n.d.). These connections make predictable treatment relevant for foreign corridor users as well as Ghanaian importers, exporters and logistics businesses. Ghana is therefore examined as an important regional gateway without assuming that its ports dominate every West African performance indicator.

The employment connection is also visible within Ghana, although isolated recruitment figures cannot represent the port economy or its employment multiplier. For example, GPHA (2024) reports the recruitment and training of 149 security personnel at Tema, illustrating one documented occupational contribution. Such evidence demonstrates a employment activity rather than establishing total national employment attributable to ports. Wider livelihood interests include freight forwarding, trucking, maintenance, trading and services whose demand depends partly on port operations. Those interests may respond differently when charges, access conditions or clearance requirements change across the port network. National trade gains therefore cannot establish that every affected group experiences regulation as equitable, respectful or sufficiently transparent. This distinction supports an investigation that connects port development with stakeholder evaluation rather than treating aggregate throughput as an adequate measure of satisfaction.

Existing research provides foundations, which make an assertion that fairness has never been studied in Ghanaian ports untenable. Lawer (2019) examines participation and conflict around Tema expansion, while Andersen et al. (2023) analyse difficulties developing governance arrangements considered fair by different stakeholders. Research on Ghanaian agricultural exporters additionally demonstrates the practical importance of handling time and service quality for trading decisions (Kornher et al., 2025). Beyond Ghana, Moeremans and Dooms (2025) investigate local community acceptance, while Yeo et al. (2015) address customer satisfaction within Korean container ports. These contributions illuminate participation, governance, operational performance and acceptance, although those outcomes should not be collapsed into one interchangeable evaluation. Within the selected literature, the relationship between differentiated regulatory fairness judgements and defined stakeholder satisfaction remains insufficiently integrated. The gap addressed here is therefore specification and theoretical integration rather than the geographical absence of previous research.

The main objective is to develop a theory-informed framework explaining how perceived regulatory fairness may relate to stakeholder satisfaction in Ghana's port sector. The first specific objective is to clarify regulatory fairness and satisfaction while distinguishing their conceptual dimensions and evaluative boundaries. The second specific objective is to synthesise relevant Ghanaian and international documentary evidence concerning fairness in port governance. The third specific objective is to formulate propositions and an explanatory model that can guide subsequent empirical testing. Organisational Justice Theory provides the principal perspective because it distinguishes fairness concerning procedures, distributions, interpersonal treatment and information (Colquitt, 2001). Expected benefits include clearer consultation design, more intelligible tariff communication, accessible complaints processes and a defensible research instrument. These are potential uses of the framework rather than measured improvements already attributable to the present study.

Ghana is timely because commercial shipping regulation has entered an implementation period in which institutional responsibilities and stakeholder expectations are negotiated. GSA's June 2025 account describes expanded oversight and complaints arrangements associated with the Ghana Shippers' Authority Act, 2024, Act 1122 (GSA, 2025). Its September 2026 account further describes parliamentary engagement concerning predictable charges, institutional coordination and supporting implementation arrangements (GSA, 2026b). These developments create a concrete opportunity to distinguish the existence of regulatory authority from the fairness experienced through its exercise. The analytical question concerns how stakeholders evaluate decisions when commercial, administrative and public responsibilities intersect across several organisations. Ghana's transit connections strengthen this question because regulatory experiences can affect actors whose businesses extend beyond the country itself. The study consequently treats Ghana as a informative setting while avoiding an unsupported assumption that recent legislation has already improved satisfaction.

2 Literature review and theoretical perspective

2.1 Organisational Justice Theory

Organisational Justice Theory explains fairness through the standards people apply when assessing decisions, decision processes and treatment within institutional relationships. Colquitt (2001) distinguishes distributive, procedural, interpersonal and informational justice, providing a foundation for separating related but different experiences. Distributive justice concerns the appropriateness of allocations, whereas procedural justice concerns how those allocations and other decisions are reached. Interpersonal justice concerns dignity and respect, while informational justice concerns explanations and the quality of communication surrounding decisions. Colquitt et al. (2001) synthesise organisational research demonstrating that justice dimensions relate to several evaluative and behavioural outcomes. However, relationships established within employment settings cannot automatically establish equivalent effects among port users, commercial intermediaries or neighbouring communities. The present study therefore adapts the theory's analytical distinctions while treating their proposed port-sector relationships as questions requiring contextual testing.

This adaptation requires a specified evaluative object because stakeholders may judge a terminal operator, customs agency and commercial regulator quite differently. Perceived regulatory fairness is defined as a stakeholder's assessment of the appropriateness of regulatory decisions, procedures, treatment and explanations affecting port-related activities. Regulation includes the exercise of public authority and delegated governance responsibilities, while ordinary service encounters are relevant only where they implement those responsibilities. A stakeholder's appreciation of efficient cargo handling therefore differs from an assessment of whether an inspection decision was consistently

justified. Likewise, a commercially attractive charge may still be perceived as unfair when comparable users receive unexplained differential treatment. The framework accordingly separates favourable personal outcomes from judgements about acceptable rules and their application. This distinction prevents fairness from becoming another label for satisfaction and preserves a relationship that empirical research can meaningfully examine.

The theory also faces limitations because fairness perceptions can reflect restricted information, strategic interests and unequal access to institutional decision makers. A powerful organisation may describe a preferential arrangement as fair because it protects established commercial advantages rather than public accountability. Conversely, consistent enforcement may attract dissatisfaction from actors whose previous benefits depended on discretionary exceptions or weak monitoring. These possibilities mean that perceived fairness cannot substitute for legal compliance, independent oversight or defensible ethical standards. They also explain why satisfaction should not become the sole criterion for evaluating legitimate regulatory action across competing stakeholder interests. The study uses organisational justice as an explanatory perspective rather than as a mechanism for validating whichever preferences stakeholders express. Its contribution lies in specifying evaluative relationships that can be investigated alongside evidence about actual decisions and their consequences.

2.2 Regulatory fairness equity and stakeholder satisfaction

Equity concerns the defensibility of allocations in relation to relevant differences, while simple equality concerns identical treatment irrespective of those differences. Within ports, legitimate differences may include service requirements, cargo characteristics and documented risks, although their relevance must be made intelligible. Differential treatment becomes a fairness issue when stakeholders cannot understand why distinctions exist or believe those distinctions reward privileged access. The proposed framework therefore considers consistency and justified differentiation together rather than assuming every charge or inspection must be identical. It also recognises that workers and communities may evaluate employment opportunities or burdens through different standards from those used by shipping businesses. Those differences do not require additional core variables because they identify the substantive content of fairness judgements within the existing construct. The analytical task is to explain which comparison standards stakeholders use and whether those standards remain appropriate to the regulatory decision.

Stakeholder satisfaction is defined as an overall evaluation of a specified regulatory encounter or governance relationship over an identifiable period. It encompasses whether the experience meets reasonable expectations and how the stakeholder assesses the handling and outcome of that experience. Oliver's (1980) expectation-based account provides useful background, although the present study retains organisational justice as its explanatory theory. Satisfaction differs from trust because a person may approve of a completed interaction without expecting the organisation to behave reliably thereafter. It differs from legitimacy because acceptance of an organisation's right to regulate does not imply satisfaction with every exercise of authority. It also differs from operational efficiency because faster movement can coexist with unresolved concerns about treatment, distribution or explanations. These distinctions protect measurement validity and prevent evidence supporting one outcome from being presented as direct proof concerning another.

Port scholarship illustrates the need for these distinctions because customers, communities and institutional actors evaluate different relationships and experience different consequences. Yeo et al. (2015) locate satisfaction within port service quality research, providing a relevant comparison rather than direct evidence about Ghanaian regulatory encounters. Kornher et al. (2025) examine exporter

preferences associated with improved handling, highlighting an operational concern that future fairness research should consider separately. Lawer (2019) and Andersen et al. (2023) identify governance tensions that cannot be resolved simply by assuming stakeholders share one performance preference. Moeremans and Dooms (2025) focus on community acceptance, demonstrating why research must preserve the distinction between social acceptance and satisfaction. Chlomoudis et al. (2026) additionally propose social sustainability indicators for concessions, extending attention to employment and external stakeholder interests. Taken together, these streams justify an integrated conceptual model while leaving its specific satisfaction relationships open to empirical investigation.

An additional implication concerns how African port development is discussed when available employment statistics use different institutional and geographical boundaries. Direct employees of a port authority, terminal contractors and people working in dependent transport businesses belong to related but different statistical categories. Adding these categories without checking overlap would exaggerate employment, while excluding dependent activities would understate the relevance of reliable port connections. The study therefore treats employment as a differentiated development concern rather than deriving an unsupported continental total from isolated project announcements. This approach also makes occupational adjustment visible because aggregate trade expansion does not establish that displaced workers obtain the opportunities generated elsewhere. Future African comparisons should identify their employment definitions, reference periods and geographical coverage before assessing whether port development distributes opportunities equitably. Such clarification would strengthen the connection between economic relevance and the fairness questions examined within the present conceptual framework.

3 Ghanaian port governance and regulatory context

Ghanaian port governance involves overlapping operational, commercial and administrative relationships, making institutional attribution essential for any subsequent satisfaction assessment. The Ghana Ports and Harbours Authority Act, 1986, PNDCL 160, establishes the port authority and provides for port management, rates and regulatory responsibilities. The Customs Act, 2015, Act 891, separately addresses customs controls, information, advance rulings and objection procedures within its published statutory structure. GSA's official account describes Act 1122 as extending commercial shipping oversight and establishing a formal complaints resolution framework (GSA, 2025). These sources indicate differentiated responsibilities rather than one agency exercising complete authority over every charge, clearance decision and service experience. The analysis consequently identifies the decision maker and decision category before interpreting a reference to regulatory fairness or stakeholder satisfaction. Published legal texts are used as institutional foundations, while current implementation accounts are treated as official descriptions rather than substitutes for consolidated legal verification.

The regional context further complicates evaluation because a transit user may encounter several organisations while experiencing the resulting journey as one administrative process. GPHA's transit facilities establish the practical relevance of hinterland users, although port facilities alone cannot demonstrate seamless coordination across entire corridors (GPHA, n.d.). Similarly, published throughput figures establish commercial scale without revealing whether smaller businesses or neighbouring communities consider decisions equitable (GSA, 2026a). Research at Tema shows why infrastructure expansion and stakeholder relationships need to be considered together when interpreting governance outcomes (Andersen et al., 2023). For the present framework, these connections motivate explicit attention to explanation, referral and responsibility across institutional boundaries. An illustrative complaint about a charge would therefore require identification of its

issuing body before any satisfaction judgement is attributed. Such examples are conceptual illustrations and should not be mistaken for observed complaints or additional documentary findings.

4 Proposition development and conceptual model

4.1 Procedural fairness and stakeholder satisfaction

Procedural fairness concerns whether decisions follow consistent, unbiased and reviewable processes that provide affected stakeholders with meaningful opportunities to express relevant concerns. Its proposed relationship with satisfaction arises because predictable procedures allow stakeholders to understand their position and assess how decisions were reached. Meaningful voice requires more than attendance at meetings because participants must be able to recognise how relevant information entered the decision process. A review mechanism can also support satisfaction when stakeholders believe errors can be identified and corrected through an accessible procedure. Ghanaian participation and governance research makes this reasoning relevant without independently establishing the proposed satisfaction effect (Lawer, 2019; Andersen et al., 2023). Accordingly, P1 proposes that greater perceived procedural fairness is positively associated with stakeholder satisfaction concerning a specified port regulatory relationship. Figure 1 represents this expected relationship as an untested path rather than an observed coefficient or confirmed causal connection.

4.2 Distributive fairness and stakeholder satisfaction

Distributive fairness concerns whether regulatory benefits, costs and burdens are allocated through standards stakeholders regard as appropriate to the circumstances. The relevant evaluation may concern the proportionality of a charge, access to opportunities or the allocation of adjustment costs. Satisfaction should be more favourable when stakeholders understand why their treatment is defensible relative to an appropriate comparison group. However, lower charges alone cannot establish distributive fairness because their justification and consequences for other affected groups also matter. The conceptual reasoning draws on justice research and concession-related attention to social allocation rather than assuming a uniform commercial preference (Colquitt, 2001; Chlomoudis et al., 2026). Accordingly, P2 proposes that greater perceived distributive fairness is positively associated with stakeholder satisfaction concerning a specified port regulatory relationship. Future testing should distinguish fairness evaluations from the absolute financial value of an outcome to reduce conceptual overlap between these measures.

4.3 Interpersonal fairness and stakeholder satisfaction

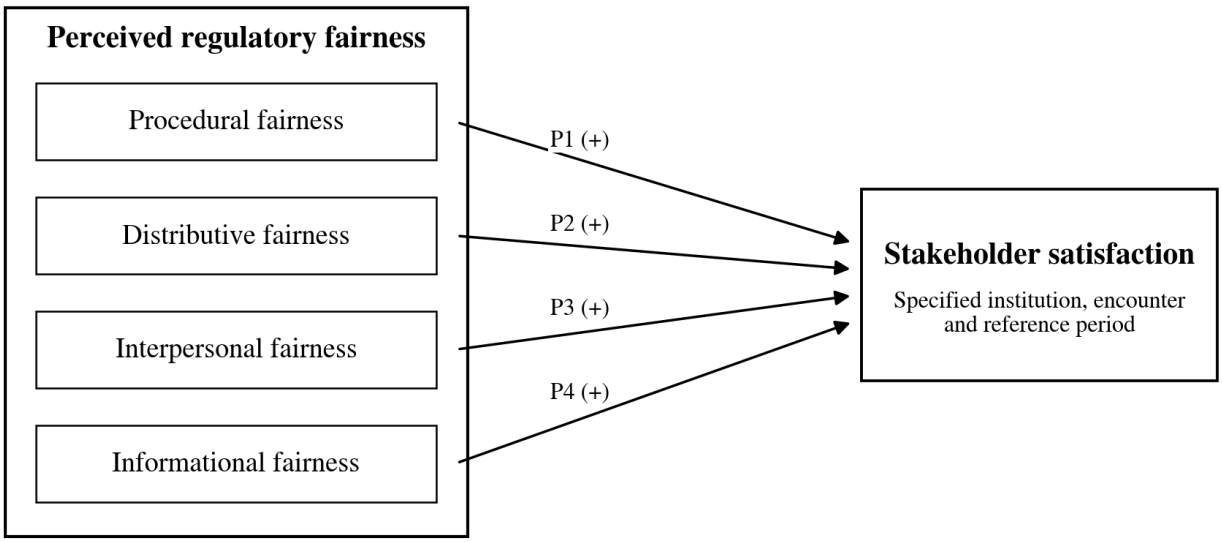
Interpersonal fairness concerns whether officials and other actors implementing regulatory responsibilities treat stakeholders with dignity, courtesy and appropriate recognition of their circumstances. Respect can influence satisfaction because an encounter communicates how an institution regards the person or organisation affected by its decision. This mechanism remains relevant when the decision itself is unfavourable, although respectful treatment cannot guarantee approval of its substantive outcome. In port settings, the circumstances requiring recognition may include occupational vulnerability, unfamiliarity with procedures or the cultural significance of affected places. Lawer (2019) provides relevant contextual evidence concerning community interests, while the ILO (n.d.) emphasises dialogue and social responsibilities within port work. Accordingly, P3 proposes that greater perceived interpersonal fairness is positively associated with stakeholder satisfaction concerning a specified port regulatory relationship. This proposition concerns experienced treatment and must remain distinct from a general evaluation of the friendliness or attractiveness of port services.

4.4 Informational fairness and stakeholder satisfaction

Informational fairness concerns whether explanations are timely, truthful, understandable and sufficiently detailed for stakeholders to interpret decisions affecting their activities. Its proposed satisfaction effect operates through intelligibility because unexplained decisions create uncertainty about obligations, comparative treatment and opportunities for correction. Publication is relevant but insufficient when affected actors cannot locate information or understand its practical meaning for their circumstances. The distinction is particularly important where a stakeholder receives separate instructions from organisations involved in the same port transaction. Official Ghanaian implementation accounts and the statutory availability of rate information provide contextual foundations for examining these issues (GSA, 2026b; Republic of Ghana, 1986). Accordingly, P4 proposes that greater perceived informational fairness is positively associated with stakeholder satisfaction concerning a specified port regulatory relationship. Figure 1 groups all four fairness dimensions within one conceptual domain while treating satisfaction as the second core construct under investigation.

Figure 1

Proposed model for future empirical testing



Two core constructs; four dimensions of fairness; all paths await empirical testing.

Note. Positive paths P1–P4 represent theoretical expectations, with no estimated coefficients or empirical validation.

5 Methodology

5.1 Design and evidence boundaries

The study adopts a theory-informed conceptual documentary synthesis that combines construct clarification with structured interpretation of accessible scholarly and institutional material. This design supports framework development without requiring documentary statements to represent measured attitudes or the effects of regulatory interventions. Jaakkola (2020) informs the model-building logic, while Bowen (2009) supports evaluating documents according to authorship, purpose and contextual relevance. The unit of analysis is a relevant passage or accessible abstract statement

bearing on regulation, stakeholder evaluation or the port setting. Full documents, institutional webpages and abstracts are differentiated because their evidential depth and purposes are not equivalent. The fifteen substantive sources comprise five scholarly studies and ten official institutional or legal sources, identified individually in Appendix A. Theory and methods references support interpretation but are excluded from that fifteen-source analytical total to avoid inflating the documentary evidence base.

5.2 Search strategy and selection

Retrieval was conducted on 3 November 2026 using targeted web searches, official institutional sites, publisher records and a SciSpace discovery query. The requested boiling strategy is operationalised as limited snowball searching, meaning references and related records were followed outward from relevant starting studies (Wohlin, 2014). Initial search concepts combined ports or seaports with stakeholder satisfaction, regulatory fairness, procedural justice, distributive equity, Ghana and Africa. Exact-title searches then checked identified publications, while institutional searches used GPHA, GSA, UNCTAD, ILO and the World Bank. Eligibility required an identifiable source and a direct contribution to conceptual explanation or the Ghanaian port context, with English-language accessibility recorded as a practical boundary. Foundational theory was retained irrespective of publication year, while current institutional material was prioritised for contemporary contextual descriptions. The process was purposive and iterative rather than exhaustive, and it did not produce a complete export-based screening denominator for all web results.

The SciSpace query returned ten records representing six distinct studies after four duplicate or alternative repository records were consolidated. Three distinct studies were retained for direct relevance, while three were not selected because their contribution was less immediate to the bounded framework. Targeted searches supplied two further substantive scholarly studies, producing the five-study scholarly component listed in Appendix A. Ten official sources completed the substantive selection, while Yeo et al. (2015) was used separately as bibliographic background concerning service quality and satisfaction. No authenticated Scopus or Web of Science search exports were obtained, so database retrieval and download counts are reported as unavailable. This status does not mean either database contains zero relevant studies, and SciSpace discovery results are not relabelled as Scopus records. Appendix C records the available counts and proposed database syntax, allowing a later author-led systematic extension without inventing retrospective search activity.

5.3 READ extraction and analytical procedure

READ structures the documentary workflow through preparing materials, extracting relevant information, analysing the material and distilling the resulting interpretation (Dalglish et al., 2020). Preparation established source identities, access levels and roles before substantive statements were considered for their contribution to the research objectives. Extraction recorded the issuing organisation or authors, publication date, geographical setting, accessible evidence, analytical relevance and important limitations for each source. Analysis used provisional theory-led coding around procedures, distributions, treatment and information, followed by descriptive coding of contextual issues and outcome boundaries. Distillation grouped the completed twenty-code matrix into five analytical themes and connected those themes with the objectives and four propositions. Appendix B provides the final code labels, operational meanings and supporting source identifiers so the analytical structure can be inspected. The code and theme totals describe this bounded interpretation and do not represent independent discoveries of causal relationships or population-level frequencies.

Coding combined deductive organising categories with inductive descriptive refinement, rather than presenting an entirely inductive grounded theory exercise or an automated keyword classification. Descriptive labels were assigned to relevant accessible material, while analytic memos separated what a source reported from the inference proposed here. Thematic development followed an interpretive logic informed by Braun and Clarke (2006), with attention to coherence within themes and distinction across them. Source comparison also considered negative possibilities, including favourable outcomes achieved through questionable procedures and formal participation that failed to address substantive concerns. The resulting matrix was organised manually in structured records, without representing the exercise as NVivo analysis, independent team coding or an intercoder reliability assessment. Documentary sources involved no newly recruited participants, and the study does not report interviews, survey responses or an unobtained ethics approval. Its methodological credibility rests on inspectable selection, source-status distinctions and explicit limits rather than unsupported assurances of saturation or comprehensive database coverage.

6 Findings from the documentary synthesis

6.1 Objective one and conceptual differentiation

The completed analysis contains twenty codes organised into five themes, although those counts describe analytical organisation rather than the statistical prevalence of stakeholder experiences. Theme one concerns procedural accountability through voice, consistency, reviewability and bounded discretion, connecting codes C01 through C04. Theme two concerns distributive equity through charge justification, proportionality, compensation and employment adjustment, connecting codes C05 through C08. Theme three concerns recognition and access through respect, cultural consideration, smaller-actor inclusion and usable complaints channels, connecting codes C09 through C12. Theme four concerns informational transparency through publication, explanation, accessibility and institutional attribution, connecting codes C13 through C16. Theme five concerns evaluative boundaries through satisfaction, acceptance, efficiency and the distinction between commitments and observed practice, connecting codes C17 through C20. These themes clarify the two core constructs while preserving important differences between the theoretical dimensions and the contextual mechanisms used to interpret them.

The first objective produces a differentiated account in which fairness concerns how stakeholders evaluate governance and satisfaction concerns their overall evaluation of a specified relationship. This distinction follows the justice framework while preventing port performance, approval of authority and customer experience from becoming interchangeable outcomes (Colquitt, 2001; Oliver, 1980). An institutional commitment to transparency can therefore support analysis of informational expectations without showing that stakeholders actually received an adequate explanation. Similarly, documented consultation identifies an engagement activity without establishing that participants considered the process responsive or the eventual decision acceptable. The code matrix treats these distinctions as analytical safeguards when moving between statutory responsibilities, official implementation accounts and scholarly research. A central conceptual finding is that outcome specificity matters as much as the inclusion of additional predictors within an explanatory model. The framework consequently specifies satisfaction with a regulatory referent and period, leaving actual stakeholder responses to be established through subsequent empirical investigation.

6.2 Objective two and Ghanaian governance evidence

The second objective identifies a difference between formal opportunities for participation and the substantive responsiveness that a procedural fairness interpretation would require. Lawer's (2019)

accessible account links participation around Tema expansion with unresolved cultural concerns and conflict, making attendance an inadequate proxy for meaningful inclusion. Andersen et al. (2023) likewise provide a port-governance example in which a shared interest in efficiency did not establish agreement about fair arrangements. These studies support examining the quality and consequences of stakeholder engagement without demonstrating the satisfaction coefficients proposed in the present framework. Their comparison suggests that the procedural question concerns whose information influences decisions and how disagreements receive a reasoned response. The interpretive result is a mechanism-based distinction between providing an opportunity to speak and demonstrating that relevant concerns received consideration. This result supports P1 while retaining the possibility that fair procedures may coexist with dissatisfaction about an unfavourable substantive outcome.

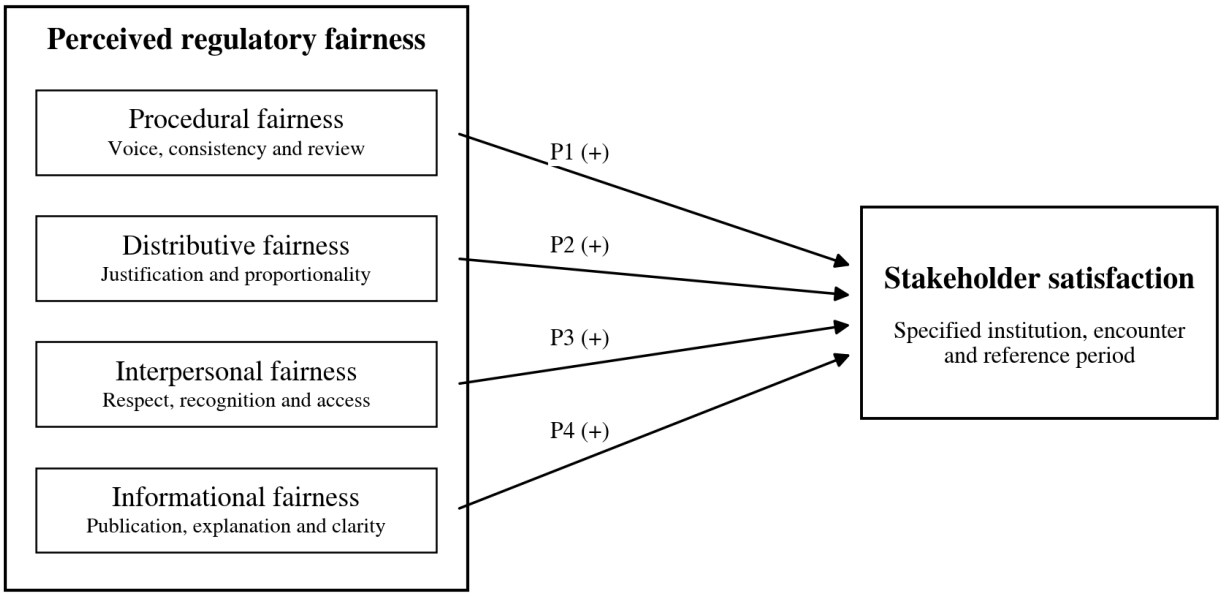
A second Ghanaian interpretation concerns the need to distinguish the justification of regulatory charges from stakeholders' preferences for financially favourable treatment. GSA's (2026b) account documents continuing engagement over commercial shipping regulation, while the GPHA statute establishes an institutional basis for dues, rates and related information. The accessible material establishes that pricing and oversight are governance matters, although it does not measure whether any stakeholder considers a particular charge equitable. This creates a reason to investigate proportionality, comparative treatment and the explanation of differences rather than relying exclusively on the nominal amount charged. The same logic extends conceptually to employment adjustment and community burdens because the legitimacy of allocation requires more than an aggregate development benefit. However, these wider allocations should be examined only where the selected regulator or delegated governance actor actually controls the relevant decision. The resulting synthesis supports P2 and clarifies the importance of matching distributive evaluations to a decision, comparison standard and responsible institution.

6.3 Objective three and model refinement

The third objective integrates recognition and explanation into the model because a technically defensible decision can still be experienced through disrespectful or incomprehensible implementation. The institutional sources make communication, dialogue and complaints handling relevant, while community research establishes why experienced port impacts require attention beyond cargo movement (ILO, n.d.; Moeremans & Dooms, 2025). The synthesis interprets respectful treatment and intelligible explanations as distinct mechanisms, rather than assigning both to an undifferentiated engagement score. Nevertheless, the documentary evidence cannot determine whether either mechanism influences Ghanaian stakeholder satisfaction more strongly than procedural or distributive evaluations. The final model therefore retains four unweighted proposition paths and specifies that all remain open to future confirmation, qualification or rejection. Figure 2 presents the refined framework, linking the five-theme interpretation with the two core constructs without adding themes as independent latent variables. The substantive finding is a coherent explanatory architecture and testing agenda, rather than a statistically tested model or evidence of achieved regulatory reform.

Figure 2

Final framework derived from the documentary synthesis



Five-theme documentary synthesis informs the paths; theme five separates satisfaction, acceptance and efficiency.

Note. Codes C01–C16 inform the four fairness dimensions; C17–C20 preserve outcome and evidence boundaries. The model remains untested.

7 Discussion

The study extends port-governance reasoning by connecting previously separated concerns through an explicitly differentiated relationship between regulatory fairness and satisfaction. Participation research helps identify procedural tensions, concession research highlights allocation, and community research establishes the importance of recognition beyond immediate commercial transactions. Organisational justice provides the common analytical language, while satisfaction supplies a specified outcome that remains distinct from efficiency and social acceptance. This integration does not establish that existing port scholarship overlooked fairness, since several selected studies directly address related governance problems. Its narrower contribution concerns how fairness dimensions can be organised and translated into propositions with identified mechanisms and evaluative referents. Such specification responds to the conceptual requirement that theory development should explain relationships rather than merely announce an unexamined geographical gap (Jaakkola, 2020). The Ghanaian setting provides institutional detail through which this contribution can be assessed, challenged and developed through future comparative research.

A second contribution concerns the relationship between operational performance and evaluative experience because the two may reinforce one another without being identical. The economic importance of handling quality is supported by exporter research, although that evidence should not be reinterpreted as a direct assessment of regulatory justice (Kornher et al., 2025). A future investigation could find that faster clearance improves satisfaction while having little relationship with perceptions of respectful treatment or procedural voice. It could also find that explanation improves satisfaction during an unavoidable delay, although operational problems remain unresolved and commercially costly. These possibilities show why fairness and efficiency should be measured

separately before their empirical relationships are examined through an appropriate design. They further prevent fairness programmes from being presented as substitutes for infrastructure, staffing or technical competence within the port system. The conceptual position therefore supports evaluating governance experiences alongside operational evidence while preserving the distinctive contribution made by each source of information.

The framework also contributes to debates about inclusion because the visibility of an actor's interests may differ from the economic importance of that actor's activities. Large organisations can provide detailed technical submissions, while smaller businesses, workers or communities may face different information and participation constraints. The study does not estimate those differences or reintroduce stakeholder power asymmetry as an additional moderating variable within the selected two-construct framework. Instead, it identifies a design responsibility to ensure that satisfaction measures do not merely reproduce the perspectives of the easiest organisations to reach. This responsibility includes distinguishing commercial users from employees and communities when defining sampling frames, regulatory relationships and appropriate questions. Any later comparison should first establish that respondents understand the items in sufficiently similar ways for group-level interpretation to be defensible. Inclusion thus strengthens the conceptual and methodological design without converting an unmeasured contextual concern into a statistical result.

Finally, the study emphasises that regulatory satisfaction has a bounded normative role because some necessary decisions may remain unpopular even when implemented fairly. Safety inspections, justified sanctions and restrictions protecting public interests can impose burdens that stakeholders would prefer to avoid in their commercial activities. A regulator should therefore investigate dissatisfaction without assuming that every negative evaluation establishes an improper decision or requires preferential accommodation. Equally, satisfaction among commercially influential actors should not establish that a regulatory arrangement adequately protects weaker participants or wider public interests. The relevant institutional response combines perception evidence with legal authority, documented reasons, distributional assessment and independent accountability where appropriate. Organisational justice remains useful because it directs attention to evaluative processes without removing the need to assess substantive decisions through other standards. This bounded interpretation helps preserve the distinction between explaining stakeholder responses and endorsing those responses as an exhaustive definition of good governance.

8 Implications and future empirical assessment

8.1 Theoretical and methodological implications

The theoretical implication is that perceived regulatory fairness should be treated as a multidimensional domain rather than reduced to a single general approval statement. A subsequent measurement study should first establish whether procedural, distributive, interpersonal and informational evaluations are distinguishable among the selected Ghanaian stakeholder groups. Items should refer to the same institution, encounter category and period so that comparisons reflect substantive experiences rather than different objects of evaluation. Satisfaction items should measure overall evaluation without repeating fairness language, thereby reducing the risk that the predictor and outcome become semantically identical. Cognitive interviews and a pilot assessment would help determine whether adapted justice language is intelligible in port transactions and community governance relationships. Those activities remain prospective and cannot be described as completed instrument validation or evidence of measurement equivalence in the present study. The resulting research design should preserve the framework's conceptual simplicity while allowing empirical evidence to question the usefulness of its proposed dimensional structure.

Future testing could combine stakeholder survey responses with administrative information about charges, processing time, complaint handling and the decision category involved. A stratified design across Tema and Takoradi would support comparison, provided that the sampling frame identifies who actually experienced the relevant regulatory relationship. A measurement model should be assessed before the structural paths are estimated, with attention to reliability, discriminant validity and defensible comparisons between groups. The researcher should then examine the four proposition paths while accounting for operational experiences and outcome favourability where theory and data support their inclusion. Longitudinal observations or carefully designed policy comparisons would provide stronger evidence about temporal ordering than a single cross-sectional questionnaire alone. Administrative records and separately timed responses could also reduce dependence on one respondent reporting every predictor and outcome simultaneously. Sample size should follow an explicit power analysis and anticipated model complexity rather than an arbitrary respondent total attached to the conceptual framework.

The proposed testing strategy should also distinguish the experience of making a complaint from the wider evaluation of the regulatory organisation. Complainants may evaluate corrective action after an unusually difficult encounter, whereas routine users may base satisfaction on repeated experiences with ordinary requirements. Combining these groups without recording their different reference points could conceal meaningful variation or produce misleading comparisons between institutional performance scores. Future sampling should therefore record encounter type and timing before interpreting differences associated with the four proposed fairness dimensions. It should also include actors who abandoned a complaint where feasible, because completed cases alone may omit experiences of inaccessible procedures. These refinements concern the design of subsequent research and provide no additional evidence about the current prevalence of complaints in Ghana. Their purpose is to preserve alignment between the model, the measurement process and the interpretation of stakeholder satisfaction.

8.2 Practical and policy implications

For regulators and port organisations, the framework suggests examining how decisions are explained, reviewed and attributed before introducing another general stakeholder satisfaction score. Consultation records could identify the issues raised, the evidence considered and the reasons relevant suggestions were accepted, modified or declined. Complaints systems could specify referral responsibilities, response periods and escalation routes so that stakeholders understand which organisation can resolve a particular problem. Tariff communication could explain the basis of differences without assuming that publication alone produces understanding among every category of port user. These practices should be assessed against actual institutional mandates because the study does not authorise any agency to assume another organisation’s responsibilities. Their potential value lies in making regulatory encounters more intelligible and reviewable while preserving the capacity to enforce justified requirements. Evaluation would still be necessary to establish whether implementation changes experienced fairness, satisfaction or administrative performance within the Ghanaian port system.

For employment and community relationships, the framework encourages distinguishing the promise of economic opportunities from the procedures through which affected people access those opportunities. Dialogue concerning occupational adjustment could identify the groups affected, the alternatives considered and the criteria used when allocating support or training. Community engagement could also recognise non-financial concerns where a development decision affects places, social practices or other interests that simple compensation values may overlook. Such actions require contextual investigation because the present documentary synthesis does not establish the

distribution or scale of these concerns across Ghanaian ports. Regional users could benefit from clearer institutional referral and information arrangements, although the resulting effects on corridor competitiveness remain questions for empirical assessment. The practical emphasis is therefore on defensible governance processes rather than guarantees that consultation, communication or compensation will eliminate disagreement among affected interests. The framework can guide questions for institutional improvement while leaving the adequacy of particular interventions open to evidence and stakeholder scrutiny.

9 Limitations and conclusion

The study is limited by purposive selection, uneven document accessibility and the absence of authenticated Scopus and Web of Science search exports. Its fifteen-source analytical selection is a bounded foundation for conceptual development rather than a comprehensive inventory of all scholarship or policies relevant to Ghanaian ports. Some scholarly records were accessible only through abstracts, and institutional accounts were analysed as accounts rather than treated as full legislation or independent outcome evaluations. Current legal application would require verification of amendments, implementing instruments and authoritative consolidated texts before the framework informs a specific compliance decision. The twenty codes and five themes organise this synthesis without establishing inter-rater agreement, thematic saturation or the prevalence of any stakeholder experience. These limitations constrain the strength of empirical inference but leave the conceptual relationships available for transparent criticism and subsequent testing. An expanded review should archive full texts, complete database searches and examine evidence that could challenge the proposed positive fairness–satisfaction relationships.

The study concludes that Ghanaian port governance can be examined more precisely when perceived regulatory fairness is distinguished from stakeholder satisfaction and from neighbouring performance outcomes. It develops four propositions connecting procedural, distributive, interpersonal and informational fairness with satisfaction concerning a specified regulatory relationship. The framework preserves two core constructs while using dimensions to explain how fairness judgements may arise in different port encounters. Its documentary interpretation connects twenty codes with five themes and shows how official responsibilities, published research and conceptual inference can inform model development. Ghana’s regional gateway role and evolving commercial shipping oversight provide a concrete setting in which these relationships warrant empirical investigation. Figure 2 is consequently the final conceptual result and remains a model for future testing rather than a representation of effects already demonstrated. The contribution is a transparent explanation and research agenda that can support better questions about equitable governance without substituting conceptual coherence for evidence of stakeholder experience.

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Appendix A Documentary source register

ID	Source	Accessible material	Analytical role and limitation
D01	UNCTAD (2025)	Official report overview	Global maritime development context; overview only
D02	ILO (n.d.)	Official sector webpage	Dialogue, work and employment definitions; no port-only global total extracted
D03	World Bank (2025)	Official toolkit overview	Economic regulation, labour and port–city modules described; complete modules not analysed
D04	GSA (2026a)	Report PDF, Tables 1–2 and 7	Ghana trade scale and combined transit/transshipment category
D05	Republic of Ghana (1986)	Published statutory PDF	Functions, rates and access to rate regulations; foundational version
D06	Republic of Ghana (2015)	GRA statutory PDF	Customs information and objection provisions; consolidated current application not asserted
D07	GSA (2025)	Official implementation account	Expanded commercial oversight and complaints framework; full Act 1122 not analysed
D08	GSA (2026b)	Official parliamentary engagement account	Predictability, implementation and institutional coordination; no satisfaction outcomes measured
D09	GPHA (n.d.)	Official facilities webpage	Hinterland services for Burkina Faso, Mali and Niger
D10	GPHA (2024)	Official employment account	149 security recruits; illustrative activity rather than sector employment total
D11	Lawer (2019)	Publisher and author-institution abstract	Participation and cultural concerns; inference limited to accessible account
D12	Andersen et al. (2023)	Open publisher article	Tema governance and disagreements over fairness
D13	Moeremans and Dooms (2025)	Open publisher article	Community acceptance; distinct from regulatory satisfaction
D14	Chlomoudis et al. (2026)	Publisher abstract and discovery record	Concession social indicators; abstract-level analysis; full text not systematically coded

ID	Source	Accessible material	Analytical role and limitation
D15	Kornher et al. (2025)	Open publisher article	Ghana exporter preferences and handling quality; not a regulatory fairness test

Appendix B Interpretive coding matrix

Code	Analytical label	Operational meaning	Source IDs	Theme
C01	Voice and responsiveness	Relevant stakeholder input and consideration	D11, D12	Procedural accountability
C02	Consistent procedures	Comparable treatment and reasoned differentiation	D06, D12	Procedural accountability
C03	Review and correction	Availability of objection or complaint review	D06, D07	Procedural accountability
C04	Bounded discretion	Mandates and the limits of decision authority	D05, D06	Procedural accountability
C05	Charge justification	Reasons supporting commercial charge oversight	D03, D08	Distributive equity
C06	Proportionate allocation	Defensible distribution of benefits and burdens	D03, D14	Distributive equity
C07	Compensation and loss	Recognition of development-related burdens	D05, D11	Distributive equity
C08	Employment adjustment	Dialogue and support during work changes	D02, D03, D14	Distributive equity
C09	Respectful treatment	Dignity within work and governance relationships	D02, D14	Recognition and access
C10	Cultural recognition	Attention to non-financial community interests	D11	Recognition and access
C11	Inclusive participation	Whose interests enter governance evaluation	D12, D13, D14	Recognition and access
C12	Usable complaints access	Practical access to an institutional response	D07	Recognition and access
C13	Published requirements	Availability of rates and formal requirements	D05, D06	Informational transparency
C14	Reasoned explanation	Reasons enabling interpretation of decisions	D06, D08	Informational transparency
C15	Accessible information	Information and digital implementation context	D03, D07	Informational transparency
C16	Institutional attribution	Identifying the responsible organisation	D05, D06, D08	Informational transparency

Code	Analytical label	Operational meaning	Source IDs	Theme
C17	Outcome specificity	Satisfaction not inferred from neighbouring outcomes	D12, D13, D15	Evaluative boundaries
C18	Acceptance distinction	Social acceptance distinguished from satisfaction	D13	Evaluative boundaries
C19	Performance distinction	Trade and efficiency distinguished from satisfaction	D01, D04, D09, D10, D15	Evaluative boundaries
C20	Commitment and enactment	Official intention distinguished from observed effects	D02, D03, D07, D08	Evaluative boundaries

Appendix C Search accounting and replication syntax

Retrieval route	Recorded count	Interpretation
SciSpace discovery	10 records	6 distinct studies after 4 duplicate records; 3 selected and 3 not selected
Targeted scholarly additions	2 studies	Lawer and Kornher added to the selected three; five substantive scholarly studies in total
Official contextual and legal selection	10 sources	Individual source identities and access levels in Appendix A
Final substantive analytical selection	15 sources	Five scholarly studies plus ten official sources
Scopus retrieval	Unavailable	No authenticated search export; zero downloaded database exports; hit and screening counts not established
Web of Science retrieval	Unavailable	No authenticated search export; zero downloaded database exports; hit and screening counts not established
All web searches combined	Not recorded	No comprehensive denominator; the selected-source total is not a systematic search yield
Supplementary theory methods and background	10 references	Twenty-five references overall; these ten are excluded from the fifteen-source analytical total