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List of abbreviations

BOO: Build-Own-Operate

BOST: Build-Operate-Share-Transfer

BOT: Build-Operate-Transfer

BROT: Build-Rehabilitate-Operate-Transfer

BTO: Build-Transfer-Operate

BTL: Build-Transfer-Lease

PA: Port Authority

PPPs: Public-Private Partnerships

ROT: Rehabilitate-Operate-Transfer

TOC: Terminal Operating Company

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Abstract

Ports face numerous challenges and opportunities amid significant transformations in the global maritime industry. Port Authorities (PAs) and Terminal Operating Companies (TOCs) invest heavily in infrastructure and equipment to remain competitive in a volatile and technologically evolving market. The prevailing landlord function model, used by 60-70% of global maritime ports, defines the roles of PAs in managing land and infrastructure and TOCs in overseeing terminal operations. This model highlights the complex relationship between PAs and TOCs, mainly regarding financial goals and stability. Central to this relationship is the fee structure outlined in concession contracts. Notably, there is a regional divergence: Asian nations tend to favour fixed fees, while European countries opt for a combination of fixed and per-unit fees.

This study addresses the following research question: “How can optimal concession contracts be determined, considering factors beyond revenue maximisation?” This research aims to provide a comprehensive understanding by combining bargaining theory and stakeholder theory. Unlike previous literature that often focuses solely on the perspective of PAs, primarily based on traditional bargaining theory, this study broadens the scope to include a stakeholder theory approach. This theoretical integration allows for a thorough consideration of the interests and concerns of various stakeholders, expanding the decision-making scope of PAs and TOCs to encompass social welfare, throughput benefits, and environmental sustainability. Through this perspective, the study explores a nuanced methodology to address modern port management challenges, advocating for a more comprehensive approach to navigate the complex dynamics of the rapidly evolving maritime sector, particularly within ports.

Keywords: Bargaining theory, Stakeholder theory, Concession contracts, Landlord function Model, PA, Port industry, Port logistics, TOC, International Business.

Kurzfassung

Inmitten signifikanter Veränderungen in der globalen maritimen Industrie stehen Häfen vor zahlreichen Herausforderungen und Chancen. Hafenbehörden (PAs) und Betreiber von Hafenterminals (TOCs) investieren intensiv in Infrastruktur und Ausrüstung, um in einem volatilen und technologisch fortschreitenden Markt wettbewerbsfähig zu bleiben. Das vorherrschende Landlord-Funktionsmodell, das von 60-70% der globalen maritimen Häfen verwendet wird, definiert die Aufgaben der PAs bei der Verwaltung von Land und Infrastruktur und der TOCs bei der Überwachung der Terminalbetriebe. Dieses Modell betont die komplexe Beziehung zwischen PAs und TOCs, insbesondere in Bezug auf finanzielle Ziele und Stabilität. Im Zentrum dieser Beziehung steht die Gebührenstruktur in Konzessionsverträgen. Bemerkenswert ist eine regionale Unterscheidung: Asiatische Nationen bevorzugen in der Regel feste Gebühren, während europäische Länder eine Kombination aus festen und prozentualen Gebühren bevorzugen.

Diese Studie zielt darauf ab, folgende Forschungsfrage zu beantworten: Wie können optimale Konzessionsverträge ermittelt werden, unter Berücksichtigung von Faktoren jenseits der Umsatzmaximierung? Durch die Verknüpfung von Verhandlungstheorie und Stakeholder-Theorie strebt diese Forschung an, ein umfassendes Verständnis zu vermitteln. Im Gegensatz zur bisherigen Literatur, die sich oft ausschließlich auf die Perspektive der PAs konzentriert, die hauptsächlich auf traditioneller Verhandlungstheorie basiert, erweitert diese Studie den Blickwinkel, um einen Ansatz der Stakeholder-Theorie einzubeziehen. Diese theoretische Integration ermöglicht eine umfassende Berücksichtigung der Interessen und Anliegen verschiedener Interessengruppen und erweitert den Entscheidungsspielraum von PAs und TOCs, um soziale Wohlfahrt, Durchsatzvorteile und Umweltschutz einzubeziehen. Durch diese Perspektive untersucht die Studie eine nuancierte Methodik, um moderne Herausforderungen im Hafenmanagement anzugehen, und plädiert für einen ganzheitlichen Ansatz, um die komplexen Dynamiken des sich rasch entwickelnden maritimen Sektors zu bewältigen, insbesondere im Kontext von Seehäfen.

Schlüsselwörter: Verhandlungstheorie, Stakeholder-Theorie, Konzessionsverträge, Vermieterfunktionsmodell, PA, Hafenwirtschaft, Hafenlogistik, TOC, Internationales Geschäft

1. Introduction

“COVID-19, the war in Ukraine, climate change and geopolitics have wreaked havoc on maritime transport and logistics, clogging some ports and closing others, reconfiguring routes, extending delays and pushing shipping costs. Ships deliver over 80% of world trade, so disruptions in ports and shipping lanes mean food, energy, medicine, and other essential items do not reach those in need. Businesses are left without supplies. Moreover, prices for producers and consumers soar. Although delays have improved and dry cargo rates are decreasing, maritime transport – and thus world trade – remains vulnerable. The industry must invest now to restore its resilience to future crises and climate change. Ports, shipping companies and transport operators need to expand capacity, renew and expand fleets and equipment, ensure adequate and skilled labour, improve connectivity and performance, reduce emissions and safeguard competition to ensure maritime transport can weather the next storm” (UNCTAD, 2022).

The relationship between PAs and TOCs is crucial in port logistics to ensure efficient and profitable operations. Concession contracts are the foundation for this relationship, outlining the terms and conditions under which TOCs lease port facilities and provide cargo-handling services. After an extensive literature review of international business journals and research articles, traditional approaches for determining optimal concession contracts, mainly rooted in bargaining theory, have predominantly focused on maximising fee revenues, profits, or ports’ throughput. However, the limitations of bargaining theory become apparent when the PA has objectives other than revenue maximisation.

This thesis aims to analyse these limitations in such scenarios and proposes using stakeholder theory as an integrative framework to determine the optimal concession contract. By considering the interests and concerns of various stakeholders, this work will try to provide a comprehensive perspective on the Port Authority’s decision-making process, filling the gap left by the limitations of bargaining theory. In addition, the essay will try to emphasise the current research gap and propose future research scenarios to address this gap.

This chapter will explain the research gap, the research question, and the theoretical contribution of this study. In addition, we will briefly mention related theories to give the reader a quick impression of the academic background of this study.

We used qualitative methods, focusing on semi-structured interviews with relevant PA members and TOCs following the Kvale method, ensuring ethical and rigorous data collection.

1.1. Seaports and global trade

Seaports are pivotal to commerce flow in the fluid and increasingly complex global trade landscape; they are the lifelines of international commerce, handling a massive chunk of global trade volume (UNCTAD, 2020). From early history, ports have played a key role in facilitating trade. Ancient civilisations like the Phoenicians would marvel at the contemporary ports, which have metamorphosed from rudimentary harbours to logistical and industrial hubs within global supply chains, driven by their geographical position and intermodal connectivity. Notteboom et al. (2022) affirm that ports act as connectors across regions, and their relative geographical positioning is integral to linking various shipping networks.

Similarly, ports act as transshipment zones, a function that Ducruet et al. (2020) observe promotes economies of scale and optimises shipping networks. Cullinane and Song (2003) contend that the robustness of port infrastructure is vital in processing cargo, with efficient customs procedures as a linchpin in reducing trade costs. Moreover, ports are significant contributors to regional economic growth, with employment opportunities, investments, and stimulation of local industries being some of their indirect benefits, as posited by Pallis and De Langen (2010).

Technological strides have evolved ports into entities that are now pitted against whole transport networks in a competitive landscape, as Notteboom and Yap (2012) described. To stay ahead, investments in cutting-edge facilities and management systems are pivotal (Notteboom & Winkelmanns, 2001). Also, forging alliances in the shipping industry offers operational efficiencies and boosts port performance, as Parola et al. (2016) highlighted.

Ports have also transformed their governance from public entities to a blend of private and public management. Goss (1990), Brooks (2004) and others have documented this trend,

emphasising its contribution to efficiency. Additionally, the adoption of landlord models in port governance, as discussed by the World Bank (2017) and Meersman et al. (2010), indicates a convergence of public oversight and private enterprise.

Effective pricing is central to port operations, and several scholars, including Yoshida and Kim (2004) and Pando et al. (2005), have examined its nuances. The significance of concession contracts in the port industry, which caters to mutual growth, has also been explored extensively. Coordination between PAs and TOCs is imperative for smooth operations, as Notteboom (2006) and Brooks and Schellinck (2015) argue.

The highlighted thesis delves into this coordination, spotlighting the differing objectives of PAs and TOCs. While PAs focus on throughput and cost minimisation, TOCs are profit-driven. The bargaining and the stakeholder theories are invoked to understand the negotiation dynamics between these entities.

The Bargaining Theory sheds light on negotiation dynamics, which is particularly relevant in port logistics. However, its primary focus on payoff maximisation may not encapsulate PAs' broader objectives. We can address this gap through stakeholder theory, which offers a holistic understanding of various interests. As Notteboom and Winkelmanns (2001) emphasised, a network strategy requires cooperation and a sense of diverse stakeholder values.

Further, concession contracts are pivotal in the port sector. Nevertheless, a holistic perspective that considers all stakeholders remains under-explored. PAs often wear dual hats, juggling trade facilitation with public interest. Thus, an integrated approach combining bargaining and stakeholder theories can foster effective negotiations between PAs and TOCs, encompassing broader considerations.

While the explored studies underscore coordination between PAs and TOCs, they could delve deeper into the negotiation complexities. The bargaining and stakeholder theories offer insights, but a composite approach might be more conducive to future port operations. Such a synthesis can pave the way for ports to continue their pivotal role in global commerce.

1.2. Research gap: The limitations of the Bargaining Theory in determining the optimal seaport concession contract

In the dynamic world of port logistics, many PAs, particularly in Europe and Asia, have transitioned from being the direct owners and operators of ports to acting as landlords who lease out their facilities to TOCs. Notteboom and Winkelmans (2001) noted that designing beneficial concession contracts has become increasingly important for these landlord PAs.

The Bargaining Theory, which explores how parties negotiate and reach agreements, focusing on understanding the dynamics, strategies, and outcomes of the bargaining process, has proved to be a highly relevant framework for defining the clauses (fees and duration) of a concession contract between a PA and a TOC. The reason is that concession contracts inherently involve negotiations between two parties with different interests and objectives. The PA typically wants to minimise costs and ensure the efficiency of the harbour. At the same time, the TOC aims to maximise profits and reduce costs.

In the context of a concession contract, parts need to agree on several clauses, such as:

- Fees and Payments. The TOC may have to pay a fee to the PA for the right to operate: a fixed fee, a variable fee based on throughput or a combination of both.
- Contract Duration. A critical component is the length of time the concession is being made.
- Investment and Development Obligations. The contract might include the TOC investing in infrastructure or meeting development targets.
- Operational Standards. These include the level of service that must be provided, such as the speed and reliability of loading and unloading ships.
- Risk and Revenue Sharing. How the PA and TOC share risks and revenues, especially in uncertain market conditions.

Applying the bargaining theory can help us analyse how the PA and TOC negotiate the contract terms and understand the balance of power between the two parties, affecting the final contract and the conditions and leading to an efficient outcome that benefits both parties. Models like the Nash bargaining solution offer insights into the negotiation process, considering each party's

alternative options and bargaining power. This knowledge aids in designing economically efficient, fair, and sustainable long-term contracts. Incorporating bargaining theory in practice can result in more informed decision-making, better alignment of the interests of the PA and TOCs, and the production of mutually beneficial, optimal concession contracts.

Existing theoretical works, such as those by Chen and Liu (2014; 2015), Chen et al. (2017), and Liu et al. (2018), have predominantly focused on maximising fee revenues, profits, or ports' throughput. The latest refers to a port's total cargo volume over a specific period, typically measured in tons or twenty-foot equivalent units (TEUs) for containerised cargo. It reflects the port's capacity and efficiency in managing and moving goods through its facilities, including loading, unloading, and transferring loads between ships and land transportation. High throughput indicates robust port activity and can involve various cargo types, such as containers, bulk, and breakbulk. It is a critical metric for assessing a port's performance, capacity, and economic impact.

The Bargaining Theory has provided valuable insights into contract negotiations between PAs and TOCs. Indeed, almost all approaches focus on the “fee” variable.

However, in many cases, PAs have multiple objectives, which can include:

- **Economic Development:** A PA might promote economic development in the region, using the port as a catalyst for job creation and industrial growth.
- **Environmental Sustainability:** Environmental considerations may be significant, and the PA may want to ensure operations are environmentally sustainable.
- **Social Responsibility:** A PA might have objectives related to social responsibility, such as supporting local communities.
- **National or Regional Strategic Interests:** In some cases, a PA might be operating under a mandate to support national or regional strategic interests, which can encompass a range of objectives.
- **Efficiency and Service Quality:** Another objective may be to ensure that the port operates efficiently and provides high-quality services to its users.

This framework is particularly relevant for ports managed by governments alone or in partnership with private entities. In cases where governments totally or partially own ports, the

authorities may aim to maximise social welfare, which encompasses consumer surpluses and TOCs' profits. Despite changing carriers, the situation bears many similarities to that analysed by Fu et al. (2010) concerning airports. In such cases, the bargaining process becomes more complex as it involves negotiating over multiple dimensions, not just financial terms.

PAs often need to consider fee revenues and throughput simultaneously, as they provide funds for infrastructure investments and contribute to broader economic growth in port areas. An increased throughput means higher incomes for workers, truck drivers, and local shop owners and enhanced consumer utility from consuming more cargo (Han et al., 2018).

The Bargaining Theory can be instrumental in understanding how the parties can reach an agreement that balances these various objectives. For example, in bargaining, the PA might accept lower fees for commitments from the TOCs on environmental standards or local hiring. Alternatively, there might be negotiations on sharing the costs and benefits of investments aimed at broader economic development.

Applying the bargaining theory can help analyse these trade-offs and understand how the contract can align with different objectives. We could extend models such as the Nash bargaining solution to multi-objective bargaining, which can provide insights into how the parties can reach efficient agreements in a broader sense, considering the authority's multiple objectives.

1.3. Research gap: Rethinking Bargaining Theory

The Bargaining Theory, however, exhibits critical limitations when one of the bargainers (in our case, the PA) has objectives beyond revenue maximisation.

The Bargaining Theory assumes that all parties involved are rational and seek to maximise their profits or utilities. When a subject does not seek profit maximisation, the theory encounters limitations as it struggles to predict or explain the bargaining behaviours and outcomes accurately. Such altruistic or non-profit-maximising behaviours deviate from the conventional model, making it challenging to apply standard bargaining strategies and anticipate the party's concessions, demands, or acceptance thresholds, complicating the negotiation analysis and outcome prediction.

Firstly, the Bargaining Theory often fails to consider non-financial factors crucial to the PA's objectives. While financial outcomes are typically emphasised, factors such as job creation, environmental sustainability, community impact, and regional development may play significant roles. When the goal is to maximise social welfare, there is a substantial departure from Chen and Liu (2015) and Liu et al. (2018). Instead of charging TOCs, the PA's optimal choice is to subsidise them. This novel finding aligns with real-world observations in some European ports (Notteboom, 2006). Notteboom highlights the need for PAs to consider factors beyond financial gains to achieve sustainable growth and societal benefits.

Secondly, the Bargaining Theory overlooks the involvement of various stakeholders in port operations. TOCs and PAs are not the sole stakeholders in the port logistics ecosystem. Local communities, labour unions, environmental organisations, and governmental bodies also have vested interests. Ignoring their perspectives and interests may lead to suboptimal concession contract decisions. Han et al. (2018) emphasise incorporating stakeholder preferences and values to determine concession contracts to achieve balanced outcomes.

Thirdly, the Bargaining Theory often prioritises short-term financial gains without adequately considering the long-term implications of concession contracts. Immediate revenue maximisation may overshadow considerations such as sustainable growth, infrastructure development, and attracting long-term investments.

Given these limitations, our approach aims to innovatively combine the Bargaining Theory with the Stakeholder theory to overcome these critical issues. The latest can offer an integrative framework for determining the optimal concession contract when revenue maximisation is not PA's primary objective, recognising the presence of a network of stakeholders with diverse interests, goals, and concerns.

By adopting the Stakeholder Theory, the PA can address the limitations of the Bargaining Theory and consider multiple aspects:

- Firstly, the Stakeholder Theory emphasises identifying and engaging relevant stakeholders in decision-making. It acknowledges that port operations have broader impacts beyond the PA and TOCs. Engaging stakeholders such as local communities,

labour unions, and environmental organisations allows for a more comprehensive understanding of the potential impacts and benefits of the concession contract.

- Secondly, the Stakeholder Theory lets the PA consider multiple objectives and trade-offs. It provides a framework for systematically analysing and prioritising goals, such as social welfare, throughput benefits, and environmental sustainability while considering potential exchanges between them. This holistic approach allows for a balanced decision-making process that aligns with the broader societal context.
- Thirdly, the Stakeholder Theory encourages the PA to adopt a long-term perspective and consider the sustainability of the port logistics system. It emphasises the importance of sustainable growth, infrastructure development, and community well-being. By viewing the long-term impacts and benefits of different concession contract parameters, the PA can make informed decisions that promote the port's and its stakeholders' long-term prosperity.

Despite the potential benefits of applying the Stakeholder Theory in determining concession contracts, there is a research gap in understanding its practical implications and implementation challenges in port logistics. In conclusion, the limitations of the Bargaining Theory become evident when the PA has objectives beyond revenue maximisation in determining optimal concession contracts. The Stakeholder Theory offers a viable alternative by considering non-financial factors, engaging multiple stakeholders, and adopting a long-term perspective.

1.4. Research questions

Recognising the research gap that highlights the limitations of the Bargaining Theory in reconciling the divergent objectives of PA, which may extend beyond mere revenue maximisation, and TOC, which prioritises profit maximisation, this study embarks on an investigation within the context of maritime seaports. The research questions guiding this study are as follows:

- 1) How can optimal concession contracts be determined, considering factors beyond revenue maximisation?
- 2) How can synthesising the Bargaining and Stakeholder Theory serve as a valuable framework for analysing and defining optimal concession contracts?

- 3) How does the variable 'fee' influence the negotiation and awarding process? Are there other factors which might influence the process?

In order to answer these questions, this research will focus on empirical investigations, explore non-financial factors, and evaluate concession contracts' long-term implications and sustainability within maritime seaports.

2. Theoretical background

In this chapter, we delve into the theoretical background that forms the foundation of our study, centring our analysis on the Bargaining Theory and the Stakeholder Theory. The former focuses on the negotiation process between two actors. At the same time, the latter emphasises that organisations are part of a network of relationships with individuals or groups with a vested interest in the organisation's operation.

We will merge them as we progress to develop a comprehensive theoretical framework.

2.1. The Bargaining Theory

Bargaining theory, deeply rooted in the pioneering work of John Nash in the early 1950s, has evolved to provide a comprehensive framework for understanding the complexities and dynamics of negotiations across various domains and scenarios. Nash's seminal work (1950) introduced the concept of bargaining solutions within the cooperative game theory framework, establishing a milestone on which scholars based subsequent developments in the sector. His postulates emphasised that each player in a negotiation aims to maximise their utility, considering the potential strategies of others. This foundational concept illuminated how individuals or entities make strategic decisions in negotiation scenarios, considering their interests, available information, and expected responses from other parties.

Building on Nash's foundational concepts, there are two primary forms of bargaining: distributive and integrative. Distributive bargaining is a competitive, zero-sum game where the other party's loss directly offsets one party's gain. In contrast, integrative bargaining seeks win-win situations, aiming for outcomes where both parties can benefit, emphasising collaboration and mutual gains. These forms of bargaining, while distinct in their approach and outcomes, are central to understanding the myriad ways in which negotiations can unfold.

Nash's model set the stage for a narrative filled with significant transformations in bargaining theory, providing progressively nuanced insights into negotiation dynamics. Building upon his groundbreaking work, subsequent extensions to the idea in the 1950s and 60s incorporated power dynamics and strategic behaviour considerations. Walton and McKersie's (1965)

behavioural theory of labour negotiations further elucidates the concepts of distributive and integrative bargaining.

The evolution of bargaining theory in the late 1970s and 1980s, mainly through Ariel Rubinstein's work (1982) on non-cooperative models and alternating offers and Robert Axelrod's research (1984) on the evolution of cooperation, provided more profound insights into the mechanics and long-term relationships in bargaining scenarios. These developments expanded the scope and applicability of bargaining theory across various real-world scenarios and theoretical considerations.

In recent times, bargaining theory has shifted towards exploring the psychological aspects of negotiation, with researchers like Kopelman, Rosette, and Thompson (2006) investigating the impact of cognitive biases, emotions, and individual personalities on negotiation outcomes. While adding a new layer to the theoretical fabric of bargaining, this work dovetailed with behavioural decision theory, emphasising cognitive and emotional factors in negotiation decision-making.

As scrutinised by scholars like Thompson (1990), power dynamics and influence in negotiations have also been vital in elucidating how various power sources, such as authority, resources, or information, shape negotiation strategies and outcomes. This understanding has been crucial in shaping negotiation strategies and tactics, informing decision-making, and leading to more effective negotiations across various domains.

In summary, from the initial groundwork laid by Nash to the latest research on psychological and social aspects of bargaining, the field offers a robust and comprehensive theoretical framework, incorporating various theoretical foundations, such as game theory, distributive and integrative bargaining, behavioural decision theory, and power and influence theories, enriching the understanding of negotiation and decision-making processes across numerous contexts and disciplines.

2.1.1. The distinction between bargaining and negotiation: An analytical perspective

When reaching agreements, the terms ‘negotiation’ and ‘bargaining’ often appear interchangeable. However, upon closer examination, these two processes present distinct characteristics, approaches, and outcomes.

2.1.2. The distinction between bargaining and negotiation: An analytical perspective

When reaching agreements, the terms ‘negotiation’ and ‘bargaining’ often appear interchangeable. However, upon closer examination, these two processes present distinct characteristics, approaches, and outcomes.

At its core, bargaining is a transaction-focused process primarily focused on haggling over specific terms, typically price or immediate conditions. Fisher, Ury, and Patton (1991) detailed the traditional bargaining process, drawing attention to its positional nature, where parties jostle over fixed stances.

Anyone can observe a depiction of bargaining in local markets worldwide. Consider a customer interested in an object priced at 100 Euros: proposing 70 Euros, he and the seller engage in a back-and-forth dance, finally agreeing on 85 Euros. This one-time, competitive interaction encapsulates the essence of bargaining, where the focal point is the immediate transaction.

Contrastingly, negotiation adopts a more encompassing approach. Lewicki, Saunders, and Barry (2023) noted that the process emphasises understanding the other party’s intentions, fostering relationships, and working towards mutually beneficial outcomes. Instead of being a mere price haggle, it evaluates underlying interests and seeks to cultivate value for all parties involved.

Imagine two companies, A and B, deliberating a long-term business collaboration: Company A proposes services at a particular rate, but Company B requires additional auxiliary services. The discussions weave through pricing, support, quality assurance, and future collaboration potentials. The final accord shapes into a comprehensive package tailored to both entities’

needs. Such a multi-faceted discourse typifies negotiation, where the objective surpasses the immediacy of a transaction to engender lasting alliances.

Despite their differences, it is paramount to recognise the intersections of bargaining and negotiation. As Fisher, Ury, and Patton (1991) acknowledge, while positional bargaining is an innate part of many negotiation processes, focusing solely on it can hinder optimal outcomes. Conversely, even in a negotiation's collaborative spirit, elements of bargaining might emerge, especially when finite resources are at play.

Their trajectories differ while bargaining and negotiation converge on the agreement's goal. The realm of bargaining is one of immediate transactions and competitiveness, as portrayed in local market scenarios. Conversely, with its broader and relational orientation, negotiation resonates more with intricate business partnerships. Recognising these nuances is pivotal, enabling individuals and entities to deploy the right strategy to pursue their objectives.

2.1.3. Types of bargaining

The landscape of bargaining theory is replete with complexities, driven not only by the number of participants involved but also by their approach to negotiation. One of the fundamental dichotomies in this regard is bilateral vs. multilateral bargaining. Bilateral bargaining, involving only two parties, is considered the simplest form of negotiation (Raiffa, 1982). Much of the early work in bargaining theory, including John Nash's foundational Nash bargaining solution, was developed within this bilateral context. Similarly, Rubinstein proposed an alternating model framed within two-party negotiations (Rubinstein, 1982).

However, the real-world complexities often go beyond two-party bargaining, giving rise to what is known as multilateral or multi-party bargaining. Involving three or more parties, this form of negotiation introduces layers of complexity as the strategic interactions and potential agreements increase exponentially. This complexity necessitates employing more sophisticated strategies and tactics, as negotiations can be influenced by multiple interests, perspectives, and even potential coalitions.

Another important distinction in bargaining theory is between distributive and integrative bargaining approaches. Distributive bargaining is often competitive and sees the negotiation as a zero-sum game; one party's gain directly equates to the other party's loss (Walton &

McKersie, 1965). Such negotiations are typically concerned with fixed resources like money, where the parties aim to maximise their share at the expense of the other.

In contrast, integrative bargaining is based on a cooperative paradigm and aims to create value for all parties involved. Integrative bargaining emphasises problem-solving approaches and trust-building, often requiring information sharing to discover mutually beneficial solutions (Fisher et al., 2011). This approach presents a win-win scenario, where the outcome is not necessarily zero-sum, allowing for more innovative and collaborative resolutions.

To sum up, the dualities of bilateral vs. multilateral and distributive vs. integrative bargaining offer insightful frameworks for understanding the intricate landscape of negotiation. Whether it is the simplicity of two-party negotiations, the complexity introduced by multiple parties (Raiffa, 1982), or whether the approach is competitive or cooperative (Walton & McKersie, 1965; Fisher et al., 2011), these distinctions encapsulate the diverse strategies, tactics, and outcomes that make up the rich tapestry of bargaining theory.

2.1.4. Bargaining strategies and outcomes in different contexts

Bargaining is a complex process whose dynamics are greatly influenced by the context in which it takes place, be it bilateral or multilateral, distributive or integrative, or two-party versus multi-party. The strategies that negotiators employ and the outcomes they achieve are linked to these differing scenarios.

Bilateral and multilateral bargaining strategies differ markedly based on the number of parties involved. Bilateral bargaining often relies on direct communication and negotiation between the two participants, aiming for outcomes that balance the interests of both parties (Raiffa, 1982). Multilateral bargaining, in contrast, introduces complexities like coalition-building to strengthen negotiating positions. The outcomes here can be highly variable, depending on the number and alignment of parties involved.

When it comes to distributive vs. integrative bargaining, the approaches and outcomes diverge as well. Distributive bargaining is inherently competitive, utilising strategies such as anchoring, bluffing, and applying pressure to maximise one's share of a fixed resource (Walton & McKersie, 1965). The outcomes, reflecting the win-lose nature of distributive bargaining, are often zero-sum. In contrast, integrative bargaining focuses on collaboration and mutual value

creation. It requires sharing information and engaging in trust-building activities like problem-solving and brainstorming (Fisher et al., 2011). As a result, the outcomes in integrative bargaining are generally win-win, benefiting all parties involved.

Lastly, the complexity scales up when comparing two-party vs multi-party bargaining.

Two-party bargaining is straightforward, involving direct negotiations with strategies to achieve mutual benefits (Rubinstein, 1982). Multi-party bargaining is labyrinthine, requiring methods to consider many interests, potential alliances, and a broader consensus.

In summary, the context of bargaining plays a pivotal role in shaping both the strategies that negotiators choose and the outcomes they can anticipate. Understanding these contextual nuances offers negotiators valuable insights into tailoring their tactics and better forecasting potential results.

2.1.5. Factors influencing bargaining outcomes

Bargaining outcomes are intricately shaped by a plethora of determinants, ranging from the inherent characteristics of the negotiators to the broader external contexts in which negotiations transpire. Diving deep into these multi-faceted dynamics can illuminate insights for effectively strategising negotiations.

At the individual level, three dominant factors are pivotal:

- **Power Dynamics:** As Emerson (1962) highlighted, power remains one of the most profound influencers in negotiations. This power can emerge from diverse sources like control over resources, resilience against losses, or the availability of alternative options. Essentially, the more power a party wields, the more likely they are to clinch favourable terms, guiding the negotiation trajectory and sometimes resisting concessions.
- **Preferences:** Individual preferences, tangible or intangible, play an instrumental role in sculpting negotiation outcomes. Thompson, Wang, and Gunia (2010) stress that these preferences determine a negotiator's aims and colour their perceptions of potential effects. Negotiators might lean towards immediate financial gratification, prioritise sustaining relationships, or upholding principles.

- **Risk Attitudes:** Attitudes towards risk can vary significantly among individuals, influencing their negotiation styles and outcomes. While some might veer towards caution, favouring sure results, others might be more adventurous, embracing risks for potentially loftier gains.

In a broader analysis, we have to consider several factors:

- **Information Asymmetry:** Often, negotiations witness information imbalances wherein one party holds an information edge over its counterpart. This can tip the balance of outcomes in favour of the informed yet simultaneously sow seeds of distrust that could jeopardise the entire negotiation.
- **Time Constraints:** The ticking clock often exerts immense pressure on negotiators. Time constraints can lead to hurried decisions or facilitate quicker resolutions, the effects of which can be moulded by the negotiators' skill set and their perceptions of the negotiation.
- **External Influences:** External factors, including economic scenarios, legal frameworks, societal norms, and public sentiment, can influence negotiation outcomes (Gelfand et al., 2016). For instance, public opinion could significantly influence negotiators' stances on specific issues.

Furthermore, relationship dynamics between the negotiating parties significantly sway the negotiation journey and its outcomes (Fisher et al., 2011). Trust and mutual respect can foster environments conducive to integrative bargaining, leading to win-win scenarios. Additionally, strategies and tactics adopted by negotiators have pronounced effects on outcomes, with competitive strategies offering short-term gains at the potential cost of long-term relations (Lewicki et al., 2011).

Understanding the symbiosis between individual traits, interpersonal dynamics, strategic choices, and the overarching negotiation context is paramount for navigators aiming to harness optimal bargaining outcomes. This intricate dance of factors underscores the negotiation process, highlighting the importance of holistic preparation and awareness.

2.1.6. Applications of the Bargaining Theory

After exploring factors influencing bargaining outcomes, it is worthwhile to discuss how bargaining theory has found practical applications across various fields, including economics, politics, labour relations, and international negotiations.

Bargaining theory is fundamentally rooted in economics. The Nash bargaining solution, for instance, is a cornerstone of microeconomic theory and is extensively used in fields like contract theory and market design (Nash, 1950) to model interactions between buyers and sellers in imperfect competition, where price and other transaction terms often result from negotiation (Binmore et al., 1986).

Scholars employ bargaining theory in politics to understand legislative processes and coalition formations (Baron & Ferejohn, 1989). Politicians and parties negotiate and bargain over policy decisions, and understanding these bargaining processes can provide critical insights into political outcomes. The theory also helps analyse power dynamics and negotiation tactics in political disputes and conflicts.

Bargaining theory is also central to understanding labour relations, particularly in collective bargaining between unions and employers (Walton & McKersie, 1965); the approach provides insights into the strategies unions and employers use, the resulting agreements, and the factors influencing these outcomes.

On a broader scale, bargaining theory finds application in international negotiations, such as diplomatic negotiations, peace treaties, or trade agreements (Zartman & Berman, 1982) that often involve multiple parties, diverse interests, and complex power dynamics, making applying bargaining theory all the more relevant.

The practical application of bargaining theory extends beyond academic research into real-world situations, helping to model, understand, and predict negotiation behaviour and outcomes across diverse fields.

This breadth of application underscores the robustness and versatility of bargaining theory.

2.2. The Stakeholder Theory

The realm of organisational studies witnessed a transformative shift with the introduction of Freeman's stakeholder theory in the 1980s. This theory challenged the longstanding, dominant viewpoint that posited corporations as singularly focused entities operating with the principal objective of maximising profit for their shareholders. Instead, Freeman's perspective broadened this horizon, asserting that businesses exist within a sophisticated tapestry of relationships, obligations, and mutual influences.

At the heart of this theory is recognising the diversity of stakeholder interests. An organisation is not an island; it deeply intertwines with diverse entities: employees, customers, suppliers, or the broader community. Each group, termed 'stakeholders', brings distinct interests and concerns. Moreover, it is here that the theory ventures into the profound: stakeholders are driven by more than just financial gains. Their motivations encompass a spectrum, from ethical considerations to personal aspirations and the desire for positive organisational relational dynamics.

Freeman's approach to the corporate world is akin to viewing a web where each strand plays a crucial role, no matter how seemingly insignificant. This interconnectedness, dubbed the "jointness of interest," posits that enhancing the well-being of one stakeholder group can, in many instances, lead to indirect benefits for another. Take, for example, the symbiotic relationship between employees and shareholders. When employees are motivated, engaged, and content, their enhanced productivity can improve organisational performance, benefiting shareholders.

This theory's significant departure from traditional corporate views is its emphasis on rights and participatory governance. Stakeholders are not mere spectators in the corporate arena. They have intrinsic rights, and their voices hold significance. They are not just passive entities on the receiving end of organisational decisions but active participants deserving of a say in decisions that influence their fate.

Central to the theory, hence, is the concept of stakeholders. Initially, this concept was narrow, introduced by the Stanford Research Institute in the 1960s as "those groups without whose support the organisation would cease to exist" (Freeman & Reed, 1983). This definition mainly

considered entities having direct transactional relationships with the organisation. In 1984, however, Freeman's seminal work catalysed a paradigm shift, expanding the stakeholder concept to include any "group or individual who can affect or is affected by the achievement of an organisation's objectives" (Freeman, 1984). This broader definition signalled a move towards recognising the ethical and societal dimensions of organisational actions, thus widening the scope of corporate responsibility (Freeman et al., 2004).

Donaldson and Preston (1995) refined the framework, introducing a triadic framework comprising descriptive, instrumental, and normative dimensions, thereby deepening our empirical and ethical understanding of stakeholder relations. Moreover, Mitchell, Agle, and Wood (1997) enriched the landscape with the concept of stakeholder salience, based on attributes such as power, legitimacy, and urgency, to aid in identifying and prioritising stakeholders. This multi-dimensional approach to stakeholder management has created a robust framework that captures organisations' ethical and strategic imperatives (Donaldson & Preston, 1995; Jacobs & Getz, 1995; Harrison & Wicks, 2013).

The theory has found resonance across various academic domains, notably corporate social responsibility (CSR) and sustainability. Carroll's pyramid of CSR (1991) and discussions by other scholars (Starik, 1995; Starik & Rands, 1995) have helped integrate stakeholder considerations into broader corporate performance metrics, environmental stewardship, and social responsibility. More recently, the 21st-century discourse on stakeholder theory has moved toward stakeholder engagement, value creation, and sustainability. Harrison, Bosse, and Phillips (2010) introduced the concept of stakeholder utility functions, which explore how individual stakeholders can influence an organisation's competitive advantage.

This theoretical progression finds empirical substantiation in real-world case studies, such as Google's "Do the Right Thing" ethos or cautionary tales, such as BP's 2010 Deepwater Horizon incident. These cases underscore the benefits and repercussions of adhering to or neglecting stakeholder interests (Hitt et al., 2020).

This perspective necessitates the role of stakeholder analysis and mapping, which are inseparable in practice and aim to decode complex stakeholder relationships and power dynamics. The journey typically starts with stakeholder identification, a process Freeman deemed the cornerstone of stakeholder analysis in 1984. This first step involves various

techniques, from brainstorming and interviews to document research and surveys, each aiming to recognise entities that can influence or be influenced by organisational decisions.

Following the identification process, stakeholder mapping, as suggested by Mendelow (1991) and Clarkson (1995), is instrumental in clarifying the landscape of stakeholder relations, categorising stakeholders into primary and secondary or internal and external groups based on their relevance and attributes (Clarkson, 1995). In doing so, stakeholder mapping illuminates power dynamics among stakeholders. It helps prioritise engagement strategies based on their relative power and interest in organisational actions (Mendelow, 1991).

The analysis then delves deeper into assessing stakeholder attributes like interests, influence, and relationships, applying various tools for this nuanced understanding. For instance, Gupta (2013) argues for using SWOT and PESTEL analyses to gauge the broader environment impacting stakeholder interests. Mitchell, Agle, and Wood (1997) offer the stakeholder salience model to prioritise stakeholders based on power, legitimacy, and urgency. Moreover, as Prell, Hubacek, and Reed (2009) discussed, the stakeholder network analysis provides an insightful method to uncover the communication patterns and relationships among stakeholders.

In this vein, Bryson (2004) emphasises the indispensable role of stakeholder mapping in rendering the complex web of relationships and power dynamics visible. Through mapping, the organisation can discern various dynamics, including power imbalances, potential allies, opponents, and different levels of stakeholder salience crucial for effective stakeholder management.

To sum up, stakeholder analysis and mapping synthesis offer an integrative lens for understanding and navigating the complexities inherent in stakeholder relationships. Organisations can engage in informed decision-making and strategy formulation by adopting this integrated methodology that moves from identification through mapping to in-depth analysis, contributing significantly to their long-term success.

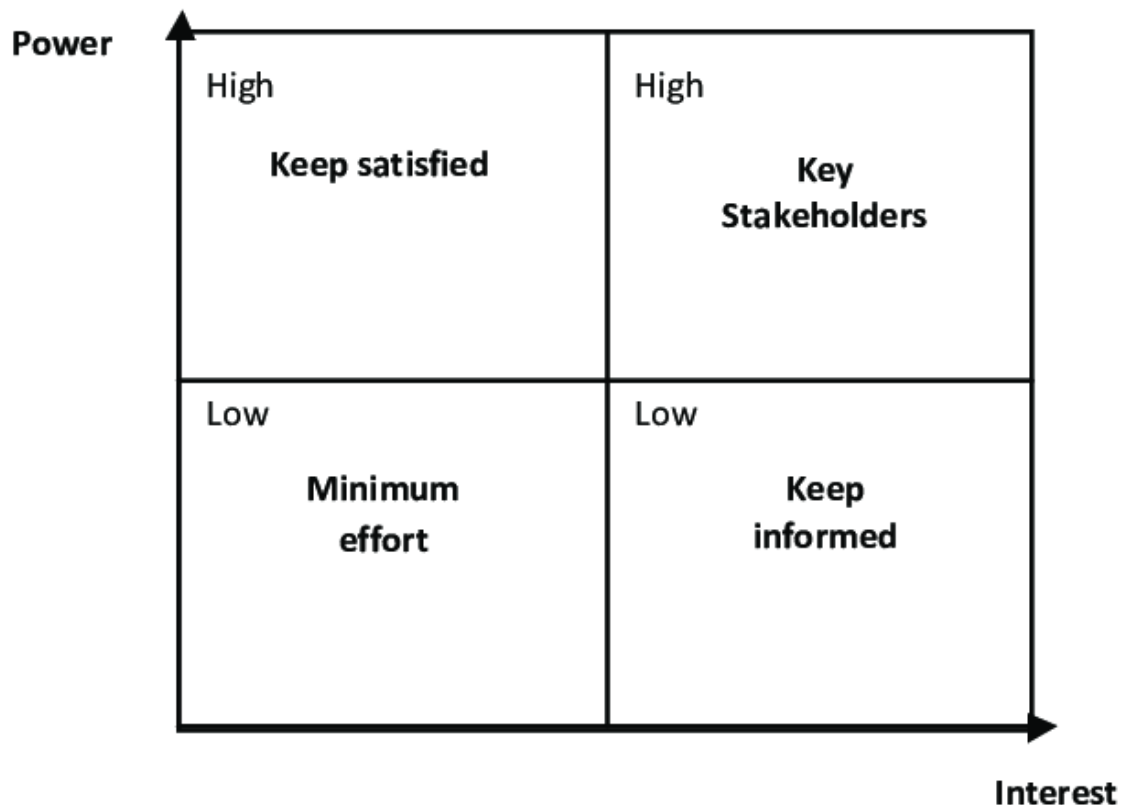
2.2.1. Stakeholder prioritisation

Stakeholder prioritisation allows organisations to discern which stakeholders require immediate focus and which can be addressed. Two prevalent frameworks for stakeholder prioritisation are

the Power-Interest Matrix developed by Mendelow (1991) and the Legitimacy-Urgency-Power framework proposed by Mitchell, Agle, and Wood (1997).

The Power-Interest Matrix categorises stakeholders along two dimensions: power (the ability to influence the organisation) and interest (the level of concern a stakeholder has in the organisation's activities).

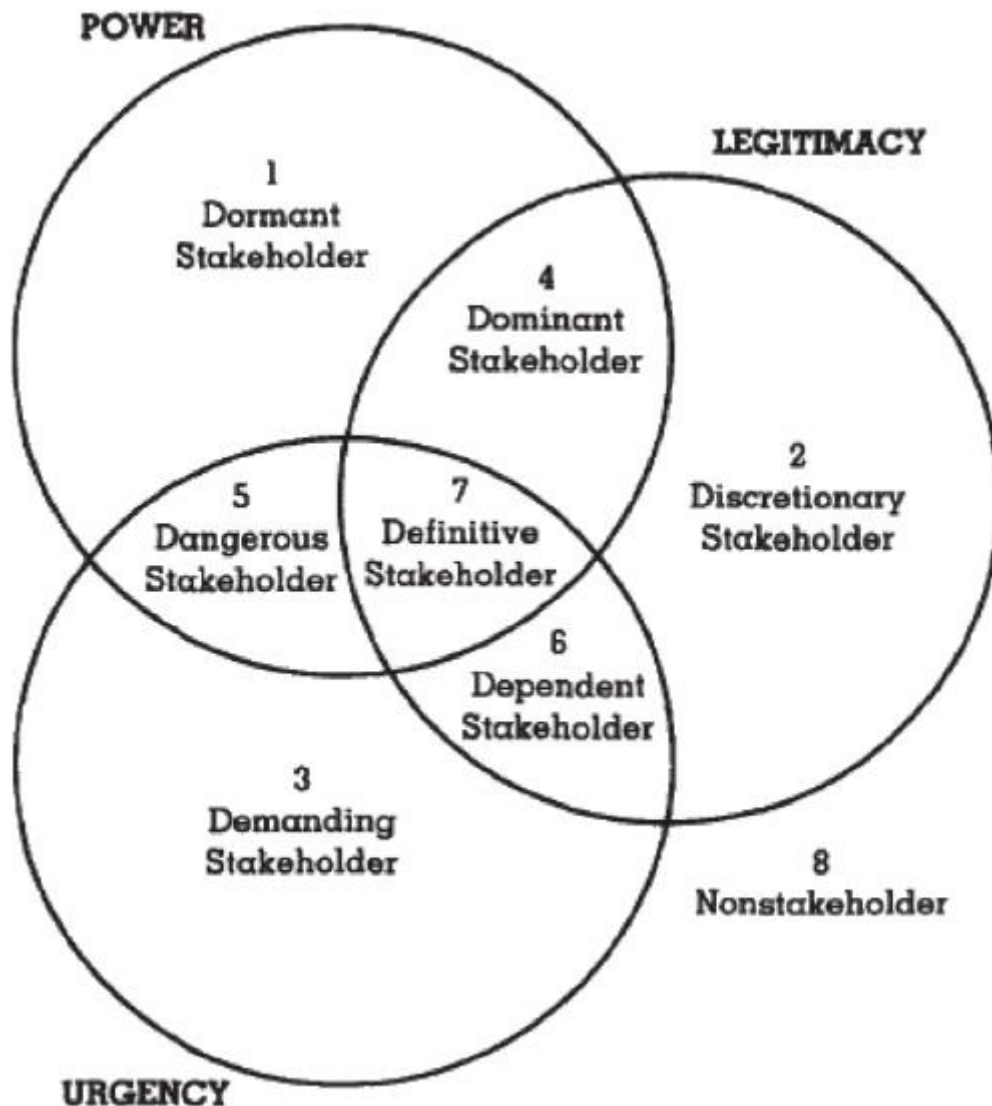
Figure 1 – Classification of Stakeholders according to the Power–Interest Matrix



From: https://www.researchgate.net/figure/Power-Interest-matrix_fig2_280560177, visited on 20/09/2023.

This matrix provides four quadrants, each indicating a specific type of stakeholder: high-power, high-interest stakeholders, often termed key players, require full engagement; high-power, low-interest or dominant stakeholders should be kept satisfied; low-power, high-interest or dependent stakeholders should be adequately informed; and low-power, low-interest or discretionary stakeholders can be monitored with minimal effort. This visual representation aids organisations in prioritising stakeholders and devising tailored engagement strategies.

Figure 2 – Classification of Stakeholders according to the Legitimacy–Urgency–Power Framework



From: https://www.researchgate.net/figure/Stakeholder-typology-One-two-or-three-attributes-present-Mitchell-et-al_fig1_236727192, visited on 20/09/2023.

An alternative to the Power-Interest Matrix is the Legitimacy-Urgency-Power framework, which classifies stakeholders using three attributes: power, legitimacy, and urgency. Power is the stakeholder's capacity to impose its will in a relationship; legitimacy is based on the perception that a stakeholder's actions are appropriate or desirable, and urgency reflects the immediacy of the stakeholder's claims. In this model, stakeholders with all three attributes are labelled "definitive stakeholders" and given the highest priority.

The Power-Interest Matrix and the Legitimacy-Urgency-Power framework provide invaluable insights for stakeholder prioritisation. They serve as guidelines for organisations to understand their stakeholders' positions and formulate corresponding engagement strategies. Nevertheless, organisations must adapt these models to their unique contexts and challenges for optimal effectiveness.

2.2.2. Stakeholder engagement and management

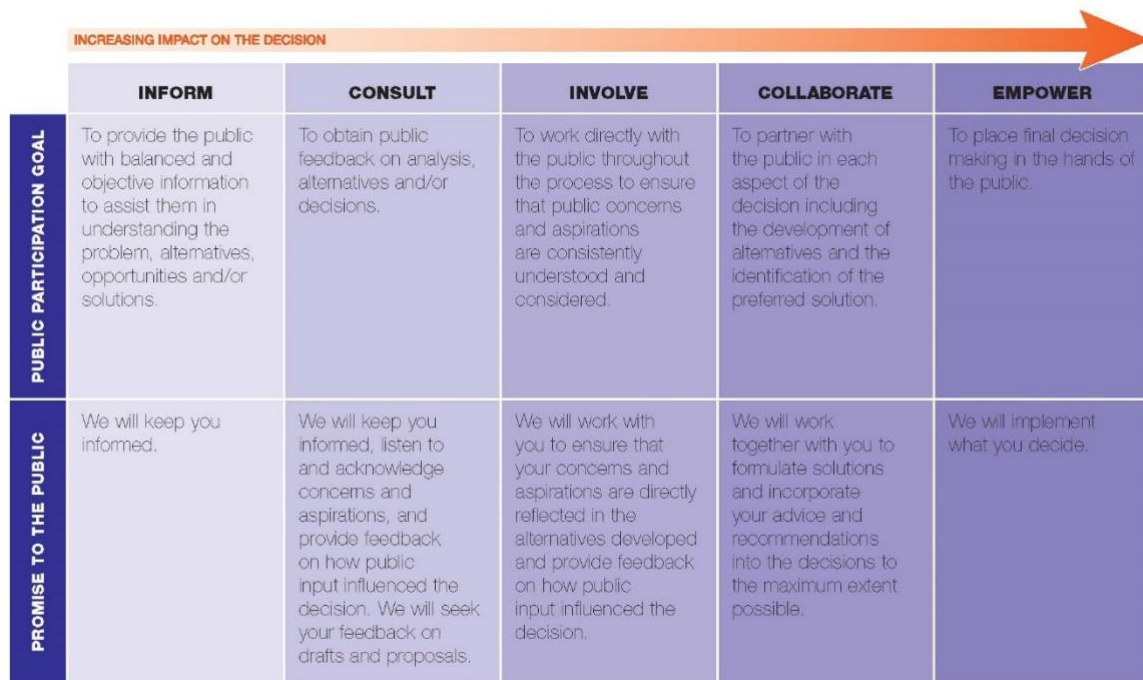
Stakeholder engagement and management are vital components of an organisation's strategy. This complex process involves identifying stakeholder needs and expectations and then devising strategies to address them. The aim is to balance various interests and values. Below are some standard practices and procedures for effective stakeholder engagement and management.

The initial step is stakeholder identification, as Freeman (1984) suggested. This step involves pinpointing parties that either affect or are affected by the organisation's actions. Following the title, stakeholder analysis assesses interests, power, and the potential impact on the organisation. Tools like the Power-Interest Grid and the Salience Model help prioritise stakeholders (Mendelow, 1991; Mitchell et al., 1997). This allows organisations to allocate resources more effectively.

Engagement strategies may vary from merely disseminating information to active collaboration. The International Association for Public Participation (IAP2) identifies five levels of public participation (or community engagement): inform, consult, involve, collaborate, and empower (IAP2, 2014). The level of choice depends on the organisation's objectives, the issues under consideration, and the stakeholders' interests and influence.

The Spectrum of Public Participation was developed by the International Association of Public Participation (IAP2) to help clarify the role of the public (or community) in planning and decision-making and the extent to which the community influences these processes.

Figure 3 – Spectrum of Public Participation



The diagram illustrates the Spectrum of Public Participation as a progression from left to right, indicated by an orange arrow at the top labeled "INCREASING IMPACT ON THE DECISION". The spectrum is divided into five stages: INFORM, CONSULT, INVOLVE, COLLABORATE, and EMPOWER. Each stage is represented by a column in a table. The first column is labeled "PUBLIC PARTICIPATION GOAL" and the second column is labeled "PROMISE TO THE PUBLIC".

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision. We will seek your feedback on drafts and proposals.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will work together with you to formulate solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

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From: <https://sustainingcommunity.wordpress.com/2017/02/14/spectrum-of-public-participation/>, visited on 04/03/2024.

Effective communication is crucial (Morsing & Schultz, 2006). Various channels, such as meetings, newsletters, and online platforms, serve to update stakeholders and gather feedback. When stakeholder interests clash, negotiation and conflict resolution strategies are essential: these may involve finding mutually acceptable compromises.

Critical elements of successful stakeholder engagement and management include effective communication, open dialogue, and active collaboration. Communication provides transparency and enables organisations to manage expectations and address concerns promptly. Moreover, it shapes stakeholders' perceptions and builds trust.

Dialogue goes beyond mere communication, offering a two-way exchange of ideas. This exchange informs decision-making and identifies areas for collaboration or potential conflict. Collaboration with stakeholders enriches the decision-making process and enhances the legitimacy of organisational actions (Reed, 2008).

Corporate Social Responsibility (CSR) and sustainability are integral to stakeholder engagement. CSR comprises voluntary actions taken to be economically, socially, and

environmentally responsible (Carroll, 1999; Carroll, 2016). Such activities enhance stakeholder trust and loyalty and offer a competitive edge (Morsing & Schultz, 2006). Similarly, sustainability considers the long-term impacts of organisational decisions on stakeholders and can facilitate collaboration (Elkington, 1997; Reed, 2008).

In summary, effective stakeholder engagement incorporates a blend of communication, dialogue, and collaboration, enriched by a focus on CSR and sustainability. These approaches build stronger stakeholder relationships, improve reputations, and offer organisations competitive advantages.

2.2.3. Applications of the Stakeholder Theory

The stakeholder theory has found application in various contexts, including business ethics, corporate governance, project management, and public policy, underpinning the strategies and actions of organisations in each area.

- In business ethics, stakeholder theory fundamentally alters the conception of business goals, expanding them beyond profit maximisation to include ethical considerations (Phillips, 2003). It posits that businesses have moral responsibilities towards all their stakeholders, influencing companies to adopt more ethical practices, such as fair trade, responsible sourcing, and direct advertising.
- Stakeholder theory also reshapes corporate governance models. Traditional governance models have focused primarily on the interests of shareholders (Tricker, 2015). In contrast, applying stakeholder theory promotes a more inclusive approach, acknowledging the relevance of other stakeholders, like employees, customers, and the community. This perspective can lead to governance practices prioritising transparency, accountability, and stakeholder participation in decision-making.
- In project management, stakeholder theory informs the management of stakeholders' expectations and interests, which are crucial for project success (Olander & Landin, 2005). It encourages project managers to identify, analyse, and actively engage with project stakeholders, thereby reducing conflicts, enhancing cooperation, and increasing the chances of project success.
- Stakeholder theory has a significant role in public policy formulation, where balancing diverse stakeholder interests is key (Brugha & Varvasovszky, 2000). It offers a

framework for identifying affected parties, understanding their interests and power dynamics, and incorporating their input into policy decisions. This can lead to more inclusive, equitable, and prosperous policy outcomes.

In these contexts, stakeholder theory provides valuable insights and strategies for managing complex stakeholder relationships, fostering collaboration, and enhancing organisational and societal outcomes.

3. Stakeholder Theory and Bargaining Theory: A synthesis

The theoretical foundation of this study rests on a composite approach of Stakeholder Theory and Bargaining Theory. As we have seen, Bargaining Theory, in its essence, relies on fundamental assumptions, with one of the most crucial being the maximisation of utility: rational actors are not only aware of their preferences but also strategically make decisions to optimise their gains (Rubinstein, 1982). In the realm of bargaining, each entity enters the process with the overarching objective of securing the most advantageous outcome.

However, this traditional notion of utility maximisation can be challenged when considering entities or firms that prioritise the interests of their stakeholders alongside or even over their immediate gains. Stakeholder Theory has brought into focus organisations that perceive their responsibilities as extending beyond profit maximisation. These organisations encompass a broader spectrum of interests, ranging from employees, customers, and shareholders to the community and the environment (Freeman, 1984).

Considering this context, an intriguing question arises: “Could we harmonise the foundational principles of the Bargaining Theory with those of the Stakeholder Theory?” Such integration aims to illuminate the bargaining behaviour of entities motivated not solely by self-interest but also by a commitment to the diverse interests of their stakeholders.

One might argue that a firm rooted in Stakeholder Theory might approach bargaining situations differently. Rather than solely pursuing profit maximisation, such a firm would consider the broader implications of its decisions, ensuring that the outcomes align with the values and expectations of its stakeholders (Donaldson & Preston, 1995). This nuanced approach to bargaining might manifest as a willingness to accept a suboptimal financial deal if it ensures greater societal or environmental benefits.

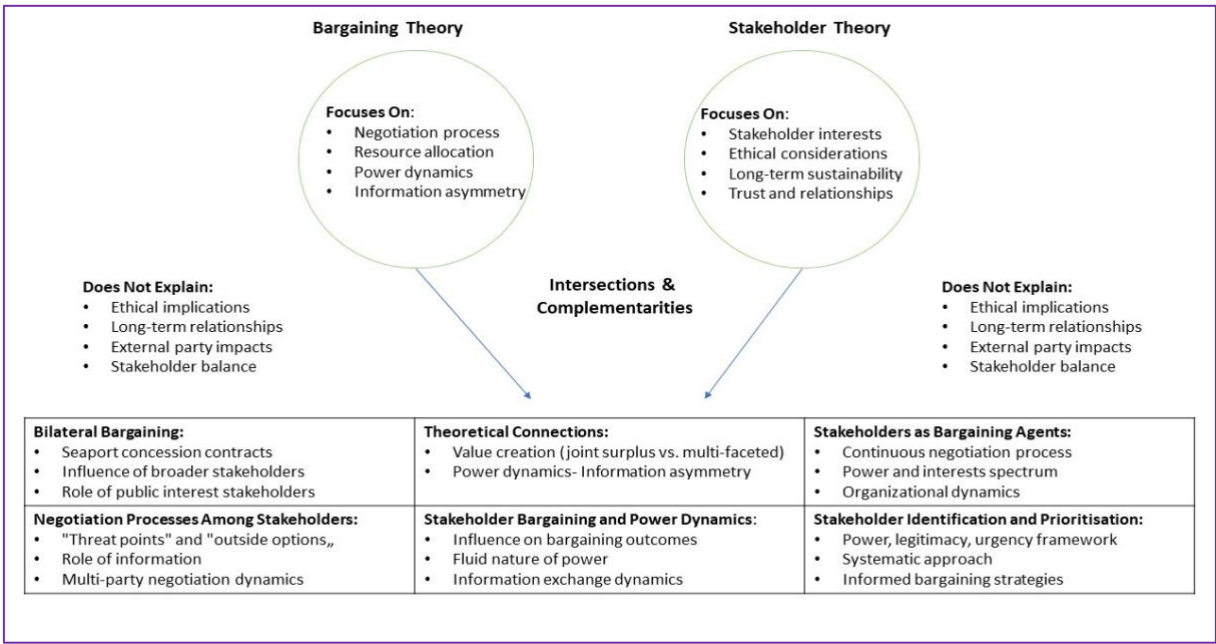
Thus, while traditional Bargaining Theory might view such behaviour as “irrational” from a stakeholder perspective, it is entirely rational if the firm’s objectives encompass stakeholder well-being. Combining Stakeholder Theory with Bargaining Theory offers a more

comprehensive view of the negotiation decision-making process, potentially bridging a conceptual gap within the traditional framework (Harrison & Wicks, 2013).

This integrative approach could illuminate the multifaceted motivations driving entities in negotiation scenarios, providing a more holistic understanding of the dynamics at play.

However, it is crucial to acknowledge a methodological challenge: the two theories have profoundly different axioms and purposes. Bargaining Theory is a game-theoretic model used to analyse and predict negotiation outcomes. It provides insights into the factors influencing benefit distribution during negotiations and helps explain the determinants of bargaining power and negotiated results. On the other hand, Stakeholder Theory is an organisational and management theory rooted in business ethics, emphasising a broader perspective on businesses' responsibilities and accountabilities.

Figure 4 – Bargaining Theory and Stakeholder Theory: Intersections and complementarities



To reconcile these theories, it becomes necessary to view Stakeholder Theory as a tool for identifying a subject's priorities, which can then inform the application of Bargaining Theory to achieve the best possible outcomes for the actors involved in negotiations. In this manner, the maximisation process becomes circular: Bargaining Theory leads us to use Stakeholder Theory, and the results obtained with the latter lead us back to the optimal utilisation of the former.

This synthesis offers a unique perspective for understanding the complexities of negotiation processes where stakeholder interests are paramount.

3.1. Bilateral bargaining

From a bargaining theory approach, seaport concession contracts are best analysed by bilateral bargaining.

From a stakeholder theory approach, bilateral bargaining could be influenced by considering and balancing the interests of a broader range of stakeholders.

The scholarly landscape on the convergence of bargaining theory and stakeholder theory remains relatively sparse. Still, a couple of seminal works deserve particular attention. Manzini and Ponsati (2005) broke ground by examining the strategic role of stakeholders in bilateral confrontations framed as wars of attrition. In 2006, their follow-up study further developed a model wherein bargaining is conceptualised as a non-cooperative game featuring three players: two traditional bargainers and a third, the stakeholder, who reaps a positive externality upon the bilateral agreement (Manzini & Ponsati, 2006).

Two characteristics separate stakeholder bargaining games from standard trilateral negotiations:

- First is what may be termed a ‘reverse liquidity constraint’ affecting the stakeholder; this entity can contribute a share of its benefits to the bargainers but cannot partake in the bilateral surplus.
- Second, the stakeholder’s involvement is not guaranteed in every negotiation period, meaning their role is generally that of a facilitator rather than a principal actor (Manzini & Ponsati, 2006).

In the context of public interest sectors - such as essential services like public transport, healthcare, and utilities - the government’s role as a stakeholder is particularly salient. The government might be willing to subsidise the agreement but cannot directly claim a part of the bilateral surplus. The model of Manzini and Ponsati illuminated two critical scenarios:

1. When the stakes are minor and the stakeholder’s participation is assured, asymmetric bilateral agreements may emerge.

2. In cases where the stakeholder's involvement is uncertain, and the stakes are high, the likelihood of inefficient outcomes - characterised by delayed agreements - increases (Manzini & Ponsati, 2006).

The framework put forth by Manzini and Ponsati offers various avenues for future research, particularly concerning public sector negotiations. For example, it can explore the potential incentives for governments to transition from direct negotiating entities to stakeholders, thus gaining advantages that might otherwise be inaccessible (Manzini & Ponsati, 2006).

While these works provide a valuable foundation for understanding stakeholder involvement in bargaining scenarios, they do not specifically address how to combine bargaining theory and stakeholder theory to delineate the Optimal Concession Contract between PAs and TOCs, particularly in instances where the primary objective of the PA extends beyond mere revenue maximisation. Theoretical connections between Bargaining and Stakeholder Theory

At a fundamental level, both theories deal with allocating resources and negotiating interests among different parties. As bargaining theory concerns the negotiation process, stakeholder theory involves negotiations, albeit in a broader sense, among a company and its stakeholders to reconcile conflicting interests and objectives.

One of the critical theoretical connections between the two theories is the concept of value creation.

In bargaining theory, value creation is often framed as the joint surplus generated through negotiation (Raiffa, 1982).

In stakeholder theory, value creation involves generating economic, social, and environmental value for diverse stakeholders (Freeman et al., 2010). This broader interpretation aligns with shared value, wherein companies seek to create economic value that generates value for society (Porter & Kramer, 2011).

Another point of intersection is the role of power dynamics and information asymmetry. Bargaining theory has long recognised that the relative power of negotiating parties and the information they possess can significantly impact the outcome of negotiations (Rubinstein, 1982). Similarly, stakeholder theory acknowledges that stakeholders wield varying degrees of

power and access to information, influencing their ability to affect corporate decision-making (Mitchell et al., 1997).

3.1.1. Stakeholders as bargaining agents

In the field of stakeholder theory, stakeholders are traditionally conceptualised as groups or individuals capable of affecting or being affected by achieving an organisation's goals (Freeman, 1984). However, when one introduces the lens of bargaining theory, stakeholders can also be examined as bargaining agents possessing divergent levels of power and interests.

Within this analytical framework, 'power' is construed as a stakeholder's capacity to sway an organisation's decision-making processes and outcomes. This ability can emanate from multiple sources, including legal authority, control over resources, expertise in specialised knowledge areas, or the extent of one's network connections (Frooman, 1999). For example, a supplier monopolising a unique component can wield substantial influence over a firm heavily dependent on that component. Conversely, a community advocacy group campaigning against a company's adverse environmental impact might not possess equivalent direct power. Nevertheless, such a group can still influence indirectly by shaping public opinion and instigating regulatory scrutiny.

Simultaneously, 'interests' relate to the goals or outcomes stakeholders aim to realise from their interactions with the organisation. These interests are manifold, ranging from shareholders seeking financial returns to employees advocating for job security, environmental groups pushing for sustainable practices, and local communities focusing on economic development (Mitchell et al., 1997).

By reconceptualising stakeholders as bargaining agents, the organisation can be perceived as a complex arena for negotiation. In this arena, stakeholders engage in a ceaseless bargaining process, armed with disparate power levels and motivated by distinct interests. This reconceptualisation illuminates the intricate dynamics of organisations and offers keen insights into how resources and decisions are allocated (Tantalo & Priem, 2016).

This evolved understanding of stakeholders as bargaining agents resonates with contemporary advancements in stakeholder theory. For instance, Tantalo and Priem (2016) postulate that organisations can engender value by adeptly negotiating the trade-offs among conflicting

stakeholder claims. Such a process requires intricate bargaining to harmonise the disparate interests presented by various stakeholders.

Bridoux and Stoelhorst (2014) realistically studied the Dutch flower industry. The research showcases how companies negotiate with various stakeholders - suppliers, employees, and local communities - each wielding varying degrees of power and harbouring unique interests. The study underlines that the efficacy of firms navigating these complex negotiations can materially affect their competitive positioning and overall performance.

In summary, examining stakeholders as bargaining agents enriched with diverse levels of power and interests furnishes a more nuanced understanding of organisational dynamics. This viewpoint underscores the perpetual negotiation process intrinsic to corporate governance, elucidating how organisations negotiate a balance among diverse stakeholder interests and manage inherent conflicts. Such a perspective enhances the theoretical crossroads between bargaining and stakeholder theory, imparting significant implications for organisational strategy and decision-making.

3.1.2. The negotiation processes among stakeholders in decision-making contexts

Expanding on the notion of stakeholders as bargaining agents, integrating bargaining theory into stakeholder theory offers a comprehensive framework for understanding the complexities of negotiation processes among stakeholders in organisational decision-making contexts. Bargaining theory is a robust analytical tool for examining how different parties negotiate to attain mutually beneficial agreements. When combined with stakeholder theory, this framework can elucidate the strategic negotiation approaches employed by stakeholders in their interactions with organisations, enriching our comprehension in several key areas.

First, bargaining theory equips us with analytical tools for deciphering the negotiation strategies employed by stakeholders. For example, the concept of “threat points” or “outside options” illuminates the alternative courses of action stakeholders might pursue when negotiations prove unfruitful (Schelling, 1960). Stakeholders possessing robust outside options can leverage these as negotiating instruments, exerting considerable pressure on organisations to accede to their demands (Bridoux & Stoelhorst, 2014).

Second, the theory underscores the pivotal role of information in the negotiation process. Information asymmetry, where one party possesses more excellent knowledge than the other, can substantially influence the negotiation outcome (Rubinstein, 1982). For instance, a stakeholder group with insider information regarding an organisation's internal operations can exploit this knowledge advantage during negotiation.

Third, bargaining theory furnishes a framework for comprehending the intricacies of multi-party negotiations. In organisations, negotiations often transcend bilateral contexts and involve many stakeholders with divergent interests. Such scenarios engender complex negotiation dynamics that can be more effectively dissected through the prism of cooperative game theory - a subfield of bargaining theory - where coalitions among stakeholders may emerge to fortify their collective bargaining power (Myerson, 1991).

Incorporating bargaining theory into stakeholder theory enhances our understanding of stakeholder negotiation strategies, the critical role of information, and the intricate dynamics in multi-party negotiation settings. This synthesis amplifies the theoretical dialogue between these two disciplines. It practically explains how organisations engage with their varied stakeholders in decision-making contexts.

3.1.3. Stakeholder bargaining and power dynamics

Stakeholder power and its influence on bargaining outcomes and organisational decision-making processes form a pivotal intersection between stakeholder and bargaining theories. At its core, stakeholder power encapsulates the relative ability of different entities to shape an organisation's decisions and actions (Mitchell et al., 1997). This power can emanate from varied sources: control over essential resources, ownership of pivotal information, legal or regulatory clout, or the capacity to sway public opinion (Frooman, 1999).

Bargaining theory offers a sophisticated lens to understand power's role in negotiation. First and foremost, the approach underscores that the equilibrium of power between negotiating parties significantly influences the terms and outcomes of an agreement (Rubinstein, 1982). For instance, stakeholders like influential shareholders or critical suppliers, armed with greater bargaining power - be it from resource control, legal authority, or distinct expertise - can mould vital strategic decisions of an organisation. An illustrative example is a primary supplier who,

by wielding the power to govern indispensable resources, can shape the clauses of a supply contract to their advantage.

Furthermore, the theory introduces concepts like “credible threats” as potent sources of power (Schelling, 1960). Stakeholders who can convincingly pose such threats, such as withholding critical resources or support, possess an advantageous position to negotiate terms favourable to them. An activist group, for example, can wield power by menacing a company with campaigns that may tarnish its reputation.

A salient feature of bargaining theory is its assertion that power dynamics are fluid; they can metamorphose as parties accrue or deplete resources, information, or broader support (Nash, 1950). This fluidity is mirrored in stakeholder theory, where stakeholders’ influence can ebb or swell based on shifts in their relationship with the organisation or the overarching business milieu (Frooman, 1999).

Power also determines the dynamics of information exchange in the intricate choreography of negotiations. Those in more powerful positions often have the autonomy to govern the dissemination of information, strategically wielding it to further their objectives. A case in point is a stakeholder with a comprehensive understanding of evolving market trends or imminent regulatory shifts which can employ this knowledge during negotiations.

Beyond negotiations, stakeholder power profoundly influences organisations’ internal decision-making apparatus. Dominant stakeholders can set the discourse, determining the primacy of issues and steering how they are tackled. This is manifested when substantial shareholders push an organisation’s strategy towards financial maximisation or when regulatory bodies mandate compliance with specific protocols.

The amalgamation of stakeholder and bargaining theories elucidates the intricate tapestry of power dynamics in organisational decision-making and negotiations. Recognising and understanding these dynamics is paramount for effective stakeholder management, empowering organisations to manoeuvre within multifaceted stakeholder terrains. The profundity of these insights extends beyond theoretical realms, holding substantial implications for organisational strategies and stakeholder engagement paradigms.

3.1.4. Stakeholder identification and prioritisation in bargaining

Stakeholder theory offers an insightful framework for identifying and prioritising stakeholders within bargaining scenarios. It stresses the pivotal role of power, legitimacy, and urgency in understanding stakeholder dynamics (Mitchell et al., 1997). The successful application of this theory hinges on a nuanced discernment of these three attributes in each stakeholder.

Illustrating this, a compelling case study by Parent and Deephouse (2007) explored stakeholder identification and prioritisation techniques among managers of two prominent sporting event organising committees. Through meticulous interviews across three managerial hierarchies, their research affirmed that stakeholder salience—or the perceived importance of a stakeholder in the context of the bargaining process—tends to elevate with an increase in the number of stakeholder attributes. Here, power emerged as the most influential factor determining salience, trailed by urgency and legitimacy (Parent & Deephouse, 2007).

To elucidate further:

- **Power:** A stakeholder's power emanates from their capacity to influence the bargaining process. Elements bolstering this power may encompass resource ownership, organisational standing, or the adeptness to sway public sentiment.
- **Legitimacy:** This dimension gauges how much a stakeholder's interests gain validation from others, underpinned by factors like legal entitlements, moral foundations, or societal standing.
- **Urgency:** This captures the immediate nature of a stakeholder's interests, significantly when these are or might be jeopardised. It draws from the stakeholder's organisational dependence, the priority of their interests, or the imminent nature of potential threats.

The application of the stakeholder theory necessitates that once stakeholders are appraised for salience, they must be appropriately prioritised. Key considerations in this prioritisation include the gravity of the stakeholder's interests, their potential influence on the bargaining process, and the immediacy of their concerns. Such meticulous identification and prioritisation fortify bargaining strategies, ensuring comprehensive stakeholder representation and enabling organisations to channel their resources towards stakeholders wielding substantive influence (Mitchell et al., 1997).

The realm of stakeholder theory, particularly in bargaining contexts, underscores the symbiotic interplay between power, legitimacy, and urgency. Power signifies a stakeholder's clout in moulding outcomes, legitimacy encapsulates the accepted rightness of their association with an entity, and urgency denotes the time-sensitive nature of their claims (Mitchell et al., 1997).

Revisiting the abovementioned study, Parent and Deephouse (2007) leveraged the triad of power, legitimacy, and urgency to discern stakeholder salience in major sporting events. Echoing prior research, they affirmed that power reigned supreme in determining salience, with speed and legitimacy as subsequent determinants. Nevertheless, the assessment of these attributes can oscillate based on the distinct nature of the bargaining scenario.

Stakeholder theory provides an invaluable scaffold for organisations to comprehend, identify, and prioritise stakeholders, ensuring more balanced and informed bargaining processes.

4. Context: Ports and their operations

Ports play a vital role in the global economy as facilitators of trade and commerce.

The lifeblood of the global economy can be arguably identified as maritime trade, which has established itself as the backbone supporting international economic exchange (UNCTAD, 2022). This enduring reliance on the sea is anchored in history, with ancient civilisations such as the Phoenicians and Greeks utilising maritime routes as channels of economic growth. These early sea routes laid the foundation for today's global trade system. In our modern era, the dynamics of maritime trade remain essential, with a vast 80% of international trade by volume and 70% by value being transported by sea, underscoring its undeniable impact on every facet of our daily lives, from the goods we consume to larger-scale economic activities (UNCTAD, 2022). However, the vastness of maritime trade extends beyond mere numbers, permeating the realm of geopolitics. For instance, regions like the South China Sea serve as critical trade routes and arenas of geopolitical tension and competition, highlighting maritime trade's multifaceted role as both an economic conduit and a geopolitical pivot point. On the environmental front, the marine industry faces a balancing act tasked with facilitating global trade while also being mindful of ecological considerations, given the substantial carbon emissions from ships. As the urgency of environmental stewardship grows, the maritime sector is propelled to find innovative solutions, such as cleaner fuel options and emission control systems, to align economic interests with ecological imperatives.

4.1. Evolution of governance transformation in seaports

The global port sector has undergone a significant transformation over the years, shifting from a predominantly public model to a more diversified approach that involves various degrees of private sector participation. Traditionally, ports operated as extensions of government departments, with Public Authorities responsible for infrastructure, superstructure, and cargo handling (Notteboom & Winkelmanns, 2001). This model, often called the Tool-Port model, allowed governments to maintain strategic control but was criticised for its inefficiency and inability to adapt to the fast-paced changes in maritime trade (Van Niekerk, 2005).

However, a paradigm shift is evident as governments and PAs retreat from direct involvement in port operations. The core driver behind this shift is the belief that enterprise-based port services will offer greater flexibility, efficiency, and responsiveness to market demands. This transition has led to the infusion of private capital, promoting enhanced competition and productivity and benefiting importers and exporters (Hales et al., 2016).

Strategic objectives in port governance vary considerably across regions (Notteboom & Winkelmanns, 2001; Bichou & Gray, 2005). These objectives often include maximising traffic throughput, investment return, shareholders' profits, and economic development prospects at local or national levels (World Bank, 2003; World Bank, 2022; UNCTAD, 2022). Government-owned ports typically focus on national financial contributions and strategic maritime interests. At the same time, private docks emphasise profit maximisation and shareholder value (Pallis et al., 2008; Pallis et al., 2015).

In conclusion, the evolution of port governance reflects the maritime industry's changing dynamics and the broader economic landscape. The increasing private sector involvement through various ownership models and PPPs signifies a move towards greater efficiency, flexibility, and market responsiveness. Proper governance structures, guided by well-defined strategic objectives, are crucial for the sustainable growth and development of the global port sector.

4.2. From the Tool Port model to the Landlord Port model

The transition from the Tool Port model to the Landlord Port model in global port governance signifies a notable shift towards more private sector involvement, aiming to enhance efficiency and fiscal sustainability in port operations. This change is propelled by the need to accommodate technological advancements and swiftly respond to global trade dynamics. Under the Tool Port model, bureaucratic inefficiencies and limited resource allocation often hindered these objectives. The Landlord Port model allows Public Authorities (PAs) to concentrate on infrastructure development and regulatory oversight while leasing operational responsibilities to private Terminal Operating Companies (TOCs).

This new model encourages increased capital investments, enabling ports to handle larger vessels and embrace technological advancements crucial for global trade. It establishes a

framework where PAs can generate revenue streams through leasing agreements, ensuring long-term fiscal sustainability. Furthermore, the involvement of private operators significantly enhances ports' efficiency and competitiveness, as they often bring sector-specific expertise and best practices.

On the socio-economic front, the transition propels economic growth through increased trade volumes and capital investments. However, it also raises labour-related concerns, such as job security and working conditions for port workers. The model change necessitates thoroughly reevaluating PAs' roles and comprehensively examining broader socio-economic implications.

In a detailed study conducted in 2019, Munim et al. employed game theory to analyse the gains from this governance model transformation, particularly in the context of Bangladesh's Chittagong Port. The study advocates for a scenario that maximises total surplus and regional welfare by promoting competition among privatised terminals. This research highlights the multifaceted implications of port governance model transformations. It suggests that transitioning towards the Landlord Port model can provide valuable avenues for enhancing efficiency and regional welfare in the port sector.

The transition also allows PAs or government agencies to retain some control over the port market structure via concession policies, ensuring the optimisation of scarce resources such as land. PAs can encourage port service providers to optimise these resources through these policies, although it calls for a meticulous examination of its broader implications.

4.3. The leading players

4.3.1. Port Authorities

PAs have substantially evolved, reflecting modern seaports' complex, multi-stakeholder nature. These entities serve as the cornerstone of seaport governance, blending public and private objectives to manage the complex ecosystems of contemporary ports (Brooks & Pallis, 2012; Brooks & Pallis, 2013; Zhang et al., 2018; Zhang et al., 2019).

Traditionally, PAs were established as governmental or quasi-governmental institutions responsible for managing property rights in waterfront areas, planning port development, and ensuring navigation safety (Ducruet & Notteboom, 2012). However, recent shifts in both

national and state legislation have broadened the remit of PAs. Today, they act as hybrid organisations, serving public interests while pursuing commercial goals and maximising throughput volumes and profitability. It is rare to encounter fully public or private PAs, as most ports combine elements of both in their governance structures.

Within the constraints defined by legislation, PAs design their strategic goals to contribute to local, regional, and national economic growth, promote trade, and generate employment. They also integrate ports with their foreland and hinterland and focus on sustainability. Over the years, there has been a devolution of powers at the port level, which has necessitated the rearrangement of public and private roles in port governance. This shift has also triggered using more generic terms like “managing body of the port” to describe them (Bichou, 2009).

Modern PAs fulfil multiple roles, acting as landlords, regulators, and sometimes operators. Their responsibilities have evolved in line with the growing complexity of port activities. Beyond traditional duties such as infrastructure management and regulatory oversight, PAs increasingly engage in activities like coastal planning and urban land use, fulfilling their environmental, social, and governance (ESG) obligations (Merk & Li, 2013; Merk & Notteboom, 2013).

- **Infrastructure Development and Management:** The development and management of infrastructure, including berths, quays, and storage facilities, are central to any PA’s operations. Keeping the port’s physical assets in optimal condition is crucial, especially amid increasing maritime trade demands.
- **Regulatory Oversight and Revenue Generation:** The PA enforces international conventions, safety protocols, and environmental requirements. In some instances, they also engage in commercial activities such as leasing land or developing industrial zones to enhance revenue.
- **Strategic Planning and Stakeholder Coordination:** Strategic planning is a significant activity for PAs as they adapt to future market trends and changing demands (Ducruet & Notteboom, 2012). This often involves collaborating closely with TOCs to allocate berths, manage congestion, and optimise vessel and cargo handling processes (Merk et al., 2018).
- **Shaping Port Ecosystems:** PAs can adopt different orientations based on their institutional context: they may act as conservators of the existing port ecosystems,

facilitators coordinating between economic and societal interests, or entrepreneurs with a more commercially focused agenda. Regardless of the orientation, a corporate culture grounded in transparency, entrepreneurship, and accountability is essential, as is a strategic focus on adaptability and stakeholder engagement (Brooks & Pallis, 2013).

In summary, PAs' roles have grown increasingly complex, transcending traditional responsibilities to encompass broader economic, social, and environmental activities (Lam & Notteboom, 2014). They serve as the linchpin in the port ecosystem, coordinating various stakeholders and resources to achieve the dual goals of operational efficiency and sustainability.

4.3.2. Terminal Operating Companies

TOCs are central to the seaport ecosystem and are responsible for many tasks crucial to port efficiency. As integral stakeholders, their chief function is to enable the smooth and efficient handling of cargo and vessels, directly affecting the terminal's operational capacity and overall performance. Among their various functions, TOCs manage different cargo types, including containers, bulk goods, and breakbulk cargo. They coordinate all phases of cargo processing, from receipt to inspection, storage, documentation, and eventual delivery, while ensuring compliance with international standards and safety regulations. Additionally, they oversee vessel berthing and departures, working closely with the PA to allocate berths and optimise vessel turnaround times. TOCs also manage activities like mooring, pilotage, bunkering, and provisioning to ensure vessels transit efficiently and safely through the terminal. Infrastructure and equipment management are other significant responsibilities, as they oversee the maintenance and operation of essential terminal facilities like container yards, storage areas, and handling equipment. They also establish and monitor the terminal's safety protocols, security measures, and environmental practices. TOCs are a vital interface between port users, shipping lines, freight forwarders, and cargo owners. They offer customer service support, handle required documentation, and facilitate timely stakeholder communication and coordination.

Furthermore, they enable seamless intermodal connections by coordinating the efficient cargo transfer between various modes of transportation, such as rail and truck. Collaboration with the PA is another critical aspect of their role; they comply with the PA's rules and regulations and

work in unison to manage berth allocation, handle congestion, and enhance overall port performance.

In summary, TOCs are vital seaport actors, serving as linchpins in coordinating and managing terminal operations and working symbiotically with the PA to ensure smooth port functioning and optimal utilisation of terminal resources.

4.3.3. Other port stakeholders

Stakeholder engagement is indispensable for efficient governance and sustainable development in port operations. The landscape of stakeholders can differ considerably based on the governance structure, geographical locale, and the unique attributes of individual ports. However, a typical pantheon of stakeholders is ubiquitously recognised in port operations (Brooks & Pallis, 2013).

Recognised Stakeholders in Port Operations:

- Shipping lines are critical stakeholders that furnish maritime logistics services, including the operation of vessels to facilitate cargo movement across ports. They are indispensable clients of port facilities and closely collaborate with PAs and TOCs to ensure seamless cargo transitions.
- Importers and Exporters are entities or individuals engaged in global trade. Ports are vital conduits in their supply chains, and their requirements concerning efficient operations, customs protocols, and logistical reliability are paramount.
- Customs Authorities represent the governmental framework and enforce customs legislation, duty collections, and security inspections. Their role is invaluable in ascertaining regulatory compliance and facilitating cargo clearances.
- Labour unions and port workers, such as dockworkers and crane operators, act as the collective voice of the workforce involved in port operations. They advocate for equitable labour practices and optimal working conditions. The personnel they represent are intrinsic to the port's day-to-day functionalities.
- Local Community and Residents: The immediate communities residing near ports are stakeholders with vested interests, particularly concerning environmental and social

impacts. Concerns often encompass issues like noise pollution, traffic congestion, and air quality.

- **Government Authorities:** Diverse governmental bodies, such as transportation departments, environmental agencies, and economic development units, also participate as stakeholders. They offer regulatory supervision, contribute policy guidelines, and support endeavours related to infrastructure development and trade facilitation.

In summary, while stakeholder configurations can be context-specific, the effectiveness of a port's operations hinges on the harmonious interaction and coordination among these various parties.

4.4. Concession and leasehold contracts in ports: A comprehensive analysis of privately operated container terminals

Effective management and governance of ports are paramount for ensuring operational efficiency and deriving maximum economic benefits. A dominant trend in port governance is the adoption of concession agreements, which are instrumental in integrating private participation into port operations. These agreements are contracts between a PA and private entities.

PPPs or Public-private partnerships have gained immense traction in infrastructure (Estache & Serebrisky, 2004; Grimsey & Lewis, 2005; Delmon, 2011), particularly in global seaport operations over recent decades. This is because they are designed to amalgamate the strengths of both the public and private sectors, offering diverse mechanisms for PAs and TOCs to work together to optimise seaport operations. Choosing a public-private partnership model in seaport concessions involves a complex interplay of economic, strategic, and risk considerations.

Among the PPP models adopted in seaport concessions, the following are noteworthy:

- **Build-Operate-Transfer (BOT):** This model allows for the design, construction, and operation of the facility by the private entity, which recovers its investment during the operational phase. It is lauded for its flexibility and ability to balance public and

personal interests, ensuring that while private companies can recoup their investments during the operational phase, the asset will eventually revert to public ownership.

- Build-Transfer-Operate (BTO): Under this model, a private entity designs, finances, and constructs the port facility, transferring it to the PA upon completion.
- Build-Transfer-Lease (BTL): Similar to BTO, the private company leases it back from the government for operation.
- Build-Own-Operate (BOO): Here, the private entity retains complete control and ownership of the asset.
- Rehabilitate-Operate-Transfer (ROT): This model involves a private entity taking over an existing facility, rehabilitating it, and operating it for a specified period.
- Build-Rehabilitate-Operate-Transfer (BROT): This hybrid of BOT and ROT is optimal for construction and rehabilitation projects.
- Build-Operate-Share-Transfer (BOST): Profits earned during the operation are shared with the PA.

Many factors, including the risk appetite of the PA and TOC, available financing options, asset lifespan, and the prevailing socio-political climate, influence the choice between these models.

Furthermore, structuring these agreements necessitates a delicate balance between the objectives of various stakeholders. While PAs often prioritise maximising traffic throughput, return on investment, and local or national economic development, private operators are more inclined towards profit maximisation and risk management.

Moreover, it is vital to manage potential disputes stemming from these agreements adeptly. They should specify all parties' rights, obligations, and risks unambiguously, encompassing concession financing, operating standards, revenue provisions, and any requisite government assistance.

Two prevalent types of concession agreements in port governance are long-term leasehold contracts (LTLC) and build-operate-transfer (BOT) agreements. In the LTLC model, the terminal operations company (TOC) is granted exclusive rights to use port facilities for a stipulated period, during which it might also undertake expansions. The PA, in return, collects annual lease payments and retains ownership rights over the facilities. Such contracts are

particularly favoured when there is pre-existing infrastructure that the TOC can leverage (Ferrari et al., 2018).

Conversely, BOT agreements are tailored for projects necessitating significant investment. Here, a private entity or consortium is tasked with constructing a facility, operating it for a predetermined period, and eventually transferring it back to the public sector. The concession duration is typically structured to allow the private entity to recover its investments via user fees and other revenue streams. Due to the substantial financial and technical resources, the private entity often assumes significant construction and operational risks.

In conclusion, choosing a particular model depends on various factors, such as the existing state of infrastructure, investment requirements, expertise, and the objectives of both the public and private sectors. Selecting the appropriate model is critical for achieving the desired outcomes regarding efficiency, service quality, and financial sustainability in port operations.

4.5. The anatomy of seaport concession agreements: A comprehensive overview

The terminal awarding procedure, which is a central element in the port concession process, can be broadly divided into three primary phases:

1) Preparation Phase:

- Pre-bidding phase: The PA prepares for the award processing, factoring in prevailing regulatory conditions. Critical deliberations include determining what will be awarded and under what situations.
- Pre-Negotiation Phase: The PA identifies potential TOCs and delineates the concession's objectives, requirements, and performance standards. Conversely, TOCs assess the feasibility of the concession in light of their business strategies.

2) Selection and Negotiation Phase:

- Awarding phase: This phase encompasses a selection process and, if deemed necessary, a prequalification stage. Prequalification often forms the initial awarding phase, wherein qualified companies are selected from a pool of candidates based on criteria established by the PA.

- **Bargaining Power and Leverage:** The PA's bargaining leverage is influenced by the port's geographical advantages, market demand, competitive dynamics, and the availability of alternative terminals. TOCs with formidable reputations, financial robustness, and operational expertise might possess heightened bargaining power.
- **Concession Terms and Financial Arrangements:** Discussions on concession terms and financial agreements are central to the negotiations. This encompasses concession duration, terminal capacity specifications, investment commitments, revenue-sharing modalities, and performance metrics. Striking a balance between the PA's revenue aspirations and the TOC's profitability concerns becomes essential at this juncture.

3) Contractual and Monitoring Phase:

- **Risk Allocation:** The PA and the TOC engage in intense negotiations to delineate allocating assorted risks, such as market demand variability, operational challenges, and regulatory modifications. They aim to devise risk-sharing strategies and contractual clauses to safeguard their interests and promote sustainable port operations.
- **Concession Agreement Formation:** This stage culminates in creating a concession agreement, a legally binding contract that meticulously details each party's rights, duties, and obligations. This document incorporates provisions spanning terminal operations, investments, performance surveillance, and dispute resolution mechanisms.
- **Post-bidding phase:** Following the signing of the contract, the TOC's performance is subjected to rigorous monitoring throughout the contract term. Corrective actions are initiated when required, and disputes are resolved amicably.
- **Outcome and Implementation:** This phase is operational, wherein the TOC manages the port based on the terms and stipulations of the signed agreement. Simultaneously, the PA is vigilant, ensuring the TOC's adherence to the contractual commitments and performance benchmarks.

In conclusion, understanding the multifaceted nature of port concessions, from the preparatory stages to the contractual commitments and subsequent monitoring, is paramount. The synergy between PAs and TOCs, fostered through straightforward negotiations and transparent agreements, is vital to a prosperous and efficient port sector.

4.5.1. Concession terms

In this paragraph, we will analyse the main terms of seaport concessions.

4.5.1.1. Duration

The concession duration, typically determined by the PA or government agency, is a critical determinant of the concession's attractiveness to potential operators. The term is often contingent upon factors such as the initial investment required, compliance with development policies, and existing land lease agreements. While no universally accepted rules regarding concession duration exist, phased concession terms are standard, typically involving a base duration with periodic renewals based on pre-set criteria.

The duration of a concession has significant implications for TOCs and PAs. Long-term agreements allow TOCs to capitalise on efficiencies from learning and ensure a reasonable return on investment (ROI). Conversely, PAs must balance this against the need for competition and new entrant opportunities. Notably, long-term agreements may act as entry barriers, limiting intra-port competition to existing local port operators.

4.5.1.2. Fees and fee Structures

Implementing concession fees and fee structures is a pivotal element in seaport management (Notteboom et al., 2022), which requires careful negotiation and strategic planning. The diversity of the fee structures available reflects the complexity of the economic, operational, and market variables that ports and TOCs navigate. With TOCs advocating for a transparent, uniform, and stable fee system for investment planning purposes, PAs often employ market mechanisms in the fee-setting process. Striking a balance between these imperatives is crucial to both parties' long-term viability.

There are several approaches to concession fee structures:

- **Fixed Rent per Year:** This approach provides a stable and predictable revenue stream, which is particularly beneficial for ports prioritising financial stability. However, its inherent rigidity often fails to capture the dynamic economic value of port land, significantly if the TOC scales up its activities.
- **Annual Lump Sum plus Variable Payment:** This model combines a guaranteed lump sum with a variable component, thus allowing ports to benefit from the TOC's financial performance. However, this dual-fee structure introduces an element of economic

uncertainty for TOCs. It can be contentious if it is based on fluctuating financial indicators like total cash flow.

- **Fixed Rent plus Royalty Fee:** The PA shares in the TOC's revenue success by applying a royalty fee on top of a fixed rent. While this fee structure offers a more transparent structure than those based on abstract financial metrics, it can discourage revenue-boosting initiatives from TOCs.
- **Fixed Rent with Bonus System:** This innovative model ties the port's revenue to the volume of traffic handled, incentivising TOCs to maximise throughput. The downside is the risk to port revenues during periods of low throughput, which calls for a balanced application of this model.

4.5.1.3. Final asset compensation

The fate of terminal superstructures, such as warehouses and fixed cargo handling equipment, is a vital consideration at the end of the concession term. The PA can opt for superstructure removal by the TOC, transfer of the assets without compensation, or provide financial compensation for transferred superstructures. It is advantageous for PAs to decide on this issue in the pre-bidding phase to ensure full disclosure of terms to potential bidders.

4.5.1.4. Throughput guarantees: A vital component of concession agreements

According to Cruz and Marques (2012), the primary objective of a concession contract structure is to formalise the relationship between the PA and the TOC for the management of port activities over a specified duration. A vital aspect of these contracts is allocating risks to the private sector, effectively transferring certain liabilities away from the public entity. Their research on Portuguese port concessions illustrates the centrality of risk allocation in these contracts, emphasising its importance in shaping the terms of engagement between the PA and TOC.

Concurrent with these findings, Notteboom and Verhoeven (2010) noted that throughput guarantees are often the most prevalent clauses in contracts between PAs and TOCs in European contexts. These guarantees are essential in concession agreements within the port sector, acting as levers to ensure productivity and optimise terminal utilisation. Throughput guarantees set a

minimum cargo movement level, which acts as a contractual obligation and a performance benchmark for the concessionaire (Notteboom et al., 2012).

PAs or relevant governmental agencies typically employ throughput guarantees to set a minimum threshold, particularly for existing berths or terminals. Such clauses encourage TOCs to maintain operations, actively market port services, attract maritime trade, and maximise terminal and land usage. This proactive approach ensures that the dock remains a productive asset.

Furthermore, throughput guarantees help secure an acceptable level of land productivity. By mandating a minimum throughput level, the concessionaire must prevent terminal underutilisation, thus contributing to the efficient usage of resources.

In addition, these guarantees can drive high terminal utilisation rates by obliging the operator to engage in aggressive marketing and cargo attraction strategies to meet the defined throughput targets. These activities are instrumental in maximising terminal utilisation, aligning with the overarching goals of efficiency and productivity.

Failure to meet throughput targets can have several repercussions, ranging from financial penalties payable to the PA - often calculated on a per-ton or Twenty-foot Equivalent Unit (TEU) basis - to more severe consequences like the revocation of the concession agreement under extreme circumstances.

Interestingly, throughput guarantees can facilitate intra-port competition by lowering entry barriers for new market entrants. For instance, if a PA adopts a retraction policy or reallocates parts of a terminal due to underutilisation, it may pave the way for new competitors to enter the market. This ensures the terminal remains productive by compelling operators to maintain minimum throughput levels.

In conclusion, throughput guarantees are critical in port concession agreements, cultivating productivity and competitiveness within the port sector. These guarantees offer a robust performance benchmark, encouraging optimal land and terminal utilisation while enhancing the port's attractiveness to maritime trade. Non-compliance with these guarantees can trigger penalties or even lead to the termination of the concession agreement, underscoring the essential

nature of these contractual obligations. Thus, throughput guarantees are pivotal in fostering a dynamic, competitive, and efficient port sector.

4.5.1.5. The technical and financial proposal

A comprehensive technical and financial proposal is the cornerstone for evaluating a potential concessionaire's capabilities and commitment. While proposal contents vary, they generally encompass an implementation plan, financing details, a marketing strategy, operational and management specifics, employment impacts, an environmental agenda, and an organisational layout.

The implementation plan, underpinned by a market study, outlines the terminal development stages in response to anticipated traffic growth. It should provide concrete details on handling capacity, investment timeline, and equipment specifications. Notably, in the case of greenfield or brownfield terminal development, bidders must provide preliminary sketches of the works, cost estimations, and an investment plan detailing proposed constructions.

A solid marketing plan often includes a market study to define terminal service demand and project annual throughput for a specified duration. It should also indicate expected prices, maximum service charges, operation costs, maintenance and supervision expenses, and administration costs.

Further, a robust proposal must address terminal operations' environmental and territorial impacts, outlining mitigation strategies for potential adverse effects. Additionally, staffing requirements should be detailed, and their evolution should be projected per cargo estimations. A comprehensive proposal must logically flow from market demand and cargo projections to the physical layout, equipment procurement, staffing levels, and operating assumptions.

Finally, each technical and financial proposal aspect is typically rated on an evaluation matrix, with weighted or unweighted scores depending on the evaluation criteria related to the proposal's elements. The weightage and passing criteria are usually incorporated in the bidding documents.

4.5.1.6. Price bid

An alternative to the technical and financial proposal is the price bid. Here, the focus shifts towards the price, with concessions awarded based on either the highest rent paid for the right to provide terminal services or the lowest price proposed to be charged to terminal users.

The first option aims to maximise the PA's revenue with annual payments. The second option prioritises the interests of port users. Under the first option, concession fees are seldom renegotiated. Under the second, they are often renegotiated, allowing the concessionaire to claim a larger share of the rent resulting from its efficiency gains.

Particularly in developing countries undertaking new terminal developments, bidders may need to quote the percentage of their revenue passed onto the government, with preference given to the party offering the highest government share.

4.5.1.7. A problematic choice

The awarding phase in a concession process hinges on a detailed technical and financial proposal or a price bid. Evaluating these proposals requires careful consideration and a comprehensive understanding of the prospective concessionaire's capabilities and commitments. While the technical and financial proposal demonstrates a bidder's competence and approach, the price bid elucidates the financial implications for the PA and users. A balance between these two evaluation criteria is critical for a successful concession process. The decision should consider the bidder's technical competency and financial strength, ensuring the concession's long-term sustainability and value for all stakeholders.

5. Methodology

This study will employ a single-embedded case study approach complemented by qualitative interviews. This methodological framework aims to provide valuable insights for managerial decision-making by delving deep into the intricacies of a specific case and drawing actionable conclusions from qualitative interview data.

5.1. Qualitative research

Qualitative research is a methodological approach that delves deep into understanding the intricacies of social phenomena within their natural settings. Rooted in a naturalistic inquiry, it aims to comprehensively understand a subject without mathematical or other formal transformations (Lindlof & Taylor, 2002, as cited in Chesebro & Borisoff, 2007). Instead, it begins with textual data, assigning meaning within a specific context (Plakoyiannaki et al., 2013). This approach allows the researcher to immerse themselves fully in the study, interpreting findings flexibly. The term “quality” in qualitative research pertains to the researcher’s approach towards the subject of investigation, emphasising the depth and richness of data over breadth (Jonker & Pennink, 2010).

In the context of this thesis, the phenomenon under investigation is the bargaining process between port authorities and terminal operators in seaports. This process is multifaceted, especially when the port authority’s objectives transcend mere revenue maximisation and consider the interests of various seaport stakeholders. Given the nuanced nature of these negotiations and the myriad of stakeholders involved, a qualitative approach is apt. It allows for an in-depth exploration of the bargaining dynamics, capturing the subtleties of stakeholder interests, power dynamics, and the broader socio-economic implications.

We can further understand the suitability of qualitative research for this study by examining its key features:

- **Descriptive Goal:** In this research, the descriptive capability of qualitative research is invaluable. We can capture the unique aspects of each negotiation between PAs and TOCs, influenced by distinct circumstances like location, economic conditions, and

political factors. This approach paints a comprehensive picture of these negotiations in different contexts.

- **Flexibility:** The flexibility of qualitative research is crucial for this study. The negotiations examined are dynamic and affected by external factors like market demands and regulatory changes. This flexibility allows us to adapt research methods to these changing environments and better understand how they influence the negotiation dynamics between PAs and TOCs.
- **Data Collection:** As the primary instrument for data collection in the research, we have gathered rich and detailed information directly from the involved parties. Through interviews and observations, we aimed to gain deep insights into the motivations, expectations, and strategies of both PAs and TOCs. This firsthand information is critical to understanding the intricacies of their bargaining processes.
- **Open-ended Questions:** Employing open-ended questions in the study allows stakeholders, namely the PAs and TOCs, to share their perspectives freely. This is vital for grasping the complexity of their negotiations, where each party might have unique concerns and priorities that shape the outcome. Open-ended questions help us delve into these nuances, enhancing the understanding of the negotiation dynamics.
- **Small Sample Size but Deep Insights:** While this research might involve a smaller sample size than quantitative studies, the depth of insights we aim to garner is significant. Given the varied nature of each negotiation between PAs and TOCs, an in-depth analysis of a few cases can provide a profound understanding of the negotiation dynamics in this context.
- **Subjectivity with Objectivity:** In the research, while we acknowledge the inherent subjectivity of qualitative methods, we strive to maintain a balance between personal insights and generalisable knowledge. This balance is essential for ensuring that the findings on the negotiation dynamics between PAs and TOCs are rich in detail and valid in their broader applicability.

Given the complexity and the various factors at play in the bargaining process between port authorities and terminal operators, especially when multiple stakeholders are involved, qualitative research offers the depth and flexibility needed to understand this phenomenon comprehensively. Qualitative research, emphasising depth, context, and flexibility, is best suited to unravel these complexities.

Negotiation processes between port authorities and terminal operators in seaports represent a complex interplay of interests, objectives, and power dynamics. These negotiations involve multiple stakeholders operating interdependently, albeit in a physical realm rather than a virtual one. The intricacies of these negotiations, mainly when the port authority's objectives encompass interests beyond revenue maximisation, can be best understood through a qualitative research lens, given its naturalistic, phenomenon-driven character.

Furthermore, it is essential to recognise that these processes are always dynamic and embedded in a specific context. This dynamic nature means that the factors influencing negotiations, such as economic conditions, regulatory changes, and technological advancements, constantly evolve. As a result, the suitability of qualitative research is further highlighted, as it allows for a deeper understanding of these changing contexts and their impact on the negotiation dynamics. Qualitative methods, emphasising understanding phenomena in their natural settings, are particularly adept at capturing the nuances and subtleties of these evolving situations. This approach provides insights into the stakeholders' behaviours, attitudes, and perceptions, offering a comprehensive view of the negotiation process within seaport operations' complex and ever-changing landscape.

While a plethora of literature exists on negotiation strategies, stakeholder management, and port economics, there is a noticeable gap in understanding the holistic nature of these negotiations. Qualitative research, with its emphasis on depth and context, allows for exploring relationships between various negotiation concepts and the broader socio-economic implications of these negotiations.

The primary motivation behind adopting a qualitative approach is to gain a profound understanding of the real-world dynamics of a seaport. This investigation will be examined through various negotiation theories, juxtaposing theoretical frameworks with empirical data collected through observations, interviews, and immersion in the seaport environment.

This research seeks to narrate the intricate dance of interests, power dynamics, and objectives within the seaport negotiation arena rather than focusing solely on quantifying negotiation outcomes. The complexity of the negotiation process involving multiple actors and the dynamic nature of these interactions underscore the appropriateness of qualitative research methods.

Engaging in negotiations as an observer, conversing with stakeholders, and immersing oneself in the seaport milieu form the crux of this research methodology.

The inherently open nature of qualitative research offers the flexibility to navigate the research process without stringent boundaries. This approach is particularly suited to capturing seaport negotiation processes' multifaceted and evolving nature. The presence of various stakeholders with differing objectives and the constant evolution of these interactions due to external factors such as economic conditions and regulatory changes call for a method that can adapt and respond to these complexities. As a result, the researcher is not just an external observer but an active participant, striving to understand the phenomenon through the perspectives of those involved (Jonker & Pennink, 2010). This immersive approach provides a comprehensive understanding of the dynamics of negotiation, highlighting the significance and relevance of qualitative research in this context.

In conclusion, given the multifaceted nature of negotiation processes in seaports and the need for a deep, contextual understanding, qualitative research emerges as the most apt methodology for this study. The aim is to conduct a comprehensive qualitative study, drawing insights from observations, in-depth stakeholder interviews, and active participation in negotiation meetings. This approach, coupled with the reasons elucidated above, underscores the relevance and appropriateness of qualitative research for this investigation.

5.2. Qualitative case study research

A single case study is an empirical inquiry that delves deep into a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and its context are unclear (Yin, 2009).

Utilising the qualitative case study research method, a staple in the field of International Business, this study delves into the intricate dynamics of negotiation within seaports. This approach is convenient for addressing the complex “why” and “how” questions that underpin the negotiation processes between port authorities (PAs) and terminal operator companies (TOCs). It allows for an in-depth exploration of individual and organisational behaviours and decisions in real-life settings, such as the intricate world of seaport negotiations.

The heart of this research lies in examining how PAs approach and structure concession contract negotiations with a broader set of objectives than mere revenue maximisation. Three pivotal research questions guide the investigation:

- 1) How can optimal concession contracts be determined, considering factors beyond revenue maximisation?
- 2) How can synthesising the Bargaining and Stakeholder Theory serve as a valuable framework for analysing and defining optimal concession contracts?
- 3) How does the variable ‘fee’ influence the negotiation and awarding process? Are there other factors which might influence the process?

This study aims to unravel these questions and will focus on a detailed case study of a particular seaport. It will involve a thorough analysis of the negotiation strategies employed by the PA, especially in their dealings with TOCs. This in-depth examination aims to illuminate how theoretical constructs, specifically bargaining theory and stakeholder theory, are applied in seaport negotiations. Special attention will be given to the negotiation of critical variables, such as fees, and how the broader objectives of the PA influence these.

This qualitative case study will contextualise seaport negotiation processes and provide a detailed understanding of the strategies and decision-making frameworks employed. By focusing on a specific PA, the study will offer a comprehensive view of the negotiation practices, strategies, and outcomes. It will explore the balance between financial objectives and broader goals such as state property and regional development social welfare, elucidating the complex interplay of various interests in seaport negotiations.

Moreover, the study will delve into the role of context in shaping these negotiations. It will examine how external factors such as market dynamics, regulatory environments, and stakeholder expectations influence the negotiation process. This comprehensive approach will help understand the negotiation tactics and strategies and how they are framed and constrained by the broader socio-economic and political context.

Summing up, this study uses a qualitative case study method to examine negotiation strategies between PAs and TOCs in seaports, focusing on how concession contracts are crafted considering broader goals beyond revenue, striking a balance between the parties’ different

objectives. It aims to understand these negotiations within their broader socio-economic and political context.

5.3. Single embedded case study

The methodology of this master thesis is anchored in the strategic selection of a single embedded case study, a decision underscored by the intent to achieve a profound understanding of the negotiation dynamics within seaport operations. This approach, inspired by the seminal work of Dyer & Wilkins (1991), prioritises depth over breadth, allowing for an intricate exploration of the qualitative nuances inherent in the negotiation process between port authorities (PAs) and terminal operators (TOCs).

The rationale behind adopting a single case study lies in its capacity to provide a detailed and granular view of the negotiation phenomena from its inception to its culmination. This longitudinal perspective is crucial for comprehending the complex interplay of interests, power dynamics, and objectives characterising the negotiations, offering a rich, detailed understanding of the case. By focusing on one specific seaport negotiation, the research delves into the subtleties of the negotiation dynamics, which might be glossed over in a broader, multi-case study approach.

Moreover, this methodology enhances the credibility and insightfulness of the findings. It allows for a dedicated examination of the case's context, history, and specificities, leading to a nuanced and comprehensive understanding of the phenomena under study. The single-embedded case study, which focuses on the social interactions, objectives, and strategies of the PAs and TOCs, facilitates a layered understanding of the negotiation landscape.

The embedded units within this primary case—representing the main stakeholders' distinct objectives, constraints, and strategies—serve as a focal point for analysis. This specialised research methodology enables an in-depth investigation into how the port authority's broader stakeholder interests contrast with the terminal operator's profit maximisation goals, thereby providing a holistic view of the negotiation process.

Figure 5 – Single-embedded case study design (own illustration based on Yin, 2003)



The single-embedded case study approach offers a unique lens through which the negotiation dynamics between PAs and TOCs are examined. By capturing the broader negotiation context while zooming in on the individual objectives and strategies of the primary stakeholders, this research methodology promises to yield invaluable insights. These insights are poised to contribute significantly to academic discourse and practical negotiation strategies, offering lessons and principles that, while specific to the case at hand, can potentially inform similar negotiation contexts in the maritime industry.

5.4. Context: The port of Trieste

The decision to focus on Trieste, rather than other national or international maritime ports, was driven by several key factors:

Firstly, the decision to focus on the Port of Trieste was significantly influenced by the presence of established contacts within the port's community. These contacts, ranging from operational staff to management level, provided a unique entry point into the inner workings of the port. The advantage of such connections cannot be overstated; they facilitated introductions to key stakeholders, opened doors to otherwise inaccessible information, and offered insights grounded in port operations' day-to-day and strategic realities. This insider perspective was crucial for developing a nuanced understanding of the negotiation dynamics, operational challenges, and strategic decisions that define the port's activities. The ability to engage directly

with individuals working in the port system enriched the research with depth and authenticity that would have been challenging to achieve through secondary sources alone.

Secondly, the geographical proximity of the Port of Trieste offered practical benefits that significantly influenced the choice of this port for the case study. The closeness allowed for easier planning and execution of site visits, which were anticipated to be a significant component of the data collection process. However, it is essential to note that despite the initial plans for a broad data collection strategy, the data gathered for the thesis predominantly came through interviews.

The proximity facilitated the scheduling and conducting of these interviews, making it feasible to engage with a wide range of participants within the constraints of the research timeline. The ease of access meant that interviews could be arranged with greater flexibility, accommodating the availability of participants and allowing for follow-up discussions as needed. Although the data collection ultimately centred on interviews, geographical closeness was critical in enabling these interactions. It ensured that the research could be grounded in direct insights from those who navigate the complexities of the Port of Trieste's daily operations and negotiations.

Lastly, the Port of Trieste is a national harbour and an increasingly pivotal international maritime port within the Mediterranean Sea. Its strategic location at the heart of Europe, at the crossroads of sea routes and the Baltic-Adriatic and Mediterranean core TEN-T network corridors, positions Trieste as a critical hub for land and sea trade, especially with the dynamic Central and Eastern European market. The port's role in long-distance intercontinental maritime transport, short/medium-distance intra-Mediterranean trade, and its development of intermodal services and innovative logistics solutions underscores its significance in the global maritime industry.

The Port of Trieste's unique attributes - such as its deep-water depths, excellent road and rail connections, and strategic position as a natural crossroads between East and West - further motivated the choice. Compared to Northern European ports, its ability to save five days of sailing on routes between Europe and East Asia highlights its competitive advantage and growing importance in international trade.

Incorporating these considerations, the Port of Trieste emerges as an exemplary case study to explore the intricate dynamics of port operations and negotiations. Its evolving role as one of the most important maritime ports of the Mediterranean Sea, combined with the personal and logistical advantages it offered for this research, made it an optimal choice for a detailed and context-rich investigation.

5.5. Unit of analysis

In exploring seaport negotiations, the port authority (PA) and the terminal operator (TOC) emerge as pivotal units of analysis, embodying a spectrum of strategies, objectives, and interactions central to the fabric of port operations. This focus is not merely defining ‘what’ or ‘who’ is being analysed but delving into the essence of their roles and the dynamics they engender within the negotiation landscape.

As a unit of analysis, the PA represents the regulatory and operational oversight body tasked with balancing port management’s economic, social, and environmental responsibilities. Its objectives often extend beyond financial metrics, encompassing broader stakeholder interests, sustainable development goals, and strategic port growth. Analysing the PA allows for understanding how these multifaceted objectives influence negotiation strategies and outcomes, shaping the port’s long-term vision and role within the global supply chain.

Conversely, the TOC, operating within the framework established by the PA, seeks to maximise operational efficiency and profitability. As a unit of analysis, the TOC provides insight into the commercial and operational pressures that drive negotiation dynamics, from investment in infrastructure to adopting innovative logistics solutions. The TOC’s strategies and objectives reflect a response to the regulatory environment set by the PA and the competitive pressures of the maritime logistics industry.

Research focusing on the PA and TOC can unravel the complex interplay between regulatory frameworks, commercial objectives, and operational strategies. This approach illuminates the negotiation process not as a series of isolated transactions but as a dynamic ecosystem where each entity’s objectives and strategies interact and evolve.

Incorporating Robert Yin's perspective, as outlined in his seminal work on case study research, enriches this analysis. Yin underscores the importance of selecting units of analysis that offer the potential to reveal insights into the phenomenon being studied. In seaport negotiations, the PA and TOC serve as such units, providing a window into the negotiation dynamics emblematic of broader trends in port management and maritime logistics. Yin's methodology advocates for a detailed examination of these units within their real-life context, allowing an in-depth understanding of the phenomena under study.

Thus, guided by Yin's framework, this research delves into the PA and TOC's roles within seaport negotiations, seeking to uncover the underlying principles that govern their interactions and strategies. This approach does not merely catalogue the objectives and actions of these entities. However, it seeks to understand how they collectively shape the negotiation landscape, offering insights specific to the case at hand and potentially generalisable to similar contexts.

5.6. Data collection

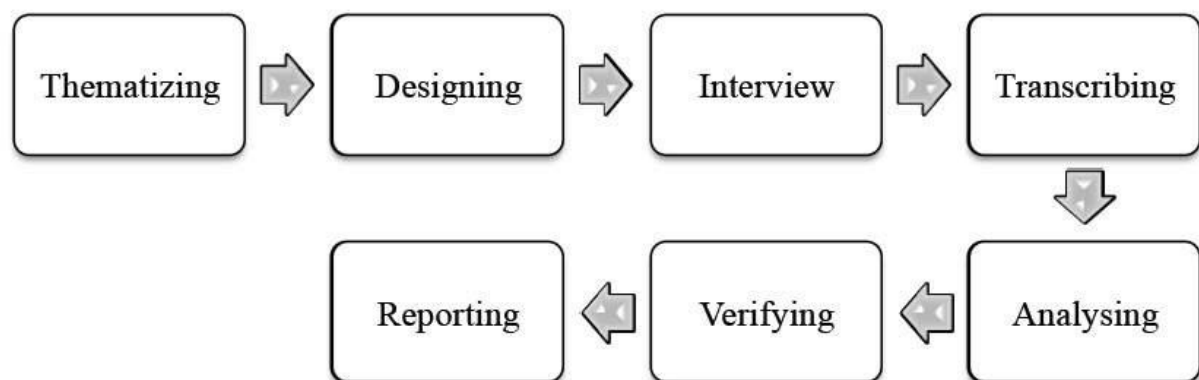
This study's primary data collection tool is qualitative semi-structured interviews, chosen to balance flexibility and structured inquiry. This approach is particularly suited to exploring the nuanced dynamics of negotiations between Port Authorities (PAs) and Terminal Operators (TOCs) over concession agreements. Through these interviews, the research aims to delve into the motivations, challenges, and strategic considerations that influence the decision-making processes of these critical stakeholders in seaport operations.

Employing Kvale's comprehensive seven stages of qualitative interviews, the methodology is carefully crafted to ensure a thorough exploration of the negotiation landscape:

- **Thematising:** The research focuses on the negotiation dynamics between PAs and TOCs, aiming to uncover the underlying challenges and strategies alongside the broader stakeholder interests that influence these discussions.
- **Designing:** An interview framework is developed to guide the conversation from the general roles and responsibilities of the stakeholders to more intricate aspects of their negotiation experiences and the challenges encountered.

- **Interviewing:** Interviews are conducted in a setting that promotes openness, utilising probing and open-ended questions to encourage participants to share their experiences and viewpoints comprehensively.
- **Transcribing:** With the consent of the participants, interviews are recorded and transcribed verbatim, ensuring the accuracy and authenticity of the data collected.
- **Analysing:** The transcripts are systematically analysed to identify themes, patterns, and insights that shed light on the negotiation processes between PAs and TOCs.
- **Verifying:** The study incorporates rigorous checks to ensure the reliability and consistency of the findings, aiming to assess their applicability and relevance to broader contexts.
- **Reporting:** Insights gleaned from the interviews are articulated clearly, highlighting the significant dynamics that drive negotiations within seaports.

Figure 6 – Seven stages of an interview (Source: Kvale, 1996)



This research relies exclusively on semi-structured interviews as its sole source of data. This focused approach reflects the study’s objective to understand the subjective experiences and perspectives of those directly involved in the negotiations. The depth and richness of the data obtained from these interviews are anticipated to provide comprehensive insights into the negotiation dynamics, offering a detailed examination of the complex interplay of factors that shape these negotiations. Allowing interview participants to choose their language of comfort within the interviewer’s capabilities is a deliberate strategy to enhance the expressiveness and precision of their responses. This linguistic flexibility is crucial for capturing the nuanced experiences and viewpoints of the participants, thereby enriching the overall quality of the data collected.

In summary, by leveraging the methodological framework of Kvale's stages for qualitative interviews, this study aims to construct a nuanced and detailed portrayal of the negotiation milieu within seaports. Through this singular focus on semi-structured interviews, the research endeavours to uncover the intricate dance of negotiations between PAs and TOCs, providing valuable insights into the mechanisms of concession agreements and the broader implications for port management and operations.

5.7. Qualitative data analysis

The study exclusively utilises oral data collected through interviews as the sole source of evidence; the approach to qualitative data analysis can be refined to focus solely on this rich vein of information. This adjustment streamlines the analytical process and underscores the depth and specificity with which the negotiation dynamics between Port Authorities (PAs) and Terminal Operators (TOCs) will be examined.

5.7.1. Data types and collection

Oral Data: Central to the study, oral data is obtained through semi-structured interviews, which are instrumental in capturing the nuanced perspectives, experiences, and strategic insights of the participants involved in PA and TOC negotiations. These interviews, which can last from 40 minutes to 2 hours, are meticulously transcribed, resulting in detailed transcripts that serve as the primary data for analysis. This approach ensures a focused examination of the verbal narratives provided by the interviewees, offering a direct lens into the complexities of negotiation processes.

5.7.2. Analytical approach

The study will employ a narrative analysis framework, concentrating on the oral narratives to understand how PAs and TOCs navigate negotiations to often arrive at suboptimal agreements. This analysis aimed to merge insights from bargaining theory and stakeholder theory to dissect and comprehend the negotiation process.

- **Bargaining Theory:** This theoretical lens will help analyse the negotiation tactics, power dynamics, and strategic manoeuvres that PAs and TOCs employ to achieve their

objectives. It provides a foundational structure for understanding how negotiations unfold and the factors influencing decision-making and agreement outcomes.

- Stakeholder Theory: The analysis will also integrate stakeholder theory to consider the broader ecosystem of interests surrounding the negotiations. This perspective highlights how negotiations are influenced by external pressures, stakeholder expectations, and ethical considerations that guide the actions and decisions of the negotiating parties.
- By analysing the interview transcripts with a narrative lens, the study aims to unravel the intricate storylines that encapsulate the negotiation journeys of PAs and TOCs. This narrative analysis will illuminate the pathways to suboptimal agreements, revealing the interplay of bargaining strategies, stakeholder influences, and the compromises characterising the negotiation outcomes.

This study's qualitative data analysis is tailored to extract, interpret, and understand the rich oral narratives captured through interviews. This focused approach sheds light on the complex negotiation dynamics between PAs and TOCs, offering nuanced insights into the factors that lead to suboptimal agreements and their implications for port management and operations.

5.8. Qualitative criteria for single case study research

The single case study methodology is renowned for its depth and contextual specificity. It is particularly suitable for exploring the complex negotiations between a PA and a TOC. In the ever-evolving landscape of research methodologies, ensuring the trustworthiness of qualitative research becomes critical. As a quality criterion, trustworthiness encompasses several factors, such as validity, reliability, and objectivity.

Addressing these concerns, Sinkovics et al. (2008) contend that traditional criteria for assessing the quality of research might not be entirely applicable to qualitative studies due to their inherent fluidity and context dependency. Drawing from the foundational work of Lincoln and Guba (1985), they propose an alternative framework that focuses on trustworthiness as the cornerstone of qualitative research quality. Reliability in this context refers to the degree to which the research findings are dependable and credible. It can be corroborated by the data and methods employed.

In conducting interviews for this single case study research, specific measures were taken to adhere to the qualitative criteria of credibility, transferability, dependability, and confirmability. These criteria are essential in ensuring the integrity and applicability of the research findings, particularly in the nuanced exploration of negotiations between Port Authorities (PAs) and Terminal Operators (TOCs).

Credibility: A rigorous interview was employed to enhance the study's credibility. Participants were selected based on their direct involvement and experience in PA and TOC negotiations, ensuring that the insights gathered reflected a broad spectrum of perspectives within this context.

The semi-structured format of the interviews allowed for a deep, conversational engagement. Participants could freely share their lived experiences and viewpoints. This approach facilitated a faithful representation of the complex realities of PA and TOC interactions, grounding the study in the authentic dynamics of the negotiation process.

Transferability: The study was designed to extract insights relevant to similar negotiation contexts beyond the immediate case of the Port of Trieste. The selection of interview questions and the data analysis was conducted to identify patterns, strategies, and challenges that are not unique to this specific setting but are indicative of broader negotiation dynamics in the maritime industry. By documenting the contextual factors and the rationale behind negotiation strategies, the study provides a foundation for applying its findings to analogous situations, enhancing the potential for broader applicability.

Dependability: To ensure dependability, the research process was meticulously documented, from the selection of interviewees and the design of the interview guide to the procedures for data collection and analysis. This comprehensive documentation offers a transparent view of the research process, allowing future scholars to trace the decision-making path and understand the methodological choices. Such transparency not only reinforces the reliability of the study but also provides a blueprint for replicating or building upon the research in future studies under similar conditions.

Confirmability: Confirmability was addressed by anchoring the analysis and conclusions in the data collected from the interviews. Throughout the analysis process, care was taken to

differentiate between empirical evidence and the researcher's interpretations. Direct quotes from interview transcripts were frequently used to support findings, ensuring that the conclusions were rooted in the participants' own words and experiences. This approach minimises the influence of researcher bias and underscores the empirical basis of the study's insights.

In the context of our study, the interviews conducted for this single case study research were designed and executed with a deliberate focus on meeting the qualitative criteria of credibility, transferability, dependability, and confirmability. These measures ensured that the study provided a deep and authentic understanding of the negotiation dynamics between PAs and TOCs and contributed valuable insights applicable to broader discussions on maritime negotiation processes.

5.9. Ethical considerations

Ethical considerations lie at the heart of qualitative research, particularly when exploring the multifaceted bargaining dynamics between PAs and seaport TOCs. Upholding these considerations reinforces the study's integrity while safeguarding the participants' rights, dignity, and welfare.

Voluntary Participation: Fundamental to any ethical inquiry is ensuring voluntary participation. All participants, whether affiliated with the PA or TOC, should be part of the study based on their free will, devoid of coercion or undue influence.

Do No Harm: The protection of participants is paramount. They should not encounter any form of physical, emotional, or reputational harm due to their involvement. The researcher must guarantee the participants' safety during and after the study.

Confidentiality and Anonymity: Given the intricate and often sensitive nature of negotiations, ensuring confidentiality is paramount. Any information that could identify a participant or reveal proprietary details must be withheld. Anonymity further safeguards participants' identities by obscuring them.

Relevance of Data: Data collection should remain focused and avoid capturing unnecessary or overly sensitive details. For instance, divulging specific financial figures without explicit consent would breach ethical boundaries.

Ethical Approval: Before the commencement of research, obtaining clearance from an appropriate ethical review board is indispensable. This approval ensures the research's alignment with accepted moral standards and the preservation of participants' rights.

Transparency with Participants: It is crucial to provide participants with comprehensive details about the study's objectives, methodology, and potential implications. This informed approach guarantees that participants are aware of their involvement's full extent and rights, such as withdrawing their participation at any point.

Publication Ethics: In presenting the research results, transparency, honesty, and respect for participants must be upheld. Any reservations or concerns voiced by participants regarding specific published details must be respected and addressed.

In undertaking this investigation into the complex interplay of negotiations between PAs and TOCs, mainly when broader stakeholder interests come into the fray, our commitment remains unwavering to these ethical tenets. Our moral obligations are heightened given this research context's unique intricacies and potential sensitivities. We, as researchers, are duty-bound to ensure that every stage of our research, from data gathering to dissemination, adheres to the bedrock principles of ethics, guaranteeing the respect, rights, and well-being of all participants (Eynon et al., 2017).

To understand the intricate world of seaport concession contract determination, we delve into the core findings of our qualitative data analysis. The data collected within the Port of Trieste offers a window into the nuanced decision-making processes that govern these critical agreements.

As we navigate the findings, it becomes evident that financial considerations only partially drive optimal concession contracts. Port Authorities (PAs) and Terminal Operator Companies (TOCs) must navigate a multifaceted landscape where factors beyond immediate revenue maximisation come into play. This analysis seeks to unravel the intricacies of this dynamic interplay.

Our approach is rooted in narrative data analysis, allowing the voices of industry insiders to illuminate the landscape. Through interviews with PA and TOC, we capture the rich tapestry of perspectives, experiences, and insights that collectively shape the determination of optimal concession contracts.

In the following chapter, we present our key findings, organising them around the prominent themes that emerged during our analysis. These themes encapsulate the diverse range of factors influencing contract negotiations, shedding light on the delicate balance that PAs and TOCs must strike to ensure the long-term success of port logistics operations.

6. Findings

The chapter starts with presenting the findings derived from our investigation, which include interview quotes to follow the interpretive research approach of this thesis so the reader can interpret the data (Leppäaho et al., 2015); in the second subsection, we will discuss them, trying to merge them with the theoretical framework of the previous chapters.

The reader can interpret the data (Leppäaho et al., 2015). Below, we present again the research questions of this thesis to remind the reader of the purpose of this study:

- 4) How can optimal concession contracts be determined, considering factors beyond revenue maximisation?
- 5) How can synthesising the Bargaining and Stakeholder Theory serve as a valuable framework for analysing and defining optimal concession contracts?
- 6) How does the variable ‘fee’ influence the negotiation and awarding process? Are there other factors which might influence the process?

6.1. Presentation of the findings

The presentation of findings will also mainly concentrate on the three questions above; the qualitative data collection of this study included ten interviews with the top managers and advisors of the Port Authority of Trieste and two TOCs.

6.1.1. How can optimal concession contracts be determined, considering factors beyond revenue maximisation?

First, we must examine the significance of concession contracts in port operations to find an answer to this question.

In the labyrinthine world of port logistics, concession contracts are an immense linchpin of importance. These agreements serve as the bedrock upon which the entire operational edifice of ports rests, shaping the fortunes of Port Authorities, Terminal Operator Companies, and the global supply chain.

The world's ports, often called the gateways of international trade, are the lifeblood of commerce, facilitating the movement of goods across borders and continents. Nevertheless, their effective functioning hinges on a complex web of infrastructure, services, and collaboration, all intricately governed by concession contracts.

These contracts delineate the terms, conditions, and obligations that both parties must adhere to, covering everything from revenue-sharing mechanisms and lease agreements to service standards and investment commitments.

They must adapt and respond to changing circumstances in a world characterised by rapidly evolving global trade patterns, technological advancements, and environmental imperatives. Therefore, determining optimal concession contracts assumes paramount importance, reflecting not only the economic interests of the stakeholders but also their commitment to environmental sustainability, societal well-being, strategic objectives, and inclusive stakeholder engagement.

The Port Authority stands as the steward of port infrastructure, often representing the public interest in the functioning of the port. It assumes the critical responsibility of overseeing the PAs, overseeing the overall governance of the port, ensuring compliance with regulatory frameworks, and providing the essential infrastructure necessary for maritime trade. Their role extends beyond that of mere landlords, as they often serve as custodians of the port region's environmental and societal well-being.

On the other side of the negotiation table are the Terminal Operator Companies, the operational entities responsible for managing and operating terminal facilities within the port. TOCs bring the expertise, equipment, and labour necessary for efficiently handling cargo, ensuring that goods traverse seamlessly from ships to the hinterland. They play a pivotal role in the physical execution of port operations.

These two primary actors form the cornerstone of concession contract negotiations. The terms and conditions of these contracts take shape within the intricate dance of interests, objectives, and perspectives of PAs and TOCs. The interplay between these entities reflects economic considerations and the broader values and visions both parties seek to uphold.

As we embark on our journey to explore the findings of our qualitative data analysis, we will delve into the narratives, experiences, and perspectives of six people who work in the sector on

both sides of the negotiation table. Their voices will shed light on the multifaceted decision-making process that determines optimal concession contracts in the dynamic world of port logistics.

6.1.1.1. Navigating public duties: The role of port authorities

In the Italian legal system, PAs are a peculiar non-economic public body.

Non-economic public bodies are defined as such when:

1. They are subject to powers of direction and supervision by ministries and regions (instrumental bodies) in pursuit of a specific purpose.
2. They use financial resources from State sources.
3. They do not operate in the market.
4. They exercise their activities through the exercise of authoritative powers.

PAs' targets are inherently tied to their role as guardians of public interest and the unique nature of their state-owned mandate. These responsibilities are enshrined in their founding law, Law No. 84 of 28 January 1994, which outlines objectives such as port promotion, development, traffic maximisation, job creation, and community welfare.

PAs' mission is rooted in their unique role as public regulators with financial autonomy. While they must be financially self-sufficient, their core objective differs from TOCS's.

Participant 1: “The goal of the port system authority does not coincide with the goal of the terminal operator, i.e. profit maximisation.”

While TOCs are driven by profit maximisation, PAs must consider a broader spectrum of public interests.

Participant 2: “The mission of the Port Authority is to develop, manage activities and contribute clearly to the well-being of the state and the region.”

This statement underscores PAs' commitment to holistic development, not just of the port but also to the well-being of the state and region at large.

Financial considerations are only a part of their interests; their motivations, goals, and priorities extend beyond profit maximisation, diverging from the profit-centric objectives of TOCs.

Participant 2: "We are now a public regulatory body, but since we have budgetary autonomy, we also have to be self-financing to maintain ourselves; the vocation to make a profit is that of the terminal operator, not the port authority."

One fundamental interest of the state, as represented by PAs, is to ensure a consistent revenue stream. However, their focus goes beyond financial gain. It includes the maintenance and upkeep of public assets. The logic governing state finances and public spending differs significantly from that of a private enterprise.

The PA's primary aim is not to profit from using public assets. Instead, its objective is to maintain and safeguard these assets efficiently.

Participant 1: "A further element that renders implausible the idea that the enjoyment of state property constitutes a lucrative activity for the state."

Profit generation from public assets can often be a misinterpretation of the PA's core mission.

While PAs may consider leasing public assets through auctions, there is a concern that such an approach might lead to misconceptions about the nature of revenue generated. This, in turn, could result in additional costs, such as taxes on income derived from public assets, potentially increasing the overall expenses associated with the occupation of the public domain.

Therefore, financial sustainability is integral to their responsibilities. They must generate revenue primarily through concession fees and other sources while ensuring economic equilibrium. This financial stability enables them to undertake infrastructure projects and maintenance essential for the port's operations and development.

Participant 2: “We are non-economic public bodies, so we do not have an economic vocation; we must aim for budgetary parity. Our revenues are mainly state concession fees, business fees, and port taxes. We must achieve budgetary parity and do the works; we must work for the common areas and the development of our infrastructure.”

Their responsibilities extend far beyond the pursuit of profit, intertwining with their governmental role as stewards of the public interest. As we delve into determining optimal concession contracts, it becomes evident that these duties significantly influence their approach to negotiation and contract determination.

Participant 1: “The state property is a precious asset, but it is not an asset whose utility must be maximised in terms of economic return on its occupation”.

This remark emphasises that while the public domain under their purview is invaluable, its utility is not solely bound to profit maximisation.

PAs assume a multifaceted role, including regulatory oversight and safeguarding the public interest, particularly in the context of concession agreements. As one participant elaborated, “The port authority has a regulatory and public interest function in granting concessions.” PAs meticulously evaluate concession applications within this framework based on operational programs, investments, and their societal impact.

In the context of concession contracts, PAs adhere to the principle of “the most profitable exploitation of state property”, which translates to maximising the general utility of the public property. It is not solely about generating revenue but also about ensuring that concessions serve the broader public interest. In a nutshell, as stated by lawyer Francesco Munari, Professor of EU law and Maritime law at the Department of Law at the University of Genoa, one of Italy’s foremost experts on port law, “The most profitable exploitation of state property does not mean how much money it makes me, but it means what maximisation of general utility this type of concession gives the state property”.

This exploration of Port Authorities’ responsibilities underscores the intricate dynamics within PAs, where public duties, regulatory roles, and financial stewardship converge. Intertwined with

their state-owned status, these responsibilities set the stage for our continued examination of how they balance these duties with terminal operators' interests in determining optimal concession contracts.

While PAs may consider leasing public assets through auctions, there is a concern that such an approach might lead to misconceptions about the nature of revenue generated. This, in turn, could result in additional costs, such as taxes on income derived from public assets, potentially increasing the overall expenses associated with the occupation of the public domain.

On the other side of the equation, PAs recognise the need to balance their interests with those of Terminal Operator Companies (TOCs). They understand that high concession fees might impact the competitiveness of businesses operating within the port. PAs may derive more revenue, but they also acknowledge the potential adverse effects on these businesses' competitiveness and investment capabilities.

PAs' interests, therefore, revolve around the prudent management of public assets, consistent revenue generation, and the need to strike a balance that does not hinder the competitiveness and investment capabilities of businesses within the port. Intricately linked to their public mandate, these interests shape their approach to concession contract negotiations.

In the following section, we will examine the interests of Terminal Operator Companies and how these two sets of interests influence the determination of optimal seaport concession contracts.

6.1.1.2. The role of Terminal Operator Companies

Terminal Operator Companies are independent entities driven by objectives different from those of Port Authorities. Their critical interest is maximising profitability. Unlike PAs, TOCs aim to operate profitably and seek opportunities to enhance their bottom line.

It is important to note that the terminal operations sector is highly competitive, characterised by varying degrees of profitability.

Participant 1: "Terminal activity is very patchy, a competitive sector".

The revenue landscape in the terminal operations sector varies, with only a few terminals generating substantial profits while others have low margins. This situation means they must continuously strive for operational efficiency and cost-effectiveness to maintain their market position.

Unlike PAs, TOCs are not responsible for maintaining public assets or ensuring the broader welfare of the state and region. Instead, they focus on optimising their terminal operations and driving revenue growth. Their interests are oriented toward expanding their market share, attracting more shipping traffic, and increasing cargo throughput.

Concession fees can be a significant operational cost for TOCs. As a result, they have a vested interest in negotiating favourable terms that allow them to maintain profitability while covering the costs associated with their operations. Their ability to secure optimal concession contracts directly impacts their competitiveness and ability to invest in infrastructure and technology.

In summary, the interests of Terminal Operator Companies revolve around profit maximisation, operational efficiency, and competitiveness within the port logistics industry. While they seek to secure favourable concession terms, their motivations and objectives differ from those of Port Authorities. This difference in interests forms a critical backdrop for negotiating and determining optimal concession contracts, where the interplay of these varying motivations must be carefully considered.

6.1.1.3. Explanation of a concession contract

A seaport concession, known in Italy as a “concessione demaniale”, is a fundamental legal instrument regulating public property and asset utilisation, regulated within the Italian Code of Navigation.

The Code is a legal framework dating back to 1942. Subsequent amendments have accommodated evolving needs, including those related to terminal operators. It remains the overarching framework for these contracts, coexisting with specific legislation, such as Law 84/1994, which addresses concession agreements tailored to terminal operators.

Concession contracts, as outlined in the Italian legal system, come in two primary forms:

1. Simple Concession Agreement: This type of concession aligns with the traditional framework outlined in the Italian Code of Navigation and applies to various concession purposes, including recreational, fishing, and tourism activities. A straightforward procedure characterises it.
2. Substitute Concession Agreement: Derived from Article 11 of Law 241/1990, this concession agreement is more complex than the simple one. It entails commitments from the prospective concessionaire, often involving significant investments such as the construction of new piers, docks, silos, or warehouses.

Participant 3: “The agreement instead of concession, on the other hand, is a little more complex, stemming from Law 241/1990; it is an agreement whereby the future concessionaire undertakes to perform a series of activities, usually including the construction of a new pier, quay or silo, or warehouses.”

In return for these commitments, substitute concession agreements typically entail less stringent financial obligations.

The duration and economic terms of concession contracts can vary significantly. The choice between a simple or substitute concession, the contract’s duration and financial obligations often depend on the scale of investments and improvements proposed by the concessionaire.

The duration can range from as short as one year to a maximum of four years for simpler concessions. However, for more substantial investments and commitments, such as the construction of new infrastructure, concession periods can extend to five, ten, fifteen, twenty, or even thirty years. The duration is closely linked to the proposed operational program and investments.

Significantly, the improvements made by the concessionaire during the contract often become state property at the end of the concession period, contributing to the long-term development and sustainability of port facilities.

This model of concession contracts is also frequently applied in other domains, such as tourism and recreation, where the management authority shifts from Port Authorities to regional entities or government agencies, depending on the nature of the property.

In summary, a seaport concession contract is a legally binding agreement that governs the use of public property and assets. It can take various forms, from simple concessions to substitute concessions, depending on the nature of the investments and improvements involved. The duration and financial terms of these contracts are determined by the scope of the proposed activities and the overall goals of the port. These contracts play a pivotal role in shaping the development and sustainability of port facilities while balancing the interests of both Port Authorities and Terminal Operator Companies.

6.1.1.4. Competitive analysis and public auctions

A competitive analysis becomes crucial to the concession determination process for longer concession durations, extending over several years or even decades.

The concession duration is often linked to the scale of investments and improvements the concessionaire commits. More extended concession periods typically require a comprehensive evaluation of the proposed investments and their expected impact on the port's development and economic growth.

A public auction mechanism is commonly employed to ensure transparency and fairness when selecting concessionaires. This competitive process aims to identify the most qualified and capable terminal operator among potential candidates. The auction serves as a platform where interested parties present their proposals, including the scale of investments and the anticipated benefits to the port and region.

The contract terms, including duration and financial obligations, are determined through a rigorous assessment of the proposed investments and their alignment with the port's strategic objectives.

Ultimately, the TOC that secures the concession promises substantial investments and offers the most compelling returns to the port and the surrounding region. This selection process ensures that the concession contract aligns with the broader interests of enhancing port infrastructure, economic development, and community welfare.

In summary, more extended concessions necessitate a thorough competitive analysis of proposed investments, and public auctions play a pivotal role in selecting the concessionaire.

The TOC that offers the most significant commitments in terms of investments and returns to the port and region stands a higher chance of securing the concession. This process ensures that concession contracts are awarded to entities best positioned to contribute to the growth and sustainability of the port logistics ecosystem and its broader economic and societal goals.

6.1.1.5. Requirements to get a concession

Participant 2: “To obtain a concession under Article 18 of Law 84/1994, i.e. to be a terminal operator, one must first meet the requirements of a port operator under Article 16.”

These requirements encompass economic and financial requirements, resources, personnel, financial statements, and a traffic plan, ensuring prospective terminal operators possess the necessary economic and operational capabilities.

One of the determining factors for granting a concession and its duration is the proposed traffic plan, which outlines the expected increase in port traffic.

Participant 4: “The duration of the concession is determined precisely based on these elements: the operational programme and a development idea that the applicant gives to the port authority about the structure that he intends to take over the concession.”

For instance, if a terminal operator applicant intends to build multiple warehouses, acquire ten cranes, and invest significantly in the facility, the PA may extend the concession duration. Importantly, these investments, which will become PA’s property at the end of the concession period, are crucial in determining the concession’s duration.

Participant 5: “The investment is basic as far as duration is concerned. Suppose one proposes to invest 15 million, 20 million, or 60 million in the terminal. In that case, one will need a long concession to amortise the initial investment, which is the determining factor.”

Another crucial aspect is the social impact assessment. It considers factors such as the number of jobs created, the influence on local communities, tax implications, and the effect on port-related revenues.

Participant 4: “What social impact will the proposal have in terms of development, increase in workers, impact on duties, VAT, and port taxes?”

The evaluation of concession proposals, therefore, may consider multiple factors, including the concession fee, employment generation, cargo volume, and alignment with the goals of the public administration. For instance, concessions may be granted based on the value added to the port, the greater public interest, or other relevant criteria.

Participant 2: “The navigation code states that we have to choose who gives more value to the port, who gives the greater public interest. In the event of a tie, we have to hold an auction.”

It is, therefore, crucial to evaluate all elements proposed by the concessionaire. The committee’s primary concern is whether the proposal aligns with the prevailing public interest.

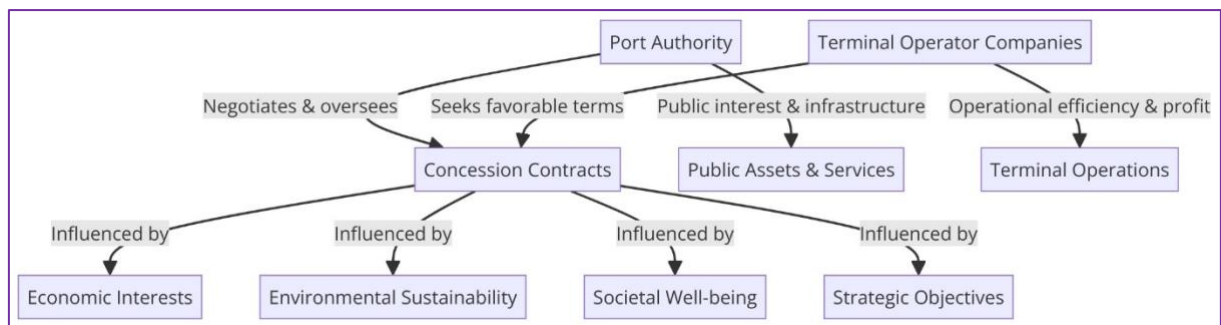
Depending on whether the concessions are four years or longer, additional criteria and procedures, including public notifications and regulatory elements, come into play.

Concession processes are inherently public and competitive, even for defined demesne spaces. In the interest of transparency and fairness, Port Authorities communicate their intent to grant a concession publicly, allowing interested parties to participate in a European public tender process.

This competitive process ensures that the concession ultimately benefits the broader public interest and that the concession award aligns with the broader economic development and societal well-being goals, considering the potential benefits and impacts on the region and its stakeholders.

In summary, obtaining a concession contract involves meeting specific requirements and criteria, including economic, operational, and social considerations. These requirements ensure that terminal operators possess the capabilities to enhance port operations, make necessary investments, and contribute positively to the community and the region. The concession process also incorporates mechanisms for transparency and competition to select the most qualified and capable concessionaires.

Figure 7 – The approach for establishing a concession agreement between a PA and a TOC



6.1.2. How can synthesising the Bargaining and Stakeholder Theory serve as a valuable framework for analysing and defining optimal concession contracts?

In port management, the Port Authority adeptly navigates the intricate landscape of stakeholder interests, continuously striving to maximise value while balancing the often-competing demands of various parties. As elucidated through interviews, this delicate balance highlights the PA's commitment to optimising outcomes.

When structuring a concession contract, the Port Authority must consider a wide array of public and private stakeholders to ensure that the interests of various parties are duly considered. Here are insights from interviews with the key stakeholders in this process:

- **Competent Public Entities:** The PA collaborates with other public entities responsible for maritime infrastructure and operations. This includes entities such as the “Provveditorato alle opere pubbliche marittime”, which oversees projects related to docks, quays, and maritime structures. Their input is crucial to assess the feasibility and quality of proposed projects concerning port infrastructure.

- **State Property Agency (Agenzia del Demanio):** It represents the state's ownership and dominion over the port property. It plays a vital role in the process, especially at the end of the concession, when assets built by the concessionaire are transferred back to state ownership. This agency handles the registration of these assets in the Register of State Properties and works closely with regional and local authorities.
- **Customs Authorities:** Given the nature of port operations, customs authorities are integral stakeholders. They are responsible for regulating the import and export of goods, ensuring compliance with customs laws, and collecting duties. Cooperation with customs is essential to streamline trade within the port.
- **Municipal and Regional Authorities:** Local and regional governments are involved in urban planning, landscape preservation, and permitting. Their role is particularly significant when projects impact the surrounding environment or require zoning changes.
- **Fire Department (Vigili del Fuoco):** It ensures fire safety and emergency preparedness within the port. Compliance with fire safety regulations is paramount for protecting assets and personnel.
- **Harbor Master's Office (Capitaneria di Porto):** This office is responsible for maritime safety, navigation, and compliance with maritime regulations. Its role is critical in maintaining port security and safeguarding navigation within the port waters.
- **Other Relevant Authorities:** Other authorities may come into play depending on the specific nature of the concession or proposed activities. For instance, if a concessionaire plans to install photovoltaic panels, it must engage with relevant energy agencies. Environmental cleanup or remediation may require approval from the Ministry of Environment.
- **Private Stakeholders:** While primarily engaging with public entities, the PA also considers the interests of private stakeholders. Private individuals and businesses can voice concerns or provide feedback during the public consultation and notification period. Private interests are assessed during the application and evaluation phases of the concession process.
- **Port Committee (Comitato Portuale):** It is a forum for deliberating concession approvals. It involves a balancing act of interests from various stakeholders, both public and private. During committee meetings, stakeholders like the Capitaneria, Customs,

and others may provide specific requirements that must be incorporated into the concession contract.

Structuring seaport concession contracts involves almost all stakeholders with distinct roles and responsibilities. The PA strives to balance these interests while ensuring the port's operations align with regulatory and environmental standards. Public input and scrutiny shape these contracts, contributing to a transparent and accountable concession process.

The Italian Navigation Code is the guiding principle for assigning a seaport concession. It mandates the selection of concessionaires based on their contribution to the port's value and the broader public interest. Moreover, when faced with competing applicants of equal merit, the PA resorts to auctions as a transparent mechanism to determine the most suitable candidate.

Participant 2: “The navigation code states that we have to choose who gives more value to the port, who gives the greater public interest. In the event of a tie, we have to hold an auction.”

A striking example of this value-driven approach is allocating warehouse spaces, particularly those designated for coffee storage. When multiple private entities have expressed interest in similar warehouse facilities, such as multi-story warehouses, the PA introduces a competitive element through auctions. This method ensures equitable resource distribution and maximises lease agreement financial returns.

The complex nature of port management is underscored by the multifaceted legal and logistical considerations it entails. Unlike standard contract scenarios, port management, including demesne rights and maritime law, allows for varying interpretations and perspectives. Even among colleagues from different ports, diverse viewpoints may exist regarding the optimal approach to managing these intricacies.

In conclusion, the PA's value creation strategies are deeply rooted in the nuanced art of balancing stakeholder interests, as expressed in interviews. Whether through transparent auctions for resource allocation or thoughtful consideration of the multifaceted demesne and maritime legal landscape, the primary focus remains the enhancement of the public interest and

the overall functionality of the port. This holistic approach maximises value while stakeholders' diverse needs and demands are met.

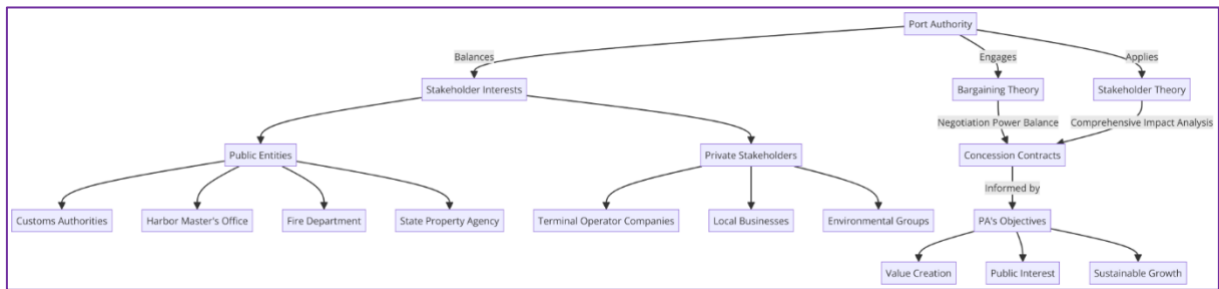
Aware of the existence of a network of stakeholders with diverse interests, goals, and concerns, PA decision-makers can address the limitations of the Bargaining Theory and consider multiple aspects:

- Firstly, the Stakeholder theory emphasises identifying and engaging relevant stakeholders in decision-making processes. It acknowledges that port operations have broader impacts beyond the PA and TOCs. Engaging stakeholders such as local communities, labour unions, and environmental organisations allows for a more comprehensive understanding of the potential impacts and benefits of the concession contract.
- Secondly, the Stakeholder theory lets the PA consider multiple objectives and trade-offs. It provides a framework for systematically analysing and prioritising goals, such as social welfare, throughput benefits, and environmental sustainability while considering potential exchanges between them. This holistic approach allows for a balanced decision-making process that aligns with the broader societal context.
- Thirdly, the Stakeholder theory encourages the PA to adopt a long-term perspective and consider the sustainability of the port logistics system. It emphasises the importance of sustainable growth, infrastructure development, and community well-being. By viewing the long-term impacts and benefits of different concession contract parameters, the PA can make informed decisions that promote the port's and its stakeholders' long-term prosperity.

The Stakeholder theory could be an essential tool for PA decision-makers to identify the purpose most likely to maximise the weighted utility of its stakeholders and make them their own.

It could constitute the lens through which the governance of the Port authority could identify the most important objectives of its stakeholders and make them their own to use the best practices identified by the most recent studies on Bargaining Theory and employ them during the negotiations for the granting of seaport concessions and especially when they are subject to variation when the disparity of negotiating power between the granting authority and the concessionaire is reduced.

Figure 8 – Synthesis of Bargaining and Stakeholder Theory within seaports



6.1.3. How does the variable ‘fee’ influence the negotiation and awarding process? Are there other factors which might influence the process?

The role of the fees, or “canoni”, in concession contracts is fundamental in defining the financial interactions between TOCs and PAs: they act as a form of rent that TOCs pay to PAs to use demesne property and port infrastructure, establishing a critical component of concession agreements that facilitate port operation.

Historically, determining demesne fees was a decentralised process, managed on a case-by-case basis by the Intendenza di Finanza, now known as the Agenzia del Demanio, before 1989. This method resulted in a complex and inconsistent fee structure across different ports, posing challenges for PAs and TOCs.

The introduction of a ministerial decree in 1989 marked a pivotal change by establishing minimum fees and limiting the ability of port authorities to reduce these fees, with certain exceptions for sectors like fishing, shipbuilding, and affiliated sports companies. This decree aimed to standardise fee structures across ports, offering some flexibility to port authorities to set fees for terminal operators and create individual fee tables, although practices varied among different authorities.

Participant 2: “As far as terminal operators are concerned, we can increase the fees. Almost all port authorities make tables where they maintain or increase the ministerial fees.”

The Ministry of Infrastructure and Transport now sets these fees based on uniform criteria applicable across all Italian ports. These criteria are designed to ensure consistency in fee structures without tying them to the profitability of individual terminals or their specific locations.

Participant 1: “The fees are set by the Ministry of Transport Infrastructure based on a set of uniform criteria, at least in the guidelines, in all Italian ports and are not linked either to the profitability of the terminal or to the port in which the concession is granted.”

This approach underlines the strategic importance of demesne as an asset, steering clear of a concession system that favours only the highest bidders. Instead, it emphasises the demesne’s role in supporting port development and contributing to the national economy.

Recent legislative changes, including those introduced by Law 118 of 2022, have updated the fee determination guidelines, reflecting policy shifts and priorities within the sector. These changes highlight that the primary motive behind concession fees is not profit generation but rather the fulfilment of strategic and public interests. As the basis of the concession, the demesne is viewed as a strategic asset, with legislative intent focused on the broader economic implications for the port and its contribution to sustaining business operations.

An emphasis is placed on keeping ports operational and competitive, preventing scenarios where competitors might acquire ports with the sole intention of keeping them inactive. This strategic perspective prioritises a vibrant and competitive port ecosystem that serves the larger economy, moving beyond the mere economic value of the concession fees.

Participant 1: “In ports, it is much more important that there are companies that run the port than one that pays me the fee and keeps it closed.”

This aligns the role of fees within concession contracts with broader state interests and the sustainable development of the port industry, ensuring that ports continue to play a crucial role in economic development and infrastructure management.

6.1.3.1. Differentiated tariffs in port concessions: maximizing port flow

Determining the appropriate tariff structure for port concessions is a complex endeavour influenced by numerous factors. It necessitates striking a delicate balance between the interests of the Port Authority, the Terminal Operator Companies, and the broader regional and economic landscape. Here, we explore the rationale behind the differentiation of fees based on the location to which they are applied, drawing insights from interviews.

A tariff's suitability is intricately linked to the port infrastructure's condition and operational requirements. As one interviewee emphasised,

Participant 6: "The most suitable tariff must undoubtedly relate to the state of the structure but also to the operability of the structure itself."

Moreover, tariffs must not remain static; they should undergo periodic assessments and revisions, typically every four or five years. These adjustments should occur while adhering to fixed pricing principles to provide stability. However, they should also account for the current state of infrastructure.

Furthermore, fees should accommodate regional disparities and specific market dynamics. Italian ports serve distinct regions and play unique roles in the national economy, making applying a uniform fee nationwide impractical. Pricing a square meter in a major port like Genoa similarly to a smaller one is unrealistic. To address this, a differentiated approach that considers each port's significance in the national economy is crucial.

Participant 3: "With all due respect, a square metre in the port of Genoa cannot have the same value as a square metre in the port of Ortona, Bari, or Brindisi."

Fees should account for the wider community and economic implications of the port. Ports are more than just fee-generating entities; they serve as drivers of regional economies, job creators, and facilitators of international trade. The focus should shift from the fee itself to the overall contributions made.

Participant 8: “The real added value of a good concession exercise is not the fee, but the amount of business that is supported and can be put into circulation.”

In summary, differentiated tariffs in port concessions are essential to harmonise revenue generation for Port Authorities, incentivise port development, and bolster regional economies. The distinct needs, conditions, and roles of different ports within a country necessitate a nuanced tariff approach that considers the specific context and objectives.

6.1.3.2. Prelude to the introduction of variable fees in seaport concessions

In Italy, the allocation of port terminal concessions is regulated by the 1994 law (Law 84/1994), yet Port Authorities retain some flexibility over setting and determining the fees. However, levying concession fees till 2023 was inefficient and failed to motivate port operators to increase throughput, as already noted in 2009 by Ferrari & Basta; their study proposed a new approach to defining the fee using a price-cap regulation, where the fee is based on the efficiency level of each port terminal.

In the context of authorisation fees under Article 16 of Law 84/1994, which governs business activities in ports, some permissions already incorporated a variable fee component alongside a fixed fee. This variable fee was typically correlated with a company’s annual revenue, featuring a decreasing rate as revenue increases. However, these variable fee rates were relatively modest.

Introducing variable fees in port concessions marked a significant departure from the existing fee structures. However, there was no established framework for variable fees. Nevertheless, interview insights reveal this research’s potential focus areas and direction.

Participant 5: “A fee of five euros per square metre cannot be charged in Palermo and Trieste without even considering whether it is a pile of stones, a modern office, or other structures. In my opinion, the determination of the fees should not be attributed to the Ministry but to each Port Authority through tariffs updated annually based on the ISTAT

price index, with market prices not dating back thirty years and now completely out of date.”

Law No. 118 of 5 August 2022 (Legge annuale per il mercato e la concorrenza 2021), with the aim of promoting the development of competition, amended Article 18 of Law No. 84 of 28 January 1994, providing for the issuance of a subsequent decree of the Minister of Sustainable Infrastructure and Mobility, in concert with the Minister of Economy and Finance, in order to standardise the regulations for the issuance of the concessions referred to in paragraph 1.

With this decree, (Regolamento recante disciplina per il rilascio di concessioni di aree e banchine, 28 dicembre 2022, n. 202) the criteria were defined for:

- the allocation of concessions;
- the identification of the duration of the concessions;
- the exercise of supervisory and control powers by the granting authorities;
- the modalities of renewal and the modalities of transfer of the facilities to the new concessionaire at the end of the concession;
- the identification of the limits of the fees to be paid by the concessionaires;
- the identification of the modalities aimed at guaranteeing the respect of the principle of competition in ports of international and national economic importance identified according to Article 4.

In particular, Article 5 defines the criteria for determining the fee.

Under the new criteria set out in the Regulation issued in 2022, State fees consist of:

- a) A fixed component, established taking into account:
 1. The location, extent and condition, including the existing level of infrastructure, of the area subject to the concession;
 2. The limitations and advantages in the use of the concession deriving from the characteristics of the area referred to in point 1;
 3. The extent of the investments proposed by the concessionaire with the construction of port infrastructure in the area or the modernisation of existing infrastructure;

- b) A variable component, established through the application to the concessionaire's business plan of indicators of the level of productive, energy and environmental efficiency of the activity, as well as the quality of the services offered also in terms of promotion and development of intermodality; this component is subject to periodic updating.

The introduction of variable fees is expected to be closely tied to a company's annual revenue. This suggests the variable fee will increase as a company's revenue grows. The variable fee structure will likely involve declining rates, encouraging businesses to scale up their operations within the port.

One potential challenge associated with variable fees is using revenue rather than profits as a basis. Linking fees to profits might incentivise companies to manipulate their financial statements to reduce reported profits, whereas using revenue as a basis becomes a cost item that can be more transparently traced in a company's financial reports.

The shift towards incorporating variable fees represents a substantial evolution in fee structures within the port industry, inviting further research to explore its implications and effectiveness.

In summary, introducing variable fees in port concessions is a novel development that promises to enhance fee structures, aligning them more closely with a company's performance and encouraging growth. As this transition unfolds, ongoing research and analysis will be essential to fine-tune the approach and ensure its effectiveness in the complex world of port concessions.

6.1.3.3. Variable fees in seaport concessions: Balancing performance and revenue

The incorporation of variable fees within port concession contracts from 2023 introduces a dynamic element to the revenue model, aligning it with the performance and efficiency of Terminal Operator Companies (TOCs). Here, we delve into how these variable fees are integrated into the concession framework, supported by interview insights.

Traditionally, concession fees consisted of fixed amounts established by the relevant authorities. However, the recent decree introduces a notable shift.

Participant 2: “The fee will consist of a fixed and a variable component.”

This marks a departure from the traditional fixed fee structure.

The variable component of these fees is tethered to performance indicators such as TEUs handled or other criteria. This innovation brings a level of flexibility and adaptability to the concession model. Each port authority is tasked with regulating these variable components independently, allowing for a customised approach.

Participant 2: “The variable part each Port Authority will have to determine in our regulations; there is, however, much autonomy: you will never find identical fees between the port of Genoa and Trieste.”

The central question revolves around whether this new fee structure, anchored in performance indicators, can optimise cargo flow. While it holds potential benefits, several factors come into play.

In some northern ports, fees increase with the terminal’s size and performance, indicating a different perspective on variable fees. Conversely, in Italy, there seems to be a predisposition to reward increased traffic with fee discounts.

Participant 2: “In Northern European ports, even the fees increase by the size of the terminal, i.e. the bigger one is, the more one pays, so the better you perform, the more you pay. The thing can also be reversed: we in Italy, I think, are more inclined to reward those who bring more traffic with a discount on the fee, but you can also see it differently.

If you bring less traffic, it means that maybe you are smaller, that you have a terminal that is also smaller in terms of square metres or infrastructure, maybe you are not served by the railway, and so you should pay less, but that is a political choice, not only economic but also political.”

This approach aims to incentivise higher cargo throughput. However, the ultimate choice between these approaches is yet to be determined. The recent decree provides room for interpretation, and decisions might differ from one port authority to another.

Participant 2: “I do not know how the port authorities will react on the variable part in Italy. There will be those who will prefer to reward the increase in traffic and those who will do precisely the opposite, as in northern Europe; the more traffic you bring, the more you pay because it means you can pay a higher fee.”

The impact of variable components on operators’ competitiveness is also a significant consideration. In Trieste, concessions with variable components were linked to substantial infrastructure development undertaken by TOCs. These components were absorbed within the overall fee structure.

Participant 10: “The fee collected was not the focal point; the point was to get major works built (by the TOCs) instead of the state.”

The key takeaway is that the role of variable fees can vary depending on the Port Authority’s goals. While revenue generation remains critical, Authorities may prioritise infrastructure development and increased vessel traffic.

Participant 7: “The interest is not to make cash but to see works realised and, above all, to increase the number of ships in the port.”

Introducing variable fees in port concessions reflects an evolving approach that balances financial sustainability with the drive for enhanced port performance and efficiency. It underscores the adaptability of the concession model to align with broader economic objectives and operational realities within each port.

6.1.3.4. Exploring revenue sharing schemes in seaport concessions

The concept of revenue sharing in port concessions offers a sensible approach to adapt to the diverse nature of cargo handled within ports. However, its implementation can vary significantly based on the types of goods and industries involved. Let us delve into this aspect further, drawing from the insights provided in interviews.

One fundamental consideration in revenue-sharing schemes is the differentiation of fees based on the specific cargo types or sectors.

Participant 9: “I would see the marginality of individual sectors and impute a variable fee differentially according to the margins.”

This approach acknowledges that different cargo categories yield varying profit margins.

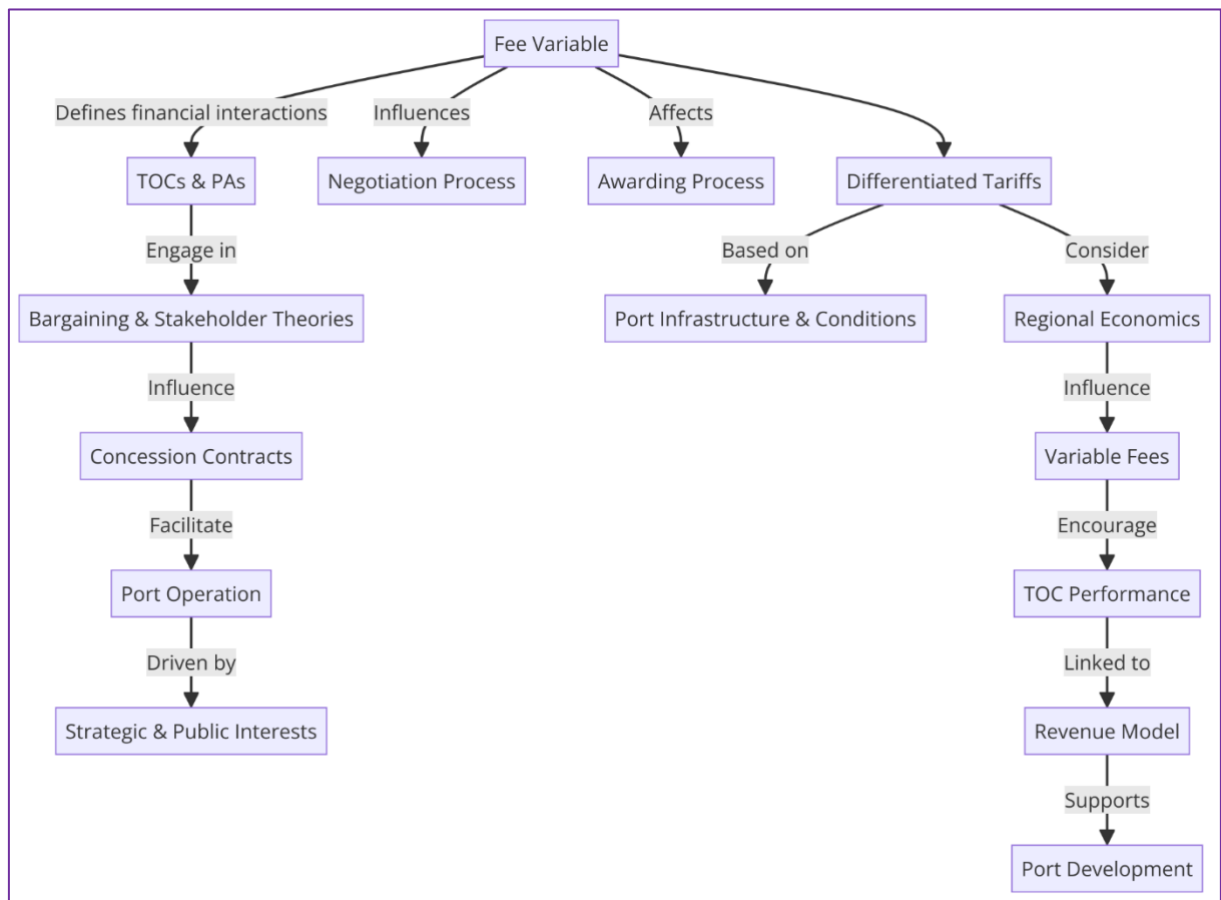
Terminal operations often deal with lower-margin goods, while containers, for example, tend to generate higher revenue. Consequently, equating one million euros generated by a Ro-Ro terminal to one million euros from a container terminal might not be accurate, as profit margins differ significantly.

Port authorities could consider applying revenue-sharing schemes based on cargo categories or business types to address this issue effectively. For instance, due to their differing profit margins, rinfuse (bulk cargo) could have a distinct fee structure compared to container handling operations.

By adopting a nuanced approach that considers the profitability of individual sectors or cargo types, port authorities can better align revenue-sharing schemes with the economic realities of each segment. This tailored approach ensures a fair distribution of costs and encourages port efficiency and competitiveness across various industries.

In summary, revenue-sharing schemes present a flexible and equitable way of structuring port concessions fees. However, their success lies in adapting the fee structure according to the profitability of cargo categories or business types, thereby fostering a conducive environment for diverse industries within the port ecosystem.

Figure 9 – The influence of a variable fee



6.2. Discussion of the findings

In this subchapter, these findings will be supported by the theory. This section will discuss the findings along with the research questions mentioned in previous chapters.:

- 1) How can optimal concession contracts be determined, considering factors beyond revenue maximisation?
- 2) How can a synthesis of the Bargaining Theory and the Stakeholder Theory serve as a valuable framework for analysing and defining optimal concession contracts that align the diverse interests and objectives of the involved parties in a mutually beneficial manner?
- 3) To what extent does the variable ‘fee’ influence the negotiation and awarding process within the framework that combines the Bargaining Theory and the Stakeholder Theory, and should other variables be considered more suitable alternatives?

6.2.1. How can optimal concession contracts be determined, considering factors beyond revenue maximisation?

This is the central theme of the research.

First, we must remember that in seaport concession negotiations, there is a balance of power between the principal parties: on one side stands the entrepreneur eager to conduct business, and on the other, the PA.

The balance, however, is not always the same; it can change over time depending on the time and context of the negotiation.

6.2.1.1. The balance of power between the two parties: The disparity in favour of the PA in the case of the first concession

While the dynamics may not always be uniform, the fundamental structure involves a conceding authority issuing a concession to an interested party, often referred to as the concessionaire. The PA has a certain amount of discretion in selecting the concessionaire, a process overseen by the Port Management Committee for multi-year concessions.

This underscores the vital role of the Port Authority in determining the prevailing public interest.

Participant 2: “While the concessionaire actively participates in the process at all stages, the ultimate decision regarding the most deserving candidate rests with the Port Authority: not by chance it is called a concession. The President (of the Port Authority) concedes. He does not conclude a contract where the synallagmatic relationship is perfect between the parties. There is always the statutory requirement on the part of the port authority to choose the overriding public interest.”

The concession contract shapes the fundamental commitment between the Port Authority and the concessionaire. It grants exclusive usage of demesne for a specified number of years, aligning with the concessionaire’s financial and operational plans. The contract encompasses various aspects, such as maintenance, insurance, compliance with the master plan, and

restrictions on certain activities. Clarity on permissible operations and adherence to the master plan are paramount to prevent conflicts and ensure the concessionaire's operations contribute positively to the port's growth and overall public welfare.

6.2.1.2. The dynamic of power changes in the case of concession contract variation

Negotiation comes into sharper focus when considering the extensions of existing concession contracts. Changes in investments or alterations to port infrastructure often prompt this process.

Power dynamics within the context of concession contracts can undergo significant shifts when discussing extending the concession duration. Typically, concession contracts are structured with varying durations and economic obligations, depending on the scale of investments the concessionaire commits. Notably, the improvements made by the concessionaire often become part of the state's assets upon the contract's expiration.

In Italy, it is worth noting that very few concessions are put out for competitive bids because, one way or another, appealing concessions tend to be renewed or extended during their term.

Participant 3: "It has to be said that in Italy today, almost nothing goes out to tender because, in one way or another, the attractive concessions are always renewed or at least extended over time, and I must also say fortunately because no one would invest in millions and millions of equipment thinking that after ten years it has to go."

Extending the concession duration is typically advantageous for a concessionaire as it allows them to utilise the demesne for a more extended period before it reverts to state ownership at the end of the concession period. During the concession, the concessionaire has a form of ownership over the demesne, often referred to as a surface right, which grants them the right to build and operate on the demesne. However, it is essential to clarify that private ownership of the land or property is not permissible under Italian law. All improvements and constructions become the state's property upon the contract's expiration.

Throughout the concession, the concessionaire can mortgage the improvements they make during the period. Still, it is essential to note that they lose any claims to private ownership of

those improvements once the concession contract expires. This aspect can be challenging for some who desire long-term surface rights or private ownership of constructed infrastructure. However, these limitations are rooted in Italian demesne law.

This legal framework, rooted in Italian demesne law, is challenging for some, as it restricts property rights and long-term ownership. Nevertheless, it underlines the intricacies involved in negotiating concession extensions, wherein the interests of both parties must be carefully balanced to ensure the port's sustainable development and the concessionaire's investment security.

The power dynamics in concession contract negotiations can change significantly when discussions revolve around extending the concession duration. Concessionaires often seek to maximise the length of the concession to optimise the utility of their investments and operations on the demesne before it reverts to state ownership.

6.2.2. Limits of the Bargaining Theory in seaport concession contracts negotiation.

PAs have multiple objectives other than revenue maximisation; in such cases, the bargaining process becomes more complex as it involves negotiating over various dimensions, not just financial terms.

However, as the PA, influenced by the purposes of its stakeholders, does not seek revenue maximisation, the Bargaining theory has several limitations:

- Firstly, it often fails to consider non-financial factors crucial to the PA's objectives. While financial outcomes are typically emphasised, factors such as job creation, environmental sustainability, community impact, and regional development may play significant roles. When the goal is to maximise social welfare, there is a considerable departure from Chen and Liu (2015) and Liu et al. (2018).
- Secondly, the Bargaining theory overlooks the involvement of various stakeholders in port operations. TOCs and PAs are not the sole stakeholders in the port ecosystem. Local communities, labour unions, environmental organisations, and governmental bodies also have vested interests. Ignoring their perspectives and interests may lead to suboptimal concession contract decisions. Han et al. (2018) suggest incorporating

stakeholder preferences and values to determine concession contracts to achieve balanced outcomes.

- Thirdly, the Bargaining theory often prioritises short-term financial gains without adequately considering the long-term implications of concession contracts. Immediate revenue maximisation may overshadow considerations such as sustainable growth, infrastructure development, and attracting long-term investments.

With its primary focus on economic outcomes, the Bargaining theory sometimes fails to explain the rationale behind decisions that transcend financial considerations comprehensively.

This is where the Stakeholder theory, introduced by R. Edward Freeman, becomes pivotal.

6.3. Summary of the process

The discussion extends to the analytical approach utilised to determine the clauses within a seaport concession agreement between a Port Authority, the landlord, and a Terminal Operator Company. It addresses this process's genesis and subsequent development and situates it in expansive contexts. Figure 7 illustrates, through graphical means, the complex methodology involved in identifying the most effective clauses of seaport concession contracts, including their various iterations, alongside the interconnected stages of this process. This illustration underscores the preliminary phase, during which the Port Authority must evaluate the breadth of a seaport concession (Phase 1). This is succeeded by delineating PA's stakeholder objectives, facilitated by applying the Stakeholder Theory (Phase 2), and concludes with implementing the most favourable resolution, as indicated by best practices identified through academic research employing the Bargaining Theory to infer optimal concession agreements for landlord ports. This concluding phase secures the maximisation of the Port Authority's utility, a process that incorporates evaluating its objectives and those of its stakeholders (Phase 3).

Table 1 – Summary of the process

Phase	Objective	Activities	Insights
Phase 1: Understanding Concession Dynamics	To assess the landscape of concession contracts, focusing on the complex interplay between revenue maximization and broader considerations.	Examination of the port logistics ecosystem and the pivotal role of concession contracts. - Identification of the primary stakeholders (PAs and TOCs) and their objectives.	Concession contracts are foundational agreements dictating operations and collaboration between Port Authorities and Terminal Operator Companies. - The necessity of adapting contracts to accommodate changing trade patterns, technological advancements, and environmental goals.
Phase 2: Stakeholder Engagement and Synthesis	To merge theoretical insights with empirical findings from interviews, highlighting the importance of balancing economic, social, and environmental objectives.	Detailed stakeholder analysis, including the roles of PAs in overseeing port infrastructure and TOCs in managing terminal operations. - Evaluation of stakeholder objectives, focusing on areas beyond financial returns, such as sustainability and public welfare.	PAs prioritize public interest, infrastructure sustainability, and strategic development goals, whereas TOCs focus on efficiency and profitability. - The alignment of concession contract terms with broader values and visions is crucial for sustainable port operations.
Phase 3: Contractual Framework and Negotiation	To apply a synthesized Bargaining and Stakeholder Theories framework in negotiating and defining optimal concession contracts.	Developing concession contract clauses that reflect a comprehensive understanding of the stakeholder objectives. - Negotiating contract terms that ensure mutual benefits for PAs, TOCs, and other stakeholders, emphasising flexibility to adapt to future challenges.	The importance of crafting contracts that support long-term investments, operational efficiency, environmental sustainability, and the surrounding community's well-being. - The need for a nuanced negotiation process considering financial, strategic, and societal objectives to ensure the port's competitiveness and sustainability.

7. Conclusion

This chapter completes the thesis, answering the research questions in chapter one. Furthermore, the chapter includes a summary, the theoretical contribution, the managerial implication and the limitations of the thesis, and some directions for future research.

7.1. Summary

In this master's thesis, we delve into the intricate dynamics between Port Authorities and Terminal Operating Companies within seaports and global trade. Central to our investigation is the pivotal research question: "How can optimal concession contracts be determined, considering factors beyond revenue maximisation?" This question propels our exploration beyond traditional financial metrics, urging us to consider a more comprehensive perspective that includes social welfare, throughput benefits, and environmental sustainability.

Our approach integrates critical concepts from Bargaining theory and Stakeholder theory, offering a nuanced understanding of the diverse interests and concerns of the stakeholders involved. This comprehensive perspective is crucial for expanding the decision-making framework of subjects contracting in seaport concessions, particularly of PAs, enabling them to incorporate a broader range of considerations in their strategies.

This thesis outlines the theoretical foundations, delves into the specific context of port operations, and explicates the methodological approach underpinning our research. We scrutinise seaport bargaining processes, illuminating the strengths and limitations inherent in bargaining theory. This examination underscores adopting an integrated approach to devise optimal concession contracts.

The thesis highlights the imperative of broader negotiation objectives and advocates for a composite approach that synergises Bargaining and Stakeholder theories. This proposed framework is designed to enhance the effectiveness of negotiations between PAs and TOCs, ensuring that a spectrum of economic, social, and environmental factors is judiciously considered.

This document presents its findings and discusses their implications for port management through an exhaustive literature review, a structured theoretical framework, and a rigorous methodology. The insights from this research could contribute to a better understanding of concession contract negotiations and set the stage for more inclusive and sustainable decision-making in port management.

7.2. Theoretical contribution

Traditionally rooted in economics, the Bargaining theory offers a robust framework for analysing and predicting negotiation outcomes. It has been instrumental in understanding the dynamics of benefit distribution, the intricacies of bargaining power, and the determinants of negotiated results. Its practical applicability extends beyond theoretical constructs, providing valuable insights into real-world negotiation scenarios.

The Bargaining Theory assumes that the parties involved in a contract seek to maximise their utility. In this context, utility refers to the satisfaction or value each party gains from the agreement. The core aim of applying bargaining theory in contract negotiations is to ensure that the agreement reached is better for each party than their respective Best Alternative To a Negotiated Agreement (BATNA), maximising their utility from the contract.

Bargaining theory significantly underscores utility optimisation for all parties involved in contract negotiations, emphasising the initial phase of identifying interests and priorities. This foundational stage is crucial as it encourages negotiators to articulate and share their core interests and priorities, setting the stage for a negotiation process to create value and devise solutions that enhance utility for all participants. By establishing a clear understanding of what each party values most, the negotiation can be directed towards outcomes that maximise overall satisfaction and benefits, thereby ensuring that the process is efficient and effective in meeting the needs of all involved.

While the first phase is pivotal, subsequent steps in the bargaining process play supportive, though less emphasised, roles in refining and achieving the goal of reaching mutually beneficial agreements that reflect the best possible outcome for each party.

The literature concerning the application of bargaining theory to seaports is not extensive. Except for two older articles (Notteboom, 2006; Saeed & Larson, 2010), most studies are particularly recent and concentrated within the last decade. Chen and Liu (2014; 2015), Chen, Lin, and Liu (2017), Liu et al. (2018), and Zhou and Kap (2019) have focused on maximising fee revenues, centred on the “fee” variable (see Appendix).

Table 2 – Optimal concession contracts under different Port Authority goals

Studies	Port Authority goals	Optimal contracts
Saeed & Larson (2010)	Maximise profits	Two-part tariff
Chen & Liu (2014)	Maximise fee revenues	Two-part tariff or unit-fee
Chen & Liu (2015)	Maximise throughput	Fixed fee
Chen & Liu (2017)	Maximise fee revenues	Two-part tariff or unit-fee
Liu et al. (2018)	Maximise fee revenues under minimum throughput requirements	Unit-fee
Liu et al. (2018)	Maximise the weighted sum of fee revenues and throughput benefits	Two-part tariff, unit fee, or fixed fee
Liu et al. (2018)	Maximise social welfare	Subsidising operators
Yanjie and Kap (2019)	Maximise fee revenues	Revenue-sharing scheme with an all-unit quantity discount
This study	Maximise throughput	Revenue-sharing scheme with an all-unit quantity discount or Subsidising operators

This thesis argues that such theories may oversimplify the complex realities of port management. PAs have multiple objectives other than revenue maximisation; in such cases, the bargaining process becomes more complex as it involves negotiating over various dimensions, not just financial terms.

However, as the PA, influenced by the purposes of its stakeholders, does not seek revenue maximisation, the Bargaining theory has diverse limitations:

- First, there is a notable oversight of non-monetary elements essential to PAs' objectives. While the focus often lies on financial results, aspects like employment generation, environmental protection, impacts on local communities, and contributions to regional growth are also critical. These factors are crucial for enhancing social well-being, marking a significant shift from the perspectives Chen and Liu (2015) and Liu et al. (2018) presented.
- Secondly, the Bargaining theory tends to overlook the role that a diverse group of stakeholders plays in the operations of ports. TOCs and PAs represent just a fraction of the parties interested in port activities. The wider port community includes residents, labour unions, environmental groups, and government entities, all of whom have their stakes. Overlooking these groups' views and needs can result in decisions regarding concession contracts that are less than ideal. Han et al. (2018) advocate for the integration of the preferences and values of these stakeholders in the determination of concession contracts to ensure more equitable outcomes.
- Thirdly, the Bargaining theory often emphasizes immediate financial benefits, neglecting the future consequences of concession agreements. The quest for quick revenue gains can obscure the need for sustainable development, enhancement of infrastructure, and drawing in enduring investments.

This gap is significantly addressed by the Stakeholder theory, introduced by R. Edward Freeman, underscoring the importance of considering a broader array of interests in decision-making processes.

The Stakeholder theory challenges the narrow focus on utility maximisation, advocating for a broader perspective that acknowledges various stakeholders' diverse interests and motivations. It emphasises the importance of ethical considerations, personal aspirations, and the dynamics of organisational relationships, advocating for a more inclusive approach to decision-making, emphasising transparency, accountability, and active stakeholder participation.

Aware of the existence of a network of stakeholders with diverse interests, goals, and concerns, PA decision-makers can address the limitations of bargaining theory and consider multiple aspects:

- Firstly, the Stakeholder theory emphasises identifying and engaging relevant stakeholders in decision-making processes. It acknowledges that port operations have broader impacts beyond the PA and TOCs. Engaging stakeholders such as local communities, labour unions, and environmental organisations allows for a more comprehensive understanding of the potential impacts and benefits of the concession contract.
- Secondly, the Stakeholder theory lets the PA consider multiple objectives and trade-offs. It provides a framework for systematically analysing and prioritising goals, such as social welfare, throughput benefits, and environmental sustainability while considering potential exchanges between them. This comprehensive approach allows for a balanced decision-making process that aligns with the broader societal context.
- Thirdly, the Stakeholder theory encourages the PA to adopt a long-term perspective and consider the sustainability of the port system. It emphasises the importance of sustainable growth, infrastructure development, and community well-being. By viewing the long-term impacts and benefits of different concession contract parameters, the PA can make informed decisions that promote the port's long-term prosperity and its stakeholders. The Stakeholder theory could be an essential tool for PA decision-makers to identify the purpose most likely to maximise the weighted utility of its stakeholders and make them their own.

This study's theoretical contribution lies in its approach to integrating these two theories. This research illuminates the multifaceted motivations and interests that drive entities in negotiation scenarios, particularly in the complex environment of port concession contracts. This integrated perspective offers a more nuanced understanding of negotiation dynamics, mainly when Port authorities prioritise objectives beyond mere revenue generation, such as social welfare, environmental sustainability, and community relations.

It provides a new lens through which we can better understand the complexities of negotiations where the interplay of economic incentives and broader stakeholder interests is paramount. This approach could fill a gap in the existing literature, setting a new direction for future research in studying the dynamics not only of port concessions but, more generally, of a full range of public concessions in the fields of transport, health, education and welfare services, where multiple objectives and diverse stakeholder interests converge.

7.3. The research gap

Despite the potential benefits of applying stakeholder theory in determining concession contracts, there is a research gap in understanding its practical implications and implementation challenges in port logistics. As we know, only one paper has studied the structuring of optimal concession contracts in cases where PAs seek objectives other than maximising revenues. Han, Chen and Liu (2018) have explored how a PA's optimal concession contracts are affected by its different goals. The authors consider two goals: maximising the weighted sum of fee revenues and throughput benefits and maximising social welfare. They construct a sequential game for each objective to characterise the interactions between two TOCs and the PA. The contract types considered are fixed-fee, unit-fee, and two-part tariff.

Their findings differ from those of previous works in several ways. First, they find that when the PA tries to maximise the weighted sum of fee revenues and throughput benefits, the optimal contract can be any of the three types, depending on the weight assigned to fee revenues. This contrasts with previous works (Chen & Liu, 2014; 2015), which have found that the fixed-fee contract is always optimal when fee revenues are given a small weight and that either the unit fee or the two-part tariff contract is optimal when fee revenues are given considerable weight.

They generalise their previous works by allowing PAs to maximise the weighted sum of fee revenues and throughput benefits when designing concession contracts. The throughput benefits refer to the monetary values brought by throughput to the port area, such as increased incomes for the workers, truck drivers, and shop owners in the port area and the hinterland and the higher consumer utility from consuming more cargo. This model is suitable for ports managed by (local) governments alone or jointly controlled by governments and some private companies.

Finally, Han et al. (2018) find that the impact of throughput benefits on the PA's choice of concession contract is significant. When throughput benefits are considered, the PA is more likely to choose a contract that encourages TOCs to invest in capacity. When ports are (partially) owned by governments, the authors find that the PA's goal is to maximise social welfare, which consists of consumers' surpluses and profits of TOCs.

The second objective was thus to investigate optimal concession contracts when maximising social welfare, which is the PAs' goal. Under social welfare maximisation, Han et al., Chen and Liu analysed the paper of Fu and Zhang (2010), which studied concession revenue sharing between airports and airlines and determined that the optimal contract is to subsidise the TOCs. This contrasts with previous works, which found that the PA always charges the TOCs a fee.

This result is new and consistent with the real-world observations for some European ports (Notteboom, 2006). Third, different from Chen and Liu (2015) and Liu et al. (2018), Han, Chen and Liu put throughput benefits directly into PAs' objective functions, combine them with fee revenues, and derive optimal concession contracts.

Finally, Han, Chen and Liu's findings have several policy implications. First, they suggest that PAs consider fee revenues and throughput benefits when choosing a concession contract. Second, they indicate that PAs may want to subsidise TOCs if their goal is to maximise social welfare. Finally, they suggest that the impact of throughput benefits on the PA's choice of concession contract should be considered when designing port policy.

Their work has emphasised the importance of tailoring contract designs to align with PAs' specific goals, whether they are maximising revenue, throughput, or a combination of both.

7.4. The importance of the combined use of Bargaining Theory and Stakeholder Theory in the PAs' approach to seaport concessions

Although the two theories have several points in common, they differ in nature and purpose. Our approach is intended to use the former pragmatically as a toolkit for PA decision-makers to identify the priority objectives of its most important stakeholders.

Having done so, the PA may decide to adopt either single-objective bargaining or multi-objective bargaining, depending on the characteristics of the concession and its bargaining power at the time of negotiation, which may be different at the time of initial award rather than at the time of contract modifications.

This approach may allow us to overcome the limitations of bargaining theory in identifying optimal maritime port concessions by adopting the best fees determined by the most recent doctrine.

This thesis tries to mark a theoretical advancement in port management and seaport concession contract negotiations by synergising two pivotal theories: Bargaining and Stakeholder theories. The core idea driving this study was to explore how these two frameworks can be synergistically used to address gaps in understanding the negotiation processes, particularly in contexts where one of the subjects is not driven solely by profit maximisation.

PAs should use the Stakeholder Theory to define their objectives by considering their stakeholders' interests. Then, they should use the Bargain Theory to maximise their expected utility, as best identified by the predefined objectives.

7.5. Managerial Implications

This thesis's managerial implications are essential for Terminal Operating Companies but crucial for Port Authorities.

The study provides a strategic blueprint for navigating negotiations that transcend traditional revenue-maximization goals by advocating for an integrated approach that marries bargaining theory with stakeholder theory. It underscores the critical need for PAs to embrace a broader spectrum of objectives during the negotiation process, including but not limited to social welfare, throughput benefits, and environmental sustainability.

Through its principles and strategies, the Bargaining theory aims to make the negotiation process more efficient and effective, ensuring that parties leave the negotiation table with a contract that reflects their best possible agreement. It provides a guide for navigating the complexities of contract negotiations, helping parties communicate their needs, understand the other party's perspective, and work collaboratively towards a mutually beneficial agreement.

For PAs, this study highlights the importance of designing concession contracts that are not solely focused on upfront fees or fixed rental payments but are dynamically structured to adapt to volume fluctuations and market conditions. This ensures that PAs can secure a consistent

revenue stream, which is crucial for funding port infrastructure development, maintenance, and other critical operations. Moreover, by incorporating volume-based incentives, PAs can encourage TOCs to invest in efficiency improvements and innovations that drive higher throughput, enhancing the overall competitiveness and attractiveness of the port.

For TOCs, the managerial implications revolve around the necessity to negotiate with a clear understanding of the PAs' broader objectives. By acknowledging the PAs' dual role in revenue generation and public service provision, TOCs can better position their proposals in a way that aligns with these objectives. This may include commitments to infrastructure investments, community engagement programs, and environmental sustainability practices that contribute to economic development and social welfare beyond the immediate confines of port operations.

Furthermore, the study's findings underscore the significance of risk-sharing mechanisms and flexible contractual clauses that protect the interests of both PAs and TOCs. These provisions ensure long-term sustainability and adaptability to changing market dynamics, regulatory environments, and global trade patterns.

In conclusion, the insights garnered from this study offer a comprehensive framework for PAs and TOCs to design and negotiate concession contracts that are economically efficient, fair, socially responsible, and environmentally sustainable. By adopting the integrated approach proposed in this study, PAs and TOCs can forge partnerships that yield mutually beneficial outcomes, setting a new benchmark for excellence in port management and operations.

7.6. The best practices

One of the core insights of this study is the proposal to introduce concession contracts with revenue-sharing schemes accompanied by a discount for all units, as illuminated by Li Zhou's research. This approach has been shown to significantly enhance the revenue streams for PAs while concurrently boosting the volume of container flow through the ports. Such a strategy aligns with the profit-maximization objectives of TOCs. It addresses the PAs' mandate to maximise the value of state property, embodying a symbiotic relationship between economic viability and public interest.

7.7. Limitations

The exploration of managerial implications within this thesis, while providing valuable insights into the negotiation dynamics between Port Authorities (PAs) and Terminal Operating Companies (TOCs), is subject to several limitations that merit consideration. Among these, a critical limitation stems from the study conducted under a case study analysis of the Port of Trieste in Italy. This specific focus inherently bounds the research findings to the national context of Italy, where legal, economic, and socio-political factors influencing port operations and concession negotiations may differ significantly from those in other countries.

Firstly, the thesis's integration of bargaining theory and stakeholder theory to understand negotiation processes in seaport concession contracts offers a novel perspective but is limited by its theoretical underpinnings. The assumptions of these theories and the model's application mainly reflect the Italian context, as demonstrated in the Port of Trieste case study. While insightful, the practical applicability and generalizability of the proposed models may vary across different national and jurisdictional contexts, suggesting that the findings might not be universally applicable.

Secondly, the advocacy for concession contracts with revenue-sharing schemes, highlighted by the study based on Li Zhou's research, is supported by experimental numerical results. Although these results point towards potential benefits in revenue maximisation and increased container flow, they may not fully encapsulate the operational complexities and unpredictabilities of ports operating under different regulatory and market conditions.

Additionally, the thesis's emphasis on broader objectives beyond revenue maximisation introduces complexity in success measurement and evaluation, a challenge that the unique stakeholder landscape and regulatory environment of the Port of Trieste may compound. The specificity of this case study to the Italian context underscores the need for caution in extrapolating the findings to other settings without considering the local nuances.

While comprehensive, the study's focus on stakeholder theory may not address the practical challenges of stakeholder engagement and management in ports with different governance structures or stakeholder configurations. This limitation is particularly relevant given the diverse operational and regulatory frameworks characterising the global port industry.

Lastly, the assumption that PAs and TOCs can align their strategies with the proposed integrated approach may not hold in environments with different organisational constraints, priorities, and capacities. This is especially pertinent when considering the application of the study's findings beyond the Port of Trieste, where local conditions significantly influence negotiation dynamics and outcomes.

In sum, while this thesis contributes significant insights into the negotiation dynamics of seaport concession contracts, the specific focus on the Port of Trieste and the Italian context highlights the importance of considering local specificities in applying the findings. These limitations not only caution against the broad generalisation of the results but also underscore the vital need for future research that explores the applicability of the proposed frameworks in diverse national and port contexts, addressing the identified gaps and refining the theoretical models to enhance their global relevance and applicability.

7.8. Directions for Future Research

Building on the insights and findings from this master thesis, several compelling directions for future research can further our understanding of seaport concession contracts, particularly in the interplay between institutional contexts and the structuring of these agreements. The study has underscored the significant influence of the institutional environment on the negotiation and execution of concession contracts between Port Authorities and Terminal Operating Companies. As such, a deeper exploration into how different institutional frameworks across various countries shape these contracts presents a promising avenue for scholarly inquiry.

One critical area for future research is examining the implications of new regulations concerning concession contracts in Italy. Given the dynamic nature of regulatory landscapes, understanding how these changes will affect the negotiation strategies, contractual structures, and operational outcomes for PAs and TOCs is crucial. This research could provide valuable insights into the effectiveness of regulatory reforms in achieving their intended objectives, such as enhanced efficiency, increased competitiveness, and improved environmental sustainability of port operations.

Furthermore, introducing a variable fee based on the port's throughput, as anticipated in forthcoming regulations, represents a significant shift in the economic model underpinning

concession contracts. Future research could investigate the impacts of this variable fee structure on port management strategies, investment decisions by TOCs, and the overall financial sustainability of ports. Analysing this approach's potential benefits and drawbacks compared to traditional fixed-fee models could offer practical guidance for policymakers and port managers aiming to optimise economic outcomes while balancing social and environmental considerations.

Additionally, comparative studies across different national contexts could illuminate how institutional differences influence the design and effectiveness of concession contracts. Such research could involve cross-country analyses identifying best practices and innovative approaches to structuring concession agreements, potentially informing the port sector's policy development and strategic decision-making.

In conclusion, the directions for future research identified in this thesis build on its foundational insights and open new pathways for inquiry into the complex and evolving landscape of seaport concession contracts. By addressing these areas, future studies can contribute to developing more effective, sustainable, and equitable strategies for port management and governance in the face of changing regulatory environments and the ongoing digital transformation of the maritime industry.

However, and this could be even more important, this type of combined approach could be studied in all those cases where a public authority has to manage the concession of a public service or good to a private party. One thinks of the public transport sector, the motorway network, health, school, sports or welfare services. However, the reasoning could be even more extensive.

The use of public goods and the provision of essential services are not subject to a profit-maximising rationale; the state must be able to guarantee universal access to them; when it contracts them out to private entities, the determination of the optimal contractual conditions should maximise the benefit for the granting body and the private concessionaire.

This approach could help the public decision-maker obtain the best possible result while considering its stakeholders' interests.

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9. Appendix

9.1. Bargaining in seaports

By merging the insights of bargain theory and stakeholder theory, we will develop a conceptual framework that provides a holistic understanding of seaport negotiations and stakeholder dynamics. This framework will be instrumental in analysing real-world cases and contributing to the body of knowledge in this domain.

9.1.1. Bargaining in seaports

Bargaining emerges as a critical facet in the governance and management of seaports, significantly shaping their operational dynamics and overarching efficacy.

Seaports serve as principal nodes in global trade and maritime transport; in doing so, they transcend their logistical function to significantly influence national economic paradigms, regional growth, and global supply chains (Notteboom & Rodrigue, 2005).

This complex environment necessitates robust bargaining processes where diverse stakeholders - from Port Authorities (PAs) and Terminal Operating Companies (TOCs) to shipping lines and labour unions - negotiate essential operational elements such as resource allocation, service delivery, and policy frameworks.

Each stakeholder brings unique interests, objectives, and capabilities to the table. The bargaining mechanism is pivotal in navigating these variegated interests, ensuring that every stakeholder's perspective is considered and their concerns addressed. This inclusive approach significantly fosters balanced and efficient port operations (Talley, 2009).

The importance of bargaining in reconciling divergent interests, championing cooperation, and enhancing port resilience and efficiency cannot be overstated. Specifically, in the nuanced relationship between PAs and TOCs, bargaining acts as a cornerstone, impacting critical areas like terminal concession agreements, tariff structures, and adherence to environmental regulations.

These negotiations aim to establish a balanced rapport between the public interests - embodied by the PA - and the commercial imperatives driving the TOCs, ensuring the port's smooth operation and adaptability to changing circumstances.

Additionally, the act of bargaining can be a catalyst for innovation and heightened efficiency within seaports. Given the diversity of stakeholders involved, bargaining amalgamates a range of expertise and perspectives. This confluence can often lead to the birth of inventive solutions and pioneering strategies that redefine port operations and management (Song & Panayides, 2008). Concurrently, bargaining can engender competitive pricing dynamics, potentially augmenting the overall efficiency of port services (Haralambides, 2002).

However, the bargaining landscape in seaports is fraught with challenges. Disparities in stakeholder power, transparency issues, and asymmetrical information access can distort negotiation outcomes, occasionally benefiting specific stakeholders disproportionately. Acknowledging these potential pitfalls is crucial, as negotiations in the seaport sector are not strictly bilateral; they operate within a broader context influenced by market dynamics, technological innovations, and evolving regulatory landscapes (Verhoeven & Vanoutrive, 2012).

In conclusion, bargaining is indispensable in seaport governance and management, playing a multifaceted role in mediating stakeholder interests, fostering innovation, and ensuring operational efficiency; a nuanced comprehension of the bargaining processes, coupled with an awareness of inherent challenges and their broader economic implications, is vital for optimizing port efficacy and magnifying their contributions to the economic canvas.

9.1.2. Assumptions in the Bargaining Process between the Port Authority and a Terminal Operating Company

In seaport management, the bargaining process between the PA and TOC is a critical area of research and practice. A majority of scholarly work in this field presupposes that both entities are primarily driven by the objective of profit maximisation (Notteboom et al., 2013). This section elaborates on the fundamental assumptions that underlie this bargaining process, aiming to offer a nuanced understanding of the negotiation dynamics and their eventual outcomes.

Critical Assumptions in the Bargaining Process:

- **Rational Decision-Making:** One foundational assumption is that the PA and the TOC use rational decision-making to optimise their financial returns; this involves a comprehensive evaluation of the concession agreement, including its associated costs, benefits, and risks, to determine decisions that enhance profitability.
- **Information Asymmetry:** The assumption of information asymmetry plays a pivotal role in bargaining; this presumes that the PA and the TOC may have access to different sets of information concerning market conditions, operational costs, and revenue potentials. This information gap necessitates a period of information exchange and negotiation to reach a mutually beneficial agreement.
- **Negotiation Power:** Another critical assumption is negotiation power and leverage for both parties; various factors, such as market demand, competition, the reputation of the TOC, and financial stability, can influence the relative bargaining strength of each party. The assumption is that this power will be exercised to secure favourable terms for each respective party.
- **Profit-Sharing Mechanisms:** The bargaining framework also includes profit-sharing mechanisms to align the financial interests of both parties; these mechanisms might include revenue-sharing models where a defined portion of the TOC's profits is allocated to the PA. The mutual goal is to develop these mechanisms to incentivise operational efficiency and revenue growth.
- **Risk Management:** Risk management is integrated into the PA and TOC's profit-maximisation strategies; the assumption is that both parties will negotiate and agree on risk allocation mechanisms that best protect each entity's financial interests while aligning with their risk profiles.

The bargaining process between the PA and TOC in seaports is fundamentally rooted in both parties' aim for profit maximisation. The assumptions of rational decision-making, information asymmetry, negotiation power, profit-sharing mechanisms, and risk management not only influence but also shape the dynamics and eventual outcomes of the negotiations. Understanding these assumptions offers invaluable insights into the critical factors that influence the bargaining process, thereby providing a lens through which to assess its impact on the financial performance of seaport operations.

9.1.3. Bargaining during the awarding phase

The awarding phase of a concession process involves selecting the most appropriate bidder based on their technical and financial proposal or price bid.

One pivotal arena in this regard pertains to PAs' awarding concessions to TOCs. This mechanism cements the contractual linkage between the two entities, setting the stage for future collaborative efforts and ensuring robust port governance (Notteboom, 2006).

Concessions fundamentally encompass rights transfer from the PA to the TOC. This allows the TOC to oversee, manage, and potentially make capital outlays in terminal facilities for an agreed-upon duration (Pallis, 2007). The specifics of the concession contract have profound ramifications on the port's operational adeptness and the TOC's competitive stance, thus underscoring the importance of a rigorous negotiation strategy (Haralambides, 2002).

From the vantage point of the PA, which shoulders the responsibility of upholding public interest, the core objective is to orchestrate concession agreements that dovetail with the overarching strategic imperatives of the port. These might encompass augmenting throughput, magnetising novel business avenues, enhancing service excellence, endorsing sustainable practices, and fuelling regional economic progression (Brooks & Pallis, 2008). To this end, the PA meticulously drafts concession accords, nudging TOCs to ensure their operational paradigms and investment blueprints align with the abovementioned goals (Notteboom & Rodrigue, 2005).

Conversely, TOCs primarily anchor their negotiations around the concession's commercial feasibility. Their negotiation priorities pivot around securing propitious terms concerning concession longevity, rental tariffs, and demarcating accountabilities for infrastructural investments and upkeep. An additional emphasis is placed on securing the agility to adapt to shifts in market landscapes and technological innovations.

The negotiation pathway leading to the finalisation of the concession can manifest in diverse forms - ranging from competitive auctioning to direct dialogues or even a hybrid of the two (Verhoeven & Vanoutrive, 2012). Regardless of the modality adopted, the negotiation process invariably unfolds as a multifaceted endeavour, demanding nuanced contemplation of many variables and the active participation of a spectrum of stakeholders.

Sceptical lenses directed at the concession awarding process spotlight potential pitfalls like information asymmetry, skewed power distributions, and the peril of regulatory capture. The latter pertains to situations where TOCs wield undue clout, skewing the PA's decisions in their favour to clinch concession terms that unduly benefit them. These challenges accentuate the imperative for the entire process to be steeped in transparency, equitability, and answerability.

In conclusion, the negotiation dynamics underpinning the concession awarding process between PAs and TOCs are paramount in the seaport ecosystem. The process profoundly influences the port's operational vitality and strategic orientation by demarcating the relational contours between these integral stakeholders.

9.1.4. Bargaining post-bidding phase

Once the concession contract is signed, the negotiation between the PA and TOC continues throughout the concession period. This ongoing negotiation is essential to address market conditions, technological advancements, regulatory updates, and other unforeseen challenges or opportunities (Notteboom, 2006).

The concession agreement usually provides a mechanism for both parties to review and renegotiate terms periodically. This process becomes particularly significant in the context of long-term concessions, where changing circumstances can impact the original terms of the agreement. For instance, TOCs may seek to renegotiate the concession fee amount or the required investment level in response to shifts in market demand or regulatory changes.

The PA, in turn, can use these negotiations to ensure the TOC maintains a high level of service, fulfils its commitments to infrastructure investment, and complies with environmental and safety regulations (Brooks & Pallis, 2008). They may also negotiate modifications to the concession agreement to reflect evolving public policy objectives, such as greater emphasis on sustainability or local economic development (Pallis, 2007).

Continuous negotiations between the PA and TOC also provide a framework for conflict resolution. Inevitably, disputes will arise during the concession period, and a structured negotiation process can provide a more efficient and less confrontational means of resolving these disputes compared to legal action (Song & Panayides, 2008).

However, the ongoing negotiation process during the concession period is challenging. Power imbalances and information asymmetries can still impact the negotiation outcomes. One party dominating the negotiation process can result in unfair or inefficient outcomes. Hence, transparency and equitable power relations remain essential in ongoing negotiations.

Moreover, it is also worth noting that the ability to renegotiate the terms of the concession agreement can be a double-edged sword. While it provides the flexibility needed to adapt to changing conditions, it can also create uncertainty and potentially undermine the stability of the concession agreement.

In conclusion, ongoing negotiation between the PA and TOC during the concession period is essential to adapt to changing circumstances, resolve disputes, and continuously align the TOC's activities with the port's strategic objectives. However, managing the challenges and risks associated with these negotiations requires a commitment to transparency, equity, and mutual respect.

9.2. Profit maximisation or regional welfare maximisation?

In exploring the multifaceted nature of port development doctrines, an apparent dichotomy emerges between those prioritising profit maximisation and those focusing on regional welfare maximisation, each with distinct implications for infrastructure investment. Flynn et al. (2011) delineate this dichotomy, introducing the Anglo-Saxon Doctrine, primarily embraced by ports in the United Kingdom. This doctrine posits profit generation as the paramount goal, likening such ports to private firms and resulting in minimal governmental involvement in infrastructure investment. Conversely, the Asian Doctrine, prevalent in nations such as China, Korea, and Singapore, accentuates the integral role of ports in enhancing local, national, and international economies. Under this doctrine, local and central governments assume leading roles in port development, aligning more closely with a welfare-maximization model. Meanwhile, European ports typically adhere to the European Doctrine, which balances the abovementioned doctrines, contributing to the national economy with sporadic government intervention in pricing decisions.

Delving deeper into the practical application and ramifications of these doctrines, studies focusing on the unique commercial seaport system in South Africa offer further enlightenment.

Meyiwa and Chasomeris (2020) disclose that South African ports incorporate a blend of elements from both the Anglo-Saxon and Asian doctrines. They critique the country's prevailing port authority pricing methodology and advocate for establishing the Transnet National Ports Authority (TNPA) as an independent entity to enhance transparency and accountability and attract private investments. In a similar vein, Gumede and Chasomeris (2015) scrutinise maritime port pricing and governance trends in South Africa, identifying the amalgamation of elements from the European and Asian port doctrines and calling for the formulation of a consistent port doctrine that aligns with the nation's vision and policies. These studies underscore the significance of adopting a coherent port development doctrine and emphasise the role of governance structure and pricing methodology in fostering investments and ensuring the efficient functioning of ports. The diverse application of elements from different doctrines in countries like South Africa illustrates port development's complexity and multifaceted nature, highlighting the need for a tailored approach that aligns with regional and national objectives.

9.2.1. Comparison of the best studies on determining the best optimal concession fee structure

Traditionally, research on the optimal determination of seaport concession fees has mainly focused on increasing the profits of PAs. This dominant approach was widely accepted as the normative paradigm for structuring concession fee frameworks.

However, in the contemporary research milieu, a perceptible shift is evident. A burgeoning corpus of scholarly work from Chinese, Korean, and Taiwanese researchers is challenging the conventional narratives. These scholars present an array of innovative criteria for ascertaining the optimal seaport concession fee. They elaborate their propositions meticulously and furnish mathematical evidence that underscores their proposed models' viability (Lee et al., 2016; Wang & Zhang, 2018; Chang & Kim, 2019).

In this chapter, our discourse will primarily be an overview of these paradigmatic shifts and the novel findings from the East Asian academic community. While we will encapsulate the essence of these contributions, a comprehensive exploration of the quantitative intricacies will be beyond our purview. For readers inclined towards the mathematical nuances, we recommend direct engagement with the original works of these scholars.

9.2.2. Elaboration on single rate rental fee for concession awarding

Determining rental fees is a crucial aspect of the concession contract in the context of concession awarding in seaports. One approach to rental fee determination is the use of a single-rate rental fee. This section elaborates on the concept of a single-rate rental fee, discussing its characteristics and implications based on relevant literature and case studies.

The single-rate rental fee (or Fixed Rent per Year) is a structure where the TOC pays a fixed rate for port facilities, regardless of the volume or type of cargo handled (Chen et al., 2017). It simplifies the calculation and payment process by applying a uniform rate to all cargo movements within the terminal.

Advantages of single rate rental fee:

- **Simplicity and Predictability:** The single-rate rental fee provides clarity and predictability for the PA and the TOC. It eliminates the need for complex calculations based on cargo type or volume, streamlining the billing process. This simplicity facilitates efficient financial management and reduces administrative burden (Liu et al., 2018).
- **Revenue Stability:** The single-rate rental fee offers revenue stability for the PA. The fixed rental fee ensures a steady income stream, as it is not directly affected by fluctuations in cargo volumes or market conditions. This stability allows the PA to plan and allocate resources more effectively (Chen et al., 2017).

Downsides of single rate rental fee:

- **Lack of Flexibility in Cost Structures:** One of the main downsides of a single-rate rental fee is its lack of flexibility in accommodating different cost structures of TOCs. As Chen, Lin, and Liu (2017) highlighted, a single-rate rental fee may not effectively account for variations in operational costs, investment requirements, or technological advancements among TOCs. This lack of flexibility can result in an imbalance between the financial obligations of the TOC and the revenue-sharing arrangement, potentially limiting the long-term sustainability and profitability of the TOC.
- **Insufficient Incentives for Efficiency and Innovation:** A single rate rental fee may not incentivise TOCs to pursue efficiency improvements and innovation. Research by Liu

et al. (2018) suggests that when a TOC is subject to a fixed-rate rental fee, there may be limited motivation to invest in productivity-enhancing technologies or processes. This can hinder the potential for operational improvements, reducing the overall competitiveness and attractiveness of the port.

- **Risk Exposure to Fluctuating Market Conditions:** Another downside of a single-rate rental fee is its limited ability to account for fluctuations in market conditions. In times of economic downturn or shifts in global trade patterns, the fixed rate rental fee may not adjust accordingly to reflect the changing market dynamics. This can place the PA and the TOC at financial risk, potentially impacting their profitability and ability to withstand market uncertainties (Chen et al., 2017).
- **Complexity in Revenue Allocation:** The simplicity of a single rate rental fee can also present challenges in revenue allocation between the PA and the TOC. Allocating revenue fairly and accurately becomes more complex when there are diverse cargo types, differing revenue sources, or multiple TOCs within the port. This complexity can lead to disputes and difficulties in determining the appropriate revenue-sharing proportions, potentially straining the relationship between the PA and the TOC (Liu et al., 2018).
- **Limited Adaptability to Changing Industry Dynamics:** The single-rate rental fee may lack the adaptability to respond to evolving industry dynamics and emerging trends. New operational models, technological advancements, and regulatory changes in the fast-paced maritime industry can significantly impact TOCs' revenue streams and cost structures. A fixed-rate rental fee may not adequately reflect these changes, potentially hindering the ability of both the PA and the TOC to adapt and remain competitive (Chen et al., 2017).
- **Risk of Underutilization:** The single rate rental fee may pose a risk of underutilisation of port facilities. Setting the fee too high may discourage TOCs from maximising cargo throughput or attracting new customers. Conversely, suppose it is set too low. In that case, it may lead to under-compensation for using port facilities, potentially impacting the PA's financial sustainability (Chen et al., 2017).

9.2.3. The use of a revenue-sharing scheme

A revenue-sharing scheme with a single rate rental fee is an optimal concession contract setup. In this scheme, the concessionaire pays the concession provider a fixed rental fee and a percentage of its revenue. This mechanism encourages both parties to profit and maximise their return on investment (Chen & Liu, 2014). The concessionaire is incentivised to increase revenues since a higher revenue base results in higher profitability, even after sharing a percentage of the income with the provider.

The single-rate rental fee arrangement is preferable for Landlord PAs who aim to maximise their fee revenues (Chen & Liu, 2014). The concessionaire, in this case, a TOC, pays the PA a fixed fee plus a share of its revenues. This model fosters a mutualistic relationship where both parties are driven to improve performance and profitability.

A significant advantage of this model is that it provides some risk mitigation for the concession provider since it offers a guaranteed income through the single rate rental fee. This fee is a baseline for earnings, irrespective of the concessionaire's performance. However, the concessionaire is motivated to strive for better performance since its profit margins are directly tied to its revenues (Chen et al., 2017).

The revenue-sharing scheme with a single rate rental fee can be further optimised by incorporating a minimal throughput requirement. This provision ensures that the TOCs maintain a certain level of service and throughput. If they fail to meet these requirements, they are subjected to penalties. This arrangement effectively protects the PAs' interests, ensuring a certain level of activity and productivity within their ports, even during periods of low demand (Liu et al., 2018).

Although this system encourages high productivity and revenue generation, it may also breed competitiveness among TOCs if they compete in price. Hence, the concession contract must be well-structured and balanced, considering the industry dynamics, port capacity, demand fluctuations, and the competitive landscape (Chen et al., 2017).

In conclusion, the revenue-sharing scheme with a single rate rental fee is an effective and optimal strategy for concession contracts, particularly for landlord PAs. It ensures a consistent

income stream for the PA while incentivising the TOCs to strive for high performance and productivity.

9.2.4. A revenue-sharing scheme with a quantity discount

It is an economic model wherein the cost per service unit decreases as the volume of service used increases. This model can be seen in various industries and is frequently applied in freight and transportation sectors to boost volume and stimulate business growth.

Under such an agreement, the concessionaire offers quantity-based discounts to its customers, encouraging them to consume more of the service or product. The rationale behind this model is that as the consumption or usage of a service increases, the cost of production or provision per unit typically decreases (Lavoie, 1992; Lee, 1986). The concessionaire can stimulate demand and improve profitability by bypassing some cost savings onto customers through discounts.

A quantity discount in the revenue-sharing scheme could mean that a TOC, the concessionaire, provides quantity-based discounts to shipping companies. As a result, these companies would be encouraged to use the terminal's facilities more frequently, leading to increased throughput and more significant total revenues for the TOC and the Landlord PA (Qiu & Lee, 2019).

This system is rooted in the Economic Order Quantity (EOQ) model, which seeks to determine the quantity of an item a company should order to minimise total inventory costs (Lavoie, 1992; Lee, 1986). Similarly, the quantity discount model strives to establish the optimal quantity of service consumption that balances cost and revenue, thereby maximising profit.

However, implementing a quantity discount scheme in a revenue-sharing agreement requires careful consideration. While it can incentivise higher usage, it also involves a reduction in the price per unit. Therefore, it is crucial to ensure that the increase in volume outweighs the decreased unit price, resulting in increased total revenue (Qiu & Lee, 2019).

In conclusion, the revenue-sharing scheme with a quantity discount can be valuable in concession contracts, particularly in the freight and transportation sectors. This model promotes high throughput, enhances profitability, and facilitates symbiotic business relationships by

aligning the interests of PAs, TOCs, and shipping companies. However, the quantity discount scheme must be carefully managed and strategically implemented to maximise benefits.

9.2.5. A revenue-sharing scheme with incremental discount

A revenue-sharing scheme with an incremental discount is a model where the concessionaire offers tiered discounts based on increased usage or volume. As consumption or service utilisation increases, the discounts become more significant, stimulating higher volume and incentivising customers to expand their use (Chen et al., 2016).

The incremental discount scheme is designed to increase the total revenue of the concessionaire and the concession provider, as higher volume usually compensates for the lower unit price due to the discount. This mechanism encourages more active customer engagement, optimising the resources provided by the concessionaire (Chen et al., 2016).

In the context of a concession contract, particularly in the transportation and logistics sector, the incremental discount can be applied to encourage greater use of the service or facility offered by the concessionaire. For example, a TOC may offer shipping companies increasing discounts based on the number of containers they handle at the terminal. This results in higher throughput at the dock, increasing total revenue despite the lower price per container.

However, setting up an effective incremental discount scheme can be complex. It requires an in-depth understanding of the cost structures, market demand, competitive landscape, and competitors' pricing strategies. It also necessitates a careful evaluation to ensure that the revenue gained from increased volume is higher than the income lost due to the discounts (Chen et al., 2016).

When executed correctly, an incremental discount scheme can lead to higher overall revenues, better utilisation of resources, and stronger relationships with customers, benefiting both the concessionaire and the concession provider. However, more empirical studies and practical examples are required to prove its effectiveness and guide the design of optimal incremental discount schemes in different contexts.

9.2.6. A revenue-sharing scheme with an all-unit discount

This scheme with an all-unit discount is a pricing strategy where the concessionaire discounts all units once a particular volume threshold is reached. This means that, rather than the discount being applied only to units beyond the threshold, the discount is applied to all units. This strategy is highly incentivising as it encourages customers to increase their usage or volume to reach the threshold and take advantage of the discount.

In a concession contract between a PA and a TOC, the all-unit discount can stimulate higher usage of the terminal's facilities. For example, the TOC could offer a shipping company a reduced container fee once it handles a specified number of containers at the dock. With the discount applied to all containers and not just those beyond the threshold, the shipping company would take the initiative to reach the threshold and thus increase throughput at the terminal.

While this approach can stimulate more significant usage and increase overall revenue, it should be used judiciously. The TOC must calculate the discount level and the threshold volume to ensure that the volume increase outweighs the price reduction per unit.

This model also requires a thorough understanding of the market conditions, competitive landscape, and cost structures associated with increasing volumes. The TOC must also assess the terminal's capacity to manage increased volumes to prevent overutilisation and maintain service quality.

The predominant model for concession awarding involves PAs bargaining on price to maximise their revenue. This mechanism serves the interests of the PA and the TOC, who share the objective of profit maximisation.

10. Interview guide – Port Authority

Research Question
What drivers condition the determination of optimal concession contracts when the Port Authority pursues other objectives than maximising concession revenues?
Briefing (Steiner, 1996)
Present the topic and research question of the thesis.
Ask for consent to record the interview.
I will ask open-ended questions, so please elaborate on your answers as much as possible.
Do you have any questions before we start?
Background Information of Interviewee:
Please introduce yourself.
How long have you been working in this field?
Please offer an example of the activities for which you are responsible.
Background Information of the Port Authority
Can you provide an overview of the port authority, including its history, mission, and objectives?
What are the primary functions of the port authority?
What are the primary responsibilities of the port authority?
Does the Port Authority pursue objectives other than maximising concession revenues? Could you provide examples of these objectives?
Probing Questions for the Port Authority Interviewee:
Please explain the nature of the concession agreements and how they are structured.
Which terms of the concession agreement could improve efficiency within the terminal? Can you provide specific examples of how the concessions have enhanced operational effectiveness?
In what ways do the terms of the concession agreement impact the competitiveness of terminal operations compared to other terminals in the Northern Adriatic region? Please share notable examples where the concessions have provided a competitive advantage or a disadvantage.
The bargaining process
What do you understand with the term bargaining?
How does the port authority engage in bargaining processes?
How are bargaining decisions made?
Who participates in this process?
What are the key objectives of these negotiations? Please offer an example.
What are some notable challenges you have encountered in seaport bargaining? Could you provide examples of these challenges and explain how they have influenced your approach?
Are there any recent developments in the port authority that can impact the bargaining process? Please explain.
How does the port authority balance its interests with the terminal operators during the bargaining process?
Can you describe a situation where the Port Authority's interests conflicted with the terminal operator's during concession negotiations? How was it resolved?
What are your thoughts on this?
Information symmetry

<u>Before the bargaining process:</u>
Does the Port Authority have access to the necessary information to make informed decisions before entering the bargaining process?
<u>During the bargaining process:</u>
How does the Port Authority promote open and transparent communication with the terminal operator during the bargaining process to minimise misunderstandings or information gaps?
Are there any mechanisms to address any information differences that may arise during the bargaining process and ensure that all parties are on the same page?
<u>After the bargaining process:</u>
Are any steps taken to address any remaining information gaps or misunderstandings that may emerge after the bargaining process?
The power distribution among the parties in the context of concession agreements.
In the initial concession phase, how does the balance of power between the port authority and the terminal operator typically manifest? Could you explain the key factors that contribute to this power dynamic?
In the event of changes to contractual terms during the concession's life, such as modifications to investments or adjustments/extensions of the docks, how might the balance of power between the port authority and the terminal operator shift? Can you provide examples of how these changes can influence the power dynamics between the two parties?
Seaport stakeholders
In your opinion, who are the main stakeholders that the Port Authority considers when structuring concession terms?
To what extent do port stakeholders influence the Port Authority in determining the weight assigned to the various evaluation criteria in the Investment Plan related to concession applications?
In what ways do port stakeholders contribute to shaping the values or specific details of the evaluation criteria used in the Investment Plan for assessing concession applications?
How does the Port Authority create value by effectively managing the trade-offs among stakeholders' competing claims? Please offer an example.
Concession fees
What fee structures could be considered for the terminal concession without specific legislation? Please explain each option briefly.
Among the various fee structures (fixed fee, unit fee with surplus distribution, subsidising the terminal operator, etc.), which would be more suitable to maximise the throughput or the port? Could you provide reasons for your preference?
In your opinion, how could the new two-part fee, introduced by the recent Italian legislation on port concessions, with the variable part not directly related to the throughput but to indicators of the efficiency level, lead to the maximisation of the throughput?
How much does the fixed component of the new two-part fee affect the competitiveness of operators operating on different piers? Please offer an example.
Debriefing (Steiner, 1996; Brinkmann & Kvale, 2015)
Highlighting some of the critical points discovered throughout the interview (enabling the participant to comment)
Conclude by saying, "I have no further questions. Do you have anything more to discuss before we finish the interview?"

11. Interview guide – Terminal Operator Company

Research Question
What drivers condition the determination of optimal concession contracts when the Port Authority pursues other objectives than maximising concession revenues?
Briefing (Steiner, 1996)
Present the topic and research question of the thesis.
Ask for consent to record the interview.
I will ask open-ended questions, so please elaborate on your answers as much as possible.
Do you have any questions before we start?
Background Information of the Terminal Operator Interviewee:
Please introduce yourself.
How long have you been working in this field?
Please offer an example of the activities for which you are responsible.
Probing Questions for the Terminal Operator Interviewee:
Please explain the nature of the actual concession agreement and how it is structured.
Which terms of the concession agreement could improve efficiency within the terminal? Can you provide specific examples of how the concession has enhanced operational effectiveness?
In what ways do the terms of the concession agreement impact the competitiveness of terminal operations compared to other terminals in the Northern Adriatic region? Please share notable examples where the concession has provided a competitive advantage or a disadvantage.
The bargaining process
What challenges do you face as a terminal operator in bargaining? Please offer an example of such a challenge and explain how you address it.
How would you describe the decision-making process within your organisation that explicitly relates to bargaining?
Please provide a detailed explanation of the decisional process.
Who is engaged in these processes? What are the key events?
Can you describe the bargaining process regarding port concession with the port authority?
What challenges did you encounter during the concession awarding process for your terminal operations? Could you provide examples of these challenges?
How have you successfully overcome these challenges?
Can you describe a situation where your interests conflicted with the Port Authority's during concession negotiations? How was it resolved?
What are your thoughts on this?
Information asymmetry
Before the bargaining process:
Before entering the bargaining process, does your organisation have access to the necessary information to make informed decisions?
During the bargaining process:
How does your organisation promote open and transparent communication with the Port Authority during the bargaining process to minimise misunderstandings or information gaps?
Are there any mechanisms to address any information differences that may arise during the bargaining process and ensure that all parties are on the same page?

After the bargaining process:
Are any steps taken to address any remaining information gaps or misunderstandings that may emerge after the bargaining process?
The power distribution among the parties in the context of concession agreements.
In the initial concession phase, how does the balance of power between the port authority and the terminal operator typically manifest? Could you explain the key factors that contribute to this power dynamic?
In the event of changes to contractual terms during the concession's life, such as modifications to investments or adjustments/extensions of the docks, how might the balance of power between the port authority and the terminal operator shift? Can you provide examples of how these changes can influence the power dynamics between the two parties?
Seaport stakeholders
In your opinion, who are the main stakeholders that the Port Authority considers when structuring concession terms?
To what extent do port stakeholders influence the Port Authority in determining the weight assigned to the various evaluation criteria in the Investment Plan related to concession applications?
In what ways do port stakeholders contribute to shaping the values or specific details of the evaluation criteria used in the Investment Plan for assessing concession applications?
How does the Port Authority create value by effectively managing the trade-offs among stakeholders' competing claims? Please offer an example.
Concession fees
What fee structures could be considered for the terminal concession without specific legislation? Please explain each option briefly.
Among the various fee structures (fixed fee, unit fee with surplus distribution, subsidising the terminal operator, etc.), which would be more suitable to maximise the throughput or the port? Could you provide reasons for your preference?
In your opinion, how could the new two-part fee, introduced by the recent Italian legislation on port concessions, with the variable part not directly related to the throughput but to indicators of the efficiency level, lead to the maximisation of the throughput?
How much does the fixed component of the new two-part fee affect the competitiveness of operators operating on different piers? Please offer an example.
Port Authority's objectives
Do you think the Port Authority pursues objectives other than maximising concession revenues? Could you provide examples of these objectives?
Debriefing (Steiner, 1996; Brinkmann & Kvale, 2015)
- Highlighting some of the critical points discovered throughout the interview (enabling the participant to comment)
- Conclude by saying, "I have no further questions. Do you have anything more to discuss before we finish the interview?"

12. Interview transcript - Sample

Participant 3 - Transcript

1	Participant 3 – Transcription
2	Interviewer: Thank you for agreeing to this interview. Before we begin, I want to ensure that you know all responses will be kept anonymous and confidential as per the document sent to you. Do you consent to these terms and to recording this interview?
3	Participant 1: Yes, I have reviewed the document, and I consent to the terms, including the interview recording.
4	Background information of the Terminal Operator interviewee
5	I: Great, thank you. This thesis focuses on the limitations of the Bargaining Theory in determining the optimal seaport concession contract. Your insights will be precious. Do you agree to proceed under these conditions?
6	P1: I am happy to contribute to your research.
7	I: Thank you. I will be asking open-ended questions, and I would appreciate it if you could elaborate on your answers as much as possible. Do you have any questions before we start?
8	P1: No questions from my side. I am ready to start.
9	I: Excellent. Let us begin with some background information. Could you please introduce yourself?
10	P1: Certainly. I am [P1's Name]. I have been at the forefront of terminal operations and logistics for over a decade.
11	I: And how long have you been working in this field specifically?
12	P1: I have been in this field for about 15 years. I started in operations and worked up to my current position.
13	I: Could you provide an example of the activities for which you are responsible?
14	P1: My responsibilities range from strategic planning and overseeing daily operations to stakeholder management. For instance, I lead the development of our terminal's digitization strategy, which aims to streamline our operations and improve efficiency by integrating advanced technologies.
15	Probing questions for the Terminal Operator interviewee
16	I: Could you please explain the nature of the actual concession agreement and how it is structured?

17	<p>P1: Law 84/1994 defines two central contracts: the concession agreement and the substitute concession agreement. The standard concession, closely following the old code and incorporated into Law 84/1994, grants a concession of a property based on specific characteristics. If I am correct, these characteristics are also mentioned in Article 18 of Law 84/1994. It entails the concessionaire operating a public asset for the public's purposes. As such, the concessionaire commits to paying a fee and performing the activity for which that public domain was allocated. Generally, this involves loading and unloading goods, embarkation and disembarkation of passengers, or, for terminals that provide ro-ro (roll-on/roll-off) services, handling goods and passengers.</p> <p>On the other hand, the substitute concession agreement is somewhat more complex. Originating from Law 241/1990, it is an agreement where the future concessionaire commits to a series of activities, usually including the construction of new infrastructure such as piers, quays, silos, or warehouses. In return, there is usually a set of somewhat lighter financial obligations, resulting in a concession duration generally more extended than what is conventionally provided by Article 18.</p> <p>We have both cases here involving a series of commitments by the concessionaire, including binding construction commitments. Based on these commitments, contracts are generally drawn up with various durations or financial charges, depending on the concessionaire's commitment to substantial investment in varying assets. Generally, the improvements made by the concessionaire revert to the State at the end of the concession.</p> <p>This model is also commonly applied in new marinas, which fall within the tourist and recreational domain rather than the 99% of the port domain used for commercial purposes. The port authority does not manage these areas but is part of a general tourist and recreational domain. Here, the delegation from the State is not to the port authority but to the regions, which then delegate to the public domain managers.</p>
18	<p>I: Which concession agreement terms could improve efficiency within the terminal? Can you provide specific examples of how the concession has enhanced operational effectiveness? In what ways do the terms of the concession agreement impact the competitiveness of terminal operations compared to other terminals in the Northern Adriatic region? Please share notable examples where the concession has provided a competitive advantage or a disadvantage.</p>

19	<p>P1: The public domain is public, and its management must be conducted in the public interest. Less rigidity on the part of the public administration could facilitate more significant private investments because the rules are generally quite flexible. Reducing the public administration's rigidity, especially in some cases in the interpretation of the law, with norms that still allow for greater flexibility, could help encourage more private investments.</p> <p>Some investments are bound by rigidities in the application of the concession fee. If I must pay for the construction and then pay rent for using the construction, financial constraints make the concession fee the deciding factor between having a return on investment sufficient to justify the investment and having an insufficient return.</p> <p>Therefore, greater flexibility in negotiating substitute agreements, focusing more on the public utility rather than rent, could be helpful. This is a problem that is quite present in Italy. There is always greater rigidity in the application of rules because there is a feeling of risk from the public administrator, who is fundamentally afraid to act. Often, acting corresponds to taking responsibility, and more and more often, the public administrator is judged better for what they do not do than for what they do because acting involves the risk of making mistakes.</p> <p>Thus, having a set of rules, a regulatory framework, a legal framework that allows acting and having processes, and public tender procedures that allow you to address specific issues and move forward with some flexibility would unlock investments and help in acting. Instead, excessive care in not making mistakes or excessive concern in protecting the public, which in a symbiotic relationship means overly protecting one side, risks sometimes blocking certain investments.</p> <p>We could be much more aggressive with investments if we had greater certainty of not paying twice. If I must pay for the depreciation of a built asset that will eventually be absorbed by the public domain and pay rent on that asset I built, you can realise it becomes challenging to stay in the market, especially in the European context, where there are different models.</p> <p>The more your terminal, your port, and your concession compete in the international market, which could be the case of Trieste, very close to Koper, ports that have more state involvement, that have a different operating regime compared to the typical Italian model, thus Landlord and Private Terminal Operator, or in the case of a port of Gioia Tauro, thus transshipment ports, competitiveness is exceptionally high. Today, a transshipment port theoretically competes from Port Said and Piraeus to Tanger Med and Algeciras, so let us say there are many directions of haulage; the competition spans thousands of kilometres, thousands of nautical miles, so there too, let us say that it would be necessary to manage to adapt the policies accordingly.</p>
20	The bargaining process
21	<p>I: How would you describe the decision-making process within your organisation that is explicitly related to bargaining? Who is engaged in these processes? What are the key events? Please provide a detailed explanation of the decisional process.</p>

22	<p>P1: A concession is always a public process subject to competitive analysis. Therefore, even for defined public domain spaces - not in our case where we have built, but also in different cases - generally, at the end of the concession, there should be a public tender in which competition is based on promises and commitments made by the concessionaire. The port authority evaluates which concessionaire best meets the requirements of public utility.</p> <p>This evaluation can be based on the concession fee paid, the number of hires, and the goods moved within the port—which defines both the success of the port and the use of public infrastructure for the benefit of inland enterprises - and includes virtual documents for taxes for the port authority and staff. Generally, investments, employment, and the asset’s usage profile, aligning with public administration’s objectives, are considered.</p> <p>Sometimes, even the duration of the concession can be extended, or the number of investments made to increase the value of the concession can be a preference factor. This aspect, too, is well defined in the laws of 1984-1994. For example, in Salerno, concessions were shorter because the quays were public, and the storage areas were under concession. If I am correct, there is a detailed regulation by the Port Authority of Salerno, now Western Tyrrhenian. Salerno’s head is Castellammare di Stabia, where you can see some of the criteria used to give a small amount of direction.</p> <p>Regarding whether there have been situations where the interests of the concessionaire have clashed with those of the port authority during concession negotiations and how they were possibly resolved, there is a highly litigious atmosphere between concessionaires and authorities in the Port of Genoa. There, disputes are generally taken to the Administrative Court (TAR), so when a public action is not deemed in line with the public interest or what is perceived as the proper conduct of public administration, administrative justice is sought at its various levels.</p> <p>There has been, and will continue to be, much jurisprudence on using certain quays in Genoa. Recently, a decision was made on the possibility of relocating coastal deposits from an old seaplane base, the quay where coal was unloaded for the old Enel power station. That area has been reassigned, and now the port authority is trying to move it to a more suitable area. Various operators, having different and opposing interests from the political vision, are responding with all the tools that modern technology and old jurisprudence allow to bring to bear.</p>
23	Information asymmetry
24	<p>I: Does the terminal operator have access to all the information he needs to make informed decisions, i.e., pre-, during, post-, and assimilation? How do these influence him?</p>

25	<p>P1: Due to asymmetries, the terminal operator does not have access to all the necessary information to make informed decisions, whether before, during, or after the process. When we talk about Italian port infrastructures, we generally refer to old infrastructures where there is not good cartography or mapping of sub-services, and the authority tends to manage based on an as-seen and liked basis. This means that often, no one has that information, and the concessionaire is responsible for mapping the area or giving up the concession if it is not to their liking, potentially losing the guarantees provided for the concession release.</p> <p>The state guarantees the fee with two to four years of the fee paid in advance or guaranteed, executable, either advanced or guaranteed by incomprehensible bank production. The relationship is not always equal. An old entrepreneur of mine used to say that one of the names by which the use of public property was consented to be the contract of submission, and the balance of power in the field is sometimes different. However, if one enters a contract, he finds interest in it.</p> <p>Remember this for your life. If every business choice could be traced back to a particular algorithm, we would all be successful entrepreneurs or all at break-even. There is a risk factor, a propensity for risk, and the return is a function of the risk propensity. It is not a failure but a function of people's risk propensity and abilities. So, there is no single model; there is a model, a success, a capability, luck, and alignment of the right plans.</p>
26	<p>Power distribution among parties in the context of concession agreements</p>
27	<p>I: In the initial concession phase, how does the balance of power between the port authority and the terminal operator typically manifest? Could you explain the key factors that contribute to this power dynamic?</p>
28	<p>P1: On one side, there is an entrepreneur who wants to conduct business, and on the other, a granting authority. However, granting authorities do not continuously operate in the same way, but there is a granting authority - a concession - granting to a concessionaire who accepts specific clauses.</p> <p>Therefore, there probably is not a natural balance of negotiating power on one side; conversely, we are in a democratic country with a reasonable separation of powers. Thus, if things do not go as they should, there is the possibility of recourse in the event of abuses of power or other to the judiciary, with times and consequences, but there is a limited negotiating capacity due to the regulatory framework. Often, there is a literal interpretation of the norms, limited, not very much based on the rationale, and very much on the letter of the law. Nevertheless, this is a general problem in Italy, from tax legislation to those that generally regulate administrations like concessions.</p> <p>The focus is often more on the norm's literal content and less on its rationale because, in Italy, extensive interpretations based on the rationale often expose public administrators, even those in extreme good faith, to devastating consequences. This is a problem of trust in the public, of trust that is the evaluation of the public administrator.</p> <p>As I said, those who do not make mistakes generally make career progress, while those who sometimes can be penalised in their careers. This is one of the problems we have in public administration in general, not just among those who have the power to grant public domain spaces.</p>

29	<p>I: In the event of changes to contractual terms during the concession's life, such as modifications to investments or adjustments/extensions of the docks, how might the balance of power between the port authority and the terminal operator shift? Can you provide examples of how these changes can influence the power dynamics between the two parties?</p>
30	<p>P1: The port authority always retains the right to revoke the concession, except for compensation, when the concessionaire has not failed significantly.</p> <p>An incident that comes to mind is when a concessionaire relinquished their concession because the port authority failed to fulfil its obligations. This event occurred in Taranto when Aginson & Poe and Evergreen abandoned their concession. In this context, it is notable that the port authority likely owned the cranes, indicating that the investment amount was relatively high. Nevertheless, a public administrator overseeing a concession and bearing many responsibilities would be highly cautious before proceeding, considering the complexity of outcomes associated with such decisions.</p> <p>Avoiding decision-making, whether supporting enterprises, forging aggressive partnerships, or penalizing underperforming concessionaires, highlights the intricate balance of power. The situation is not simply black and white; responsibility and co-responsibility levels underscore a symbiotic relationship. The port authority is typically expected to ensure access by various means and maintain infrastructure, whereas the concessionaire is tasked with promoting business and maintaining service standards relevant to the market.</p> <p>Often, both parties are in the same boat, working together under differing logic. However, the cautious approach adopted by public administration, while prudent, should not necessarily be viewed negatively. The challenge lies in the potential for a more flexible and investment-friendly regulatory framework, diverging from the current state where cautious, and sometimes overly cautious, decision-making prevails.</p> <p>Acknowledging the complexity of investing or building in Italy is essential. A fragmentation of authorizations and a lack of coordination significantly hamper timely investment decisions. Reflecting on my experience starting in Salerno, I realized that initiating a marina project underscored the protracted nature of bureaucratic processes, which starkly contrasts with more dynamic investment environments like Dubai. This situation underscores a broader challenge facing entrepreneurs in Italy, particularly in navigating the cautious and intricate landscape of public administration and regulatory compliance.</p>
31	Seaport stakeholders
32	<p>I: In what ways do port stakeholders contribute to shaping the values or specific details of the evaluation criteria used in the Investment Plan for assessing concession applications?</p>

32	<p>P1: Considering the main stakeholders the Port Authority considers when structuring concession terms, my thoughts initially go to the worker associations, especially concerning aspects like construction.</p> <p>Despite its questionable legality, the signing of a concession agreement also encompasses a commitment to adhere to the national collective agreement or to offer conditions that are at least equivalent to those outlined in the national collective agreement. This requirement highlights the Port Authority's role in embedding many standard clauses within concession agreements to safeguard the public interest. These clauses cover a broad range of considerations, including ensuring adequate worker remuneration and guaranteeing access to any third party that requests it.</p> <p>Furthermore, the maximum tariffs are published to guarantee what is being offered. These tariffs, usually agreed upon in the context of the concession's scope, can influence the decision-making process for awarding the concession to one applicant. This approach facilitates a competitive and transparent process.</p> <p>Additionally, a shared economic-financial plan outlines the commitments regarding volumes and investments the concessionaire expects to make. This extensive sharing of commitments and conditions ensures that the concession operation aligns with the Port Authority's strategic objectives. Ultimately, these objectives reflect the broader goals of the Ministry of Transport of the State, indicating a coherent strategy to enhance the port's operation and contributions to the public and the economy.</p>
33	Concession fees
34	I: What fee structures could be considered for the terminal concession without specific legislation? Please explain each option briefly.

38	<p>P1: Currently, a ministerial decree sets the minimum tariffs, updated according to an ISTAT index that might be subject to debate. However, it is essential to note that not all public domain spaces hold the same value. For instance, a square meter in the Port of Genoa cannot be equated to a square meter in the ports of Ortona, Bari, or Brindisi, reflecting the value variation based on location and strategic significance.</p> <p>The concept of tendering emerges as a potential tool for concession applications. This process allows public administration the option to auction concessions. However, in practice, it is observed that highly sought-after concessions are often renewed or extended in Italy as operations progress. This practice is somewhat seen as a necessity, considering the reluctance of businesses to invest heavily in infrastructure without assurances of long-term operability.</p> <p>Ideally, a tender would be the most equitable method of assigning concessions, although the practical value derived from such a process may only sometimes be realizable, especially in less broad markets. The Port of Trieste is an illustrative example, a gateway to Central and Eastern Europe. In this context, the concession fee is minimal compared to the broader economic benefits it generates for the State and public, such as VAT revenue, business internationalisation, customs duties, and significant job creation.</p> <p>The true value of a well-managed concession thus transcends the concession fee itself. It lies in the economic activity and opportunities it fosters. Analogously, the role of a port can be likened to that of a highway connection or a parking lot for a major shopping centre; its utility and contribution to the community far outweigh the direct financial gains from parking fees, which are often free to encourage visitation and use.</p> <p>The fairness of a concession fee is challenging to establish universally, as it greatly depends on the specific conditions of the hinterland and the state of the asset in question. Assets in excellent condition require minimal maintenance, whereas those in poor condition demand significant upkeep. Therefore, setting the concession fee might best be left to the discretion of public administrators within a flexible range that accounts for the asset's condition.</p> <p>In cases where a concession remains unused - a scenario more noted in Spain than Italy - the need for market rebalancing is recognized. However, the impact of the concession fee on such situations is likely limited.</p>
39	<p>I: Among the various fee structures (fixed fee, unit fee with surplus distribution, subsidising the terminal operator, et cetera), which would be more suitable to maximise the throughput or the port? Could you provide reasons for your preference?</p>

40	<p>P1: Rather than focusing on the amount of the fee, which makes sense as a fixed amount - if you are not able to cover your fee, you are probably not the right concessionaire, and it would be worth questioning - it would be advantageous to allow the concessionaire to recover the investments made on the concession, not at 50% but at 100%. Therefore, even reducing the fee to zero in cases where you can improve by investing in the concession's use for the state.</p> <p>This allows the concessionaire, under the supervision of the port authority and the public, to act quickly and according to market needs. Thus, the authority should adopt a more streamlined approach, maintaining primarily a supervisory role in the exercise of concessions but giving the concessionaire more freedom to act and quickly recover the costs of what has been done in the public interest.</p>
41	Debriefing (Steiner, 1996; Brinkmann & Kvale, 2015)
42	I: How does that play out in the moment that, at the end of the concession contract, what has been built by the private goes back to state property?
43	<p>P1: Yes, so I recontextualize everything granted in good condition and with good regular maintenance and the necessary extraordinary maintenance or renovation. This approach helps push more towards the perspective of public-private partnership by giving more tools to both the authority and the private sector to see it quickly and well.</p> <p>This could be a game-changer. If I must invest according to various regulations, but if I need to invest 10 million within ten years of this 10 million invested in enhancement, I avoid doing it. However, the possibility of entering earlier and adding quality and operability might allow me to do it. It is all about updating in terms of taxes, so the more possibility of recovering the investment, the more the investment makes sense. And what I invest today, in ten years, interests me to invest.</p>
44	I: I have no further questions. Do you have anything more to discuss before we finish the interview?
45	P1: I think we have covered everything. I am pleased to have had the opportunity to contribute to your research and look forward to the outcomes of your study.
46	I: Thank you once again for your time and the valuable information you have provided. Your contributions will indeed benefit the study. Have a great day.

Table 3 – Profile of interviewees

Subjects		
	Position of interviewee	Sector
P1	Advisor (Lawyer)	Terminal Operator
P2	Manager	Port Authority
P3	CEO	Terminal Operator
P4	Manager	Terminal Operator
P5	Advisor (former Top manager)	Terminal Operator
P6	Former CEO	Terminal Operator
P7	Manager	Terminal Operator
P8	Manager	Terminal Operator
P9	Manager	Terminal Operator
P10	Manager	Terminal Operator

13. Participant Consent

Participant Consent

Bargaining in Seaports – A stakeholder approach:

A CASE STUDY ON TRIESTE's SEAPORT

- > Ivoluntarily agree to participate in this research study.
- > I understand that I can refuse to answer any question without any consequences.
- > I have had the purpose of the study explained to me and I have had the opportunity to ask questions about the study before, during, and after the interview.
- > I understand that by participating in the research, I take part at an in-depth qualitative interview.
- > I agree to my interview being audio-recorded. I am aware that this is not going to be included in the thesis, it is used for data analysis.
- > I understand that I can ask for deleting my interview within 1 week after the recording.
- > I understand that the Information provided will be treated confidentially.
- > I understand that in this research my identity will remain anonymous. This will be done by changing my name and hiding any details of my interview which may give out my identity or the identity of people mentioned in the interview.
- > I understand that my interview/parts of my interview will be quoted in the master's thesis of Gabriele Visentin, BSc.
- > I understand that a transcript will be made. I agree this transcript to be shown in the attachment of the thesis.
- > I understand that I have access to the provided information.
- > I understand that I can contact the researcher for further information at any time.
- > I have received a copy of this consent form.

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.....
Date

.....
Name (in block letters)
and signature of the participant

.....
Signature of the researcher